

City of Waltham
Purchasing Department
Waltham, Massachusetts 02452

ADDENDUM NO. 1

Plans & Specifications for: Elsie Turner Field & Graverson Playground, Waltham, MA

In accordance with documents prepared by: Carolyn Cooney & Associates

TO: ALL PLAN HOLDERS

This Addendum No. 1 is to modify, correct and/or supplement the Plans and Specifications.

Bidders are hereby informed that Plans and Specifications for the above-mentioned project are modified, corrected and/or supplemented as follows and that Addendum No. 1 becomes a part of the Contract Documents. Addendum No. 1 consists of Changes described in Items 1 through 27 and attached Drawings and Specification Sections.

Addendum 1 must be acknowledged as received in Section 00310 - Form for General Bid
THE FOLLOWING REVISIONS ARE MADE A PART OF THIS CONTRACT

In accordance with documents prepared by: Carolyn Cooney & Associates

GRAVERSON PLAYGROUND

- ITEM NO. 1** *Graverson Playground: Revise Specifications Section 01020 Allowances as follows:
Delete Paragraph 1.03 Allowance for Irrigation Booster Pump in its entirety.*
- ITEM NO. 2** *Graverson Playground: Revise Specifications Section 02510 Bituminous Concrete Paving
and Curbs as follows:
Section Title & Footers: Delete "& Curbs"
1.02 SCOPE OF WORK.B.1: Delete "& curbing".*
- ITEM NO. 3** *Graverson Playground: Replace Specifications Section 02725, Drainage & Sewer Pipe.
with attached revised Section. Revision adds specifications for Ductile Iron Pipe and PVC
surface drains.*
- ITEM NO. 4** *Graverson Playground: Revise Specifications Section 02850 Athletic Equipment, as
follows:
Add to Paragraph 2.01.A.
"Local distributor: New England Recreation Group, 1-800-861-1209."*
- ITEM NO. 5** *Graverson Playground: Replace Drawing L.102A with attached new Drawing
L.102A. Revision is to the Limit of Work Line.*
- ITEM NO. 6** *Graverson Playground: Replace Drawing L.102 with new Drawing L.102 attached.
Revision is to clarify that two player's benches and footings are to be demolished.*
- ITEM NO. 7** *Graverson Playground: Replace Drawing L.613 with new Drawing L.613 attached.
Revision is to size of backboard.*
- ITEM NO. 8** *Graverson Playground: Replace Drawing L.625 with new Drawing L.625 attached.
Revision is to Drain Basin Detail.*

ELSIE TURNER FIELD

ITEM NO. 9 *Revise Specification Section 16526, Exterior Athletic Lighting.*

Add the following Subparagraph to 1.01.A.:

“1. The Contractor shall obtain all required permits, and shall arrange for City Building Department and Wires Department inspectors to inspect installation prior to backfilling electrical trenches and foundations.”

Revise Table 1.02 A, as follows:

Area of Lighting	Average Target Illumination Levels	Maximum to Minimum Uniformity Ratio	Grid Points	Grid Spacing
Softball Infield	50 Footcandles	2.0:1.0	25	20' X 20'
Softball Outfield	30 Footcandles	2.5:10	82	20' X 20'

Revise Table 1.02 B, as follows:

Area of Lighting	Annual Usage Hours	25 year Usage Hours
Softball	300	7500

Revise Table 1.03. B as follows:

	Average	Maximum
Property Line Maximum Vertical Footcandles	.04 fc	.4 fc
Property Line Horizontal Footcandles	.006 fc	.06 fc
Property Line Max Candela	3772.5 Cd	28850 Cd

Revise 2.01.C.4 to read “The Contractor shall supply all drivers and supporting electrical equipment.

Delete 2.01.C.4.b in its entirety.

Delete Paragraph 2.02.B. Energy Consumption, in its entirety.

Delete Paragraph 2.03.D Foundation Drawings, in its entirety.

Add Paragraph 2.04 C.1 thru 3 as follows:

1. *Remote Lighting Control System: System shall allow Owner and users with a security code to schedule on/off system operation via a web site, phone, fax or email up to ten years in advance. Manufacturer shall provide and maintain a two-way TCP/IP communication link. Trained staff shall be available 24/7 to provide scheduling support and assist with reporting needs.*

2. *The Owner may assign various security levels to schedulers by function and/or fields. This function must be flexible to allow a range of privileges such as full scheduling capabilities for all fields to only having permission to execute “early off” commands by phone. Scheduling tool shall be capable of setting curfew*

limits.

3. *Controller shall accept and store 7-day schedules, be protected against memory loss during power outages, and shall reboot once power is regained and execute any commands that would have occurred during the outage.*

Add the following to 3.05 INSPECTIONS:

“3.05.B. The Contractor shall arrange for an inspection by the Building Department prior to backfilling pole foundations. “

- ITEM NO. 10** *Elsie Turner Field: Replace Specification Section 02728 Drainage Structures with new section attached.*
- ITEM NO. 11** *Elsie Turner Field: Replace Coversheet with Coversheet attached. Revision is to add drawings L.609 Retaining Wall Elevation and L.625 Trench Drains/Leaching Basins, to the list of Contract Documents.*
- ITEM NO. 12** *Elsie Turner Field: Replace Drawing L.101 with new Drawing L.101 attached. Revision is to clarify sawcutting requirement.*
- ITEM NO. 13** *Elsie Turner Field: Replace Drawing L.102 with new Drawing L.102 attached. Revision is to clarify portions of stone walls to remain or to be demolished.*
- ITEM NO. 14** *Elsie Turner Field: Replace Drawings L.201 and L.202 with new Drawings L.201 and L.202 attached. Revision includes repositioning of shade shelters at softball field, reduction in the amount of protective fencing, revision to size and shape of exercise area, revision to bioretention area 2 and surrounding walkway layout. Addition of trench drains and leaching basins at softball field.*
- ITEM NO. 15** *Elsie Turner Field: Replace Drawing L.301 and L.302 with new Drawings L.301 and L.302 attached.*
- ITEM NO. 16** *Elsie Turner Field: Replace Drawings L.401 and L.402 with new Drawings L.401 and L.402. Revision is to field grading, parking lot grading, and height of wall at parking lot.*
- ITEM NO. 17** *Elsie Turner Field: Replace Drawings L.501 and L.502 with new Drawings L.501 and L.502. Revision is to areas of sod and seed related to changes in plan at Softball field and Bioretention area No. 2.*
- ITEM NO. 18** *Elsie Turner Field: Replace Drawing L.602 with new Drawing L.602 attached. Revision is to dimensions of mow strip.*
- ITEM NO. 19** *Elsie Turner Field: Replace Drawing L.605 with new Drawing L.605 attached. Revision is to Chain Link fence mow strip.*
- ITEM NO. 20** *Elsie Turner Field: Replace Drawing L.606 with new Drawing L.606 attached. Revision is to mow strip at backstop.*
- ITEM NO. 21** *Elsie Turner Field: Add new drawing L.609 attached. Revision is to height of retaining wall.*
- ITEM NO. 22** *Elsie Turner Field: Replace Drawing L.612 with new Drawing L.612 attached. Revision is to exercise area equipment and layout.*
- ITEM NO. 23** *Elsie Turner Field: Replace Drawing L.613 with new Drawing L.613 attached. Revision is to delete Back Extension.*

- ITEM NO. 24** *Elsie Turner Field: Replace Drawing L.614 with new drawing L.614 attached.
Revision is to delete a portion of chain link fencing at dugouts.*
- ITEM NO. 25** *Elsie Turner Field: Add new drawing L.624, attached.*
- ITEM NO. 26** *Elsie Turner Field: Replace Drawing ES.1A with new Drawing ES.1A attached.
Revision is to number of light fixtures.*
- ITEM NO. 27** *Elsie Turner Field: Replace Drawing ES.2 with new Drawing ES.2 attached.
Revision is to number of light fixtures, and correction to Control Cabinet Detail connections.*

Attachments:

Graverson Specifications Section 02725
Elsie Turner Specifications Section 02728
Graverson L.102A
Garverson L. 102
Graverson L.613
Graverson L.625
Elsie Turner Coversheet
Elsie Turner L.101-L.102
Elsie Turner L.201-L.202
Elsie Turner L.301-L.302
Elsie Turner L.401-L.402
Elsie Turner L.501-L.502
Elsie Turner L.602
Elsie Turner L.605
Elsie Turner L.606
Elsie Turner L.609
Elsie Turner L.612
Elsie Turner L.613
Elsie Turner L.614
Elsie Turner L.624
Elsie Turner ES.1A
Elsie Turner ES.2

END OF ADDENDUM NO. 1

SECTION 02725

DRAINAGE AND SEWER PIPE

PART I - GENERAL

1.01 GENERAL PROVISIONS

- A. All of the Contract Documents, including the Contract Form, General Provisions, General Conditions, Supplemental Conditions, and all Attachments to the General Provisions, and Division 1 - General Requirements, apply to the work of this Section.
- B. Examine and coordinate all Contract Drawings and other sections of the specifications for requirements which affect work of this section whether or not such work is specifically mentioned in this section. Coordinate work with other trades to assure the steady progress of all work under the Contract. The Contractor shall refer to the Contract Documents for all new work and coordinate how it relates to the installation of drainage and sewer pipe.

1.02 SCOPE OF WORK

- A. Under this Section the Contractor shall furnish all materials, equipment, labor, transportation, facilities and all operations and adjustments required for the installation of drainage and/or sewer pipe and all incidentals thereto.
- B. Drainage and sewer pipe shall be placed in the sizes and lengths indicated on the plans. Gate valves shall be placed along the drain and sewer pipes at locations as shown on the plans.
- C. Provide all coordination and pay all fees associated with installation of the sewer connection.

1.03 RELATED WORK

- A. Section 01050 - Field Engineering.
- B. Section 01700 - Project Closeout.
- C. Section 02100 - Site Preparation and Demolition.
- D. Section 02200 - Earthwork.
- E. Section 02622 - Field Drainage System.
- F. Section 02728 - Drainage Structures.

1.04 REFERENCES

- A. The following standards and definitions are applicable to the work of this Section to the extent referenced herein:
 - 1. ASTM A74 Cast Iron Soil Pipe and Fittings.
 - 2. ASTM C76 Reinforced Concrete Culvert, Storm Drain, and Sewer

Pipe

3. ASTM C443 Joints for Circular Concrete Sewer and Culvert Pipe, using Rubber Gaskets.
4. STM D1557 Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures using 10 lb. (4.54 kg) Rammer and 18 inch (457 mm) Drop.
5. ASTM D2729 Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
6. ASTM D1248 HDPE(High Density Polyethylene)(HDPE) Pipe and Fittings.
7. ASTM F2648 Test Methods for Non-Pressure (gravity flow) polyethylene (PE) pipes and fittings.

1.05 SHOP DRAWINGS/MANUFACTURER'S CUTS AND SPECIFICATIONS

- A. The Contractor shall submit to the Landscape Architect for approval six (6) copies of all materials and equipment proposed for use indicating manufacturers' names and addresses, identifying data and expected delivery dates. No consideration will be given to partial lists submitted from time to time. Intention of using specified materials and equipment shall not relieve the Contractor from submitting the above list, nor shall submission of the list relieve him from submission of shop drawings. Any item of material or of equipment not submitted for approval on the list will not be approved unless of the exact make and characteristics specified.
- B. If the material or equipment is installed before it is approved, the Contractor shall be liable for the removal and replacement at no extra charge to the Owner, if, in the opinion of the Landscape Architect, the material or equipment does not meet the intent of the Contract Documents.
- C. The Contractor shall submit the following information with all equipment shop drawings:
 1. Manufacturer's certified scale drawings, cuts or catalogs, including installation details.
 2. Manufacturer's specifications, including certified performance characteristics and capacity ratings.
- D. Product Data: The Contractor shall provide data indicating pipe and pipe accessories, connections, etc.

1.06 SAMPLES

- A. The Contractor shall submit all samples as requested in accordance with the provisions of the General Conditions. Samples accepted will be returned to the Contractor within five (5) days and may be incorporated into the work. Samples not accepted will be returned for disposition by the Contractor.
- B. One (1) square foot of filter fabric.

1.07 CODES, ORDINANCES AND PERMITS

- A. All work shall be performed in strict accordance with local and state codes and regulations including OSHA Construction Regulations Title 29 CFR Part 1926.
- B. Site utilities work shall be done in strict accordance with the Commonwealth of Massachusetts State Plumbing Code, latest edition, and all revisions thereto, and City of Waltham Engineering Department and Department of Public Works standards.
- C. Any material or workmanship called for in the above-mentioned requirements, which are not specified or shown on the drawings, shall be furnished and installed by the Contractor as though same has been specifically mentioned or indicated. If the drawings and specifications are at variance with any regulations, the bidder shall notify the Landscape Architect ten (10) days before the date for submitting his bid. In many cases the drawings are in excess of the requirements in the codes and these shall be followed to the fullest. If the Contractor fails to notify the Landscape Architect at this time and installs work in variance with the above-mentioned codes and regulations, he shall assume the responsibility and the expense to rectify the installation.
- D. Before commencing work, the Contractor shall obtain all permits necessary in connection with the installation of this equipment and pay fees required for same. He shall include the cost and back charge of installing any portion of the work where performed by municipal departments or utility companies.

1.08 SUBSTITUTIONS

- A. Any reference to a particular device, product, material, article or system shall be interpreted as establishing a standard of quality, design, performance, or function, and shall not be construed as limiting competition.

1.09 RECORD DRAWINGS

- A. The Contractor shall submit record drawings as specified in Section 01700 - Project Closeout.

1.10 SITE VISITATION

- A. It is recommended that all prospective bidders visit the job site to acquaint themselves with the general and special conditions that may be encountered which will have a bearing on labor, transportation, cutting and patching, material handling and storage, and similar items, during the prosecution of the work. Failure to do so shall not relieve him of his responsibility for properly estimating the difficulties involved in the work to be performed under this section.

1.11 REFERENCE STANDARDS

- A. References herein to any technical society, organization, group or body is made in accordance with the following abbreviations.

- B. ASTM - American Society for Testing Materials.
- C. AASHTO - American Association of State Highway and Transportation Officials.
- D. AWWA - American Water Works Association.
- E. ANSI - American National Standards Institute.
- F. MHD Standard Specifications: The Commonwealth of Massachusetts Highway Department, Standard Specifications for Highways and Bridges, 1988.
- G. Requirements of the City of Waltham Engineering Department and Department of Public Works.

1.12 MATERIALS AND WORKMANSHIP

- A. It is the intent of these specifications to establish quality standards for all material and equipment incorporated in the work of this section. All material and equipment installed hereunder shall be new and shall be the best of each respective kind and type. Proper care shall be exercised in handling all equipment and materials herein specified.
- B. The installation shall be as indicated on the drawings and in accordance with the manufacturer's recommendations as approved by the Landscape Architect. The installation shall be accomplished by workmen skilled in this type of work.
- C. All conduits, pipes, structures, etc. in use and which are damaged during excavation, whether uncovered or not and whether or not they are shown on the plans, shall be repaired at the expense of the Contractor.
- D. Storage of materials by the Contractor for incorporation into the work shall be off the site for other than material that is scheduled to be installed in the time span of two (2) working days. The storage site selected by the Contractor shall be made accessible to the City inspection forces at all times during normal working hours.

PART 2 - MATERIALS

2.01 GENERAL

- A. Drawings and specifications are intended to supplement and explain each other. Materials not specifically mentioned in the specifications shall be as indicated on the drawings. Where conflicts occur between the drawings or specifications, or within either document itself, the item or arrangement of better quality, greater quantity or higher cost shall be included in the Contractor's bid. Where no specific kind or quality of material is given, a first-class standard article, shall be furnished.

2.02 DRAINAGE AND SEWER PIPE

- A. PVC Pipe for use as storm drainage and sewer lines shall contain integrally belled and spigot type rubber gasketed joints conforming to ASTM 3034. Gaskets shall conform to ASTM F-477 and shall be marked to indicate nominal pipe size and proper insertion direction. The standard dimension ratio (SDR) of all pipe and fittings shall not exceed 35. Standard pipe lengths shall be twenty (20) feet unless otherwise approved. All necessary glues, gaskets and fittings shall be furnished in order to make the work complete and acceptable to the Engineer.

- B. HDPE Pipe shall be ADS N-12 high density polyethylene pipe (HDPE) as manufactured by Advanced Drainage Systems (ADS), or approved equal, and shall conform to the requirements of AASHTO M-294, and ASTM F2648.
 - 1. HDPE pipe shall be smooth wall perforated where indicated.
 - 2. Pipe and fittings shall be made of polyethylene compounds which conform to the physical requirements of Type III, Category 3, 4 or 5, P23, P33, or P34, Class C per ASTM D-1248 with the applicable requirements defined in ASTM D-1248. Clean reworked material may be used.
 - 3. Pipe shall be of the diameters shown on the Drawings.

- C. HDPE Fittings shall conform to:
 - 1. Fittings shall conform to ASTM F 2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the watertight performance of requirements of ASTM F 2306.
 - 2. Couplers and pipe shall be from the same manufacturer.
 - 3. Couplers shall be corrugated to match the pipe corrugations and the width shall not be less than one-half the nominal diameter of the pipe. Split couplers shall be manufactured to engage an equal number of corrugations on each side of the pipe joint.
 - 4. One half inch diameter galvanized steel bolts and nuts or nylon ties as supplied by manufacturer shall be used on coupling bands.

- D. Furnish pipe in the sizes indicated on the plans and/or details.

- E. DUCTILE IRON PIPE (DIP)
 - 1. Ductile iron pipes shall be designed in accordance with AWWA C150 and shall be manufactured in accordance with AWWA C151.
 - 2. Unless otherwise indicated or specified, ductile iron pipe shall be Thickness Class 52.
 - 3. All pipe delivered to the job site shall be accompanied by independent testing laboratory reports certifying that the pipe and fittings conform to the above mentioned specifications. In addition, the pipe shall be subject to thorough

inspection and tests, the right being reserved for the Engineer to apply such of the tests specified, as he may from time to time deem necessary.

4. All cutting of pipe shall be done with a machine suitable for cutting DI pipe. Cut ends shall be beveled when recommended by the pipe manufacturer.

F. PVC SURFACE DRAINAGE INLETS AND BASINS

1. PVC surface drainage inlets and drain basins shall be the type as indicated on the drawings and shall be as manufactured by Nyloplast (770-932-2443) or equal, conforming to the following:
 - a. Drains and basins shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the furnished configuration.
 - b. Drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide watertight connections with the specified pipe system.
 - 1) Joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals.
 - 2) The material used to manufacture the pipe stock shall conform to ASTM D1784 cell class 12454.
 - c. Grates shall be ductile iron grates and shall be made specifically for each fitting so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet.
 - 1) Grates shall be capable of supporting H-20 wheel loading.
 - 2) Grates shall be ADA compliant.
 - 3) Metal for manufacture of castings shall conform to ASTM A536 Grade 70-50-05 for ductile iron.
 - 4) Grates shall be provided painted black.
 - d. Provide concrete ring under and around grate and frame.

2.03 FILTER FABRIC

- A. SUPAC 8NP by Phillips Fibers Corporation, AMOCO 4508, Trevira 1125, Mirafi 180N, or equal.

2.04 BEDDING AND COVER MATERIALS

- A. Crushed Stone Bedding: Crushed stone as specified in Section 02200 - Earthwork.

- B. Cover: Gravel as specified in Section 02200 - Earthwork.

2.05 APPURTENANCES

- A. Provide all appurtenance and incidentals necessary to make the sewer and drainage pipe installation and connection complete and acceptable, including all materials necessary for the excavation, backfill, and compaction.

PART 3 - EXECUTION

3.01 PIPE INSTALLATION

- A. Layout out utilities as required in Section 01050 - Field Engineering. Prior to excavating trenches the Contractor shall field verify all existing inverts and inform the Landscape Architect of any discrepancies. Record these inverts on Record Drawings.
- B. The trench for the pipe shall be excavated to the required line and grade and be of sufficient width to permit thorough tamping of the fill material under the haunches and around the pipe. Soft or unsuitable material encountered below the normal bedding line of the pipe shall be removed as directed, replaced with selected material, gravel or crushed stone and thoroughly compacted. The bottom of the trench shall be shaped to conform to the curvature of the pipe. This bed shall also be excavated to accommodate the bells of pipes.
- C. The pipe shall be laid true to the specified lines and grades where shown on the Plans and as directed. The bell end shall be toward rising grade and each section of pipe shall have a firm bearing throughout its length. Material placed around and under the pipe shall be free of stones larger than three (3) inches in diameter.
- D. No load greater than three (3) tons shall be moved over any pipe until a fully-compacted backfill of at least two (2) feet has been placed over the top of the pipe. This minimum will be increased to three and one-half (3-1/2) feet for a forty thousand (40,000) pound single wheel load and to four (4) feet for a sixty thousand (60,000) pound single wheel load. However, compliance with these requirements is not to be construed as relieving the Contractor of any responsibility concerning damage to the pipe.
- E. Bedding material for pipes shall conform to the requirements of Section 02200 - Earthwork and shall be placed between the pipe and the walls of the trench in layers not exceeding six (6) inches in depth and thoroughly compacted. Each layer, if dry, shall be moistened and then compacted by rolling or by tamping with mechanical rammers. Compaction with iron hand tampers having a tamping face not exceeding twenty-five (25) square inches in area may be allowed only after permission has been given by the Landscape Architect. Special care shall be taken to thoroughly compact the fill under the haunches of the pipe. This method of filling and compacting shall be continued until the material is level with the centerline of the pipe. The remainder of the filling shall consist of suitable backfill material, as defined in Section 02200 - Earthwork, placed in successive layers not more than six (6) inches in depth. Each layer shall be thoroughly compacted in accordance with AASHTO-T99 Standard Proctor Test.

3.02 DRAINAGE AND SEWER PIPE

- A. Any pipe showing settlement after laying or which is not in true alignment or is otherwise unsatisfactory before final acceptance of the work shall be taken up and replaced or relayed by the Contractor without additional compensation..

3.03 WATER REMOVAL

- A. If water is encountered during construction, provisions must be made to remove the water by sheeting and pumping as required, or laying the pipe with a crushed stone bed so that the laying of pipe and other work can be done under stable conditions, all in accordance with Section 2.04 of these Specifications.

END OF SECTION

SECTION 02728

DRAINAGE STRUCTURES

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. All of the Contract Documents, including the Contract Form, General Provisions, General Conditions, Supplemental Conditions, and all Attachments to the General Provisions, and Division 1 - General Requirements, apply to the work of this Section.
- B. Specifications for requirements which affect work of this section whether or not such work is specifically mentioned in this section. Coordinate work with other trades to assure the steady progress of all work under the Contract. The Contractor shall refer to the Contract Documents for all new work and coordinate how it relates to the installation of drainage and sewer pipe.

1.02 SCOPE OF WORK

- A. The work to be done under this Section shall include the furnishing and installation of a drainage system consisting of catchbasins, trench drains, and leaching basins. The Contractor shall provide all material, labor, tools, equipment and transportation to complete these items.

1.03 RELATED WORK

- A. Section 02100 - Site Preparation and Demolition.
- B. Section 02200 - Earthwork.
- C. Section 02725 - Drainage Pipe.
- D. Section 03300 - Cast-in-Place Concrete.

1.04 REFERENCE STANDARDS AND SPECIFICATIONS

- A. Reference to the standards, specifications and tests of technical societies, organizations and governmental bodies is made in the Contract Documents.
- B. AASHTO - American Association of State Highway and Transportation Officials (tests or specifications).
- C. ASTM - American Society for Testing and Materials.
- D. MHD Standard Specifications: Mass. Standard Specs. - Standard Specifications for Highways, Bridges and Waterways, 1988 Edition, the Commonwealth of Massachusetts, Department of Public Works.
- E. Commonwealth of Massachusetts, Department of Public Works, Construction Standards, 1977.

DRAINAGE STRUCTURES

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- F. Municipal Standard Specifications and Procedures, as applicable.
- G. OSHA Construction Regulations Title 29 CFR Part 1926.
- H. Americans with Disabilities Act Accessibility Guidelines (ADAAG).

1.05 CODES, ORDINANCES AND PERMITS

- A. All work shall be performed in strict accordance with local and state codes and regulations.
- B. Site utilities work shall be done in strict accordance with the Commonwealth of Massachusetts State Plumbing Code, dated September 1976, and all revisions thereto.
- C. The Contractor shall secure all permits deemed necessary in connection with the installation of this equipment and pay fees required for same. He shall include the cost and back-charge of installing any portion of the work where performed by municipal departments or utility companies.

1.06 SUBMITTALS / SHOP DRAWINGS

- A. Shop drawings shall be submitted to the Engineer for all equipment. Six (6) copies shall be submitted and shall include cuts, scale drawings, installation details, manufacturer's specifications, certified performance characteristics and capacity ratings.
- B. No material or equipment may be purchased or installed prior to the submission and written approval of the shop drawings.
- C. Product Data: Provide data indicating, catch basins, frames and grates, etc.
- D. One (1) square foot of filter fabric.

PART 2 - MATERIALS

2.01 CEMENT CONCRETE

- A. Material shall comply with Section 03300 of these Specifications.

2.02 PRECAST CONCRETE DRAINAGE STRUCTURES

- A. All precast concrete units shall conform to Section M4.02.14 of the Standard Specifications in all aspects, and to the City of Waltham Standard Details for Drainage Structures as applicable.
- B. Refer to the Details in the Contract Drawings.

DRAINAGE STRUCTURES

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Elsie Turner Field

2.03 CASTINGS

- A. Iron castings for Catch Basins & Manholes (frames, grates and covers) shall conform to Mass Highway Construction Manual standard designs and to the requirements of AASHTO Designation M105, Class No. 30, Gray Iron Castings, unless otherwise specified. Test Bar B, 1.20 inches in diameter.
1. Catch basin frame and grate casting(s) shall be 24" round grate conforming to ADA requirements.
 2. Manhole Frames and Covers: Cover shall be of minimum weight of 150 pounds, HD20 loading, solid cover, with a pick-hole, with water tight top flange complying with the requirements of the City of Waltham Engineering Department.

2.04 FILTER FABRIC

- A. SUPAC 8NP by Phillips Fibers Corporation, AMOCO 4508, Trevira 1125, Mirafi 180N, or equal

2.05 TRENCH DRAINS & TRENCH DRAIN PIPING AT SOFTBALL FIELD

- A. Trench drains shall be Polydrain units as manufactured by ABT, or equal, conforming to the following:
1. Drains shall be radiused, presloped at approximately 0.06% slope. Units shall be interlocking with anchoring ribs.
 2. Drain units shall be polyester polymer concrete with a compressive strength of 17,000 psi minimum, bending strength of 4,000 psi minimum, and tensile strength of 2,000 psi minimum. Moisture absorption shall be 0.2% maximum, with freeze/thaw without weight loss of 1,600 number of cycles minimum.
 3. Drain units shall have inside top width of 4" and exterior width of 6" nominal.
 4. Drain units shall have in-line catch basins. Catch basins shall be provided with removable stainless steel trash buckets.
 5. Frame & grate shall be epoxy coated ductile iron conforming to ASTM A-536 with a minimum open area of 0.21 square feet per lineal foot.
 6. Grates shall be removable with an anti-vandal locking device.
 7. Grates shall be ADA compliant and heel-proof.

2.06 TRENCH DRAIN AT ENTRY DRIVE

- A. Trench drain at entry drive shall be as indicated on the Drawings.

2.07 LEACHING BASINS

- A. Leaching Basins shall be as indicated on the Drawings.

PART 3 - EXECUTION

- 3.01 Structures of various types and depths shall be constructed to the line and grades, dimensions and design shown on the plans and as directed with the necessary frames, gratings, covers, aluminum steps, etc., and in accordance with these Specifications after verification of inverts of utilities to remain.
- 3.02 The bricks and blocks (if required) shall be wetted as necessary before laying. All joints in brick masonry shall be thoroughly flushed full of mortar and no joints on the inside face shall be greater than one-quarter (1/4) inch. After the bricks and blocks are laid up, the outside of the structure shall be plastered with one-half (½) inch thick mortar coat.
- 3.03 Connections will be carefully made to all existing and proposed lines to the grades and elevations shown on the contract drawing.
- 3.04 All catch basins shall have a cast iron hinged metal hood trap installed over the outlet pipe or an oil trap outlet as detailed in the drawings. Use twelve (12) inch hoods, unless sizes equal to the specified pipe sizes are available.
- 3.05 Unless otherwise directed or specified, two (2) weep holes shall be built into the walls of all new structures. Each weep hole shall consist of a section of four (4) inch pipe or equivalent opening to carry water through the wall of the structure. The outside end of the pipe or opening shall be covered with a one-quarter (1/4) inch mesh galvanized wire screen 23 gauge satisfactorily fastened against the wall. The drain to the weep hole shall be excavated and back-filled with two (2) cubic feet of broken rock or crushed stone. The crushed stone shall be placed against and over the end of the pipe or opening with a section of filter cloth to prevent the entrance of fine material. Only one (1) type of weep hole shall be used consistently throughout the project.
- 3.06 Suitable materials obtained from the excavation or from borrow shall be placed between the outside of the structure and the limits of the excavation, uniformly distributed in successive layers not exceeding six (6) inches in depth and thoroughly compacted by tamping with mechanical rammers or tampers. When required, the backfill material shall be moistened during the compacting. Compaction with iron hand tampers having a tamping face not exceeding twenty-five (25) square inches may be allowed, but only after permission has been given by the Engineer.
- 3.07 All materials removed in the excavation for catch basins, manholes, or storm water recharge units and remaining after the filling about the finished structure has been made shall be used wherever possible within the project or removed and satisfactorily disposed of outside of the project limits without additional compensation.
- 3.08 The embedded ends of the aluminum ladder steps shall be painted with zinc chromate or bitumastic, and allowed to completely dry before they are installed. Installation shall be as shown on the plans.

DRAINAGE STRUCTURES

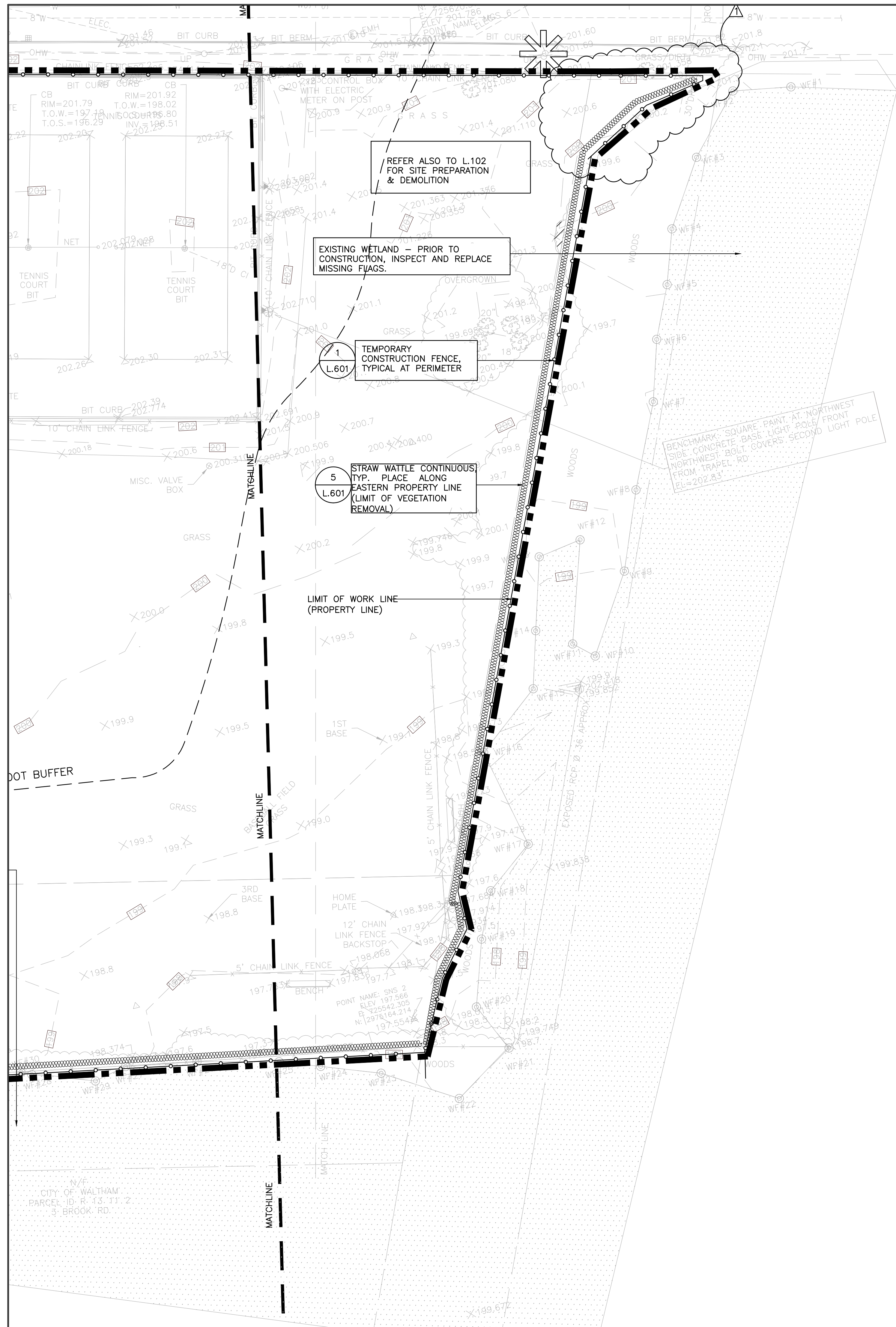
02728-4

Elsie Turner Field

Revised Addendum No. 1 - 11/20/17

- 3.09 Frame castings for structures shall be set in full mortar beds true to the lines and grades as directed.
- 3.10 Where directed, the castings shall be temporarily set at such grades as to provide drainage during the construction.
- 3.11 In general, all methods for installation of the catch basin and manhole units, brick adjustments and mortaring, and installation of frames, grates and covers, shall conform to Section 201 of the "Standard Specifications".
- 3.12 Installation of Trench Drain:
 - A. Install per manufacturer's instructions and as indicated on the plans.

END OF SECTION



REFER ALSO TO L.102 FOR SITE PREPARATION & DEMOLITION

EXISTING WETLAND - PRIOR TO CONSTRUCTION, INSPECT AND REPLACE MISSING FLAGS.




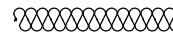
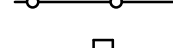
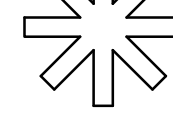
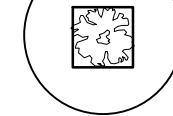
1
L.601
TEMPORARY CONSTRUCTION FENCE, TYPICAL AT PERIMETER

5
L.601
STRAW WATTLE CONTINUOUS TYP. PLACE ALONG EASTERN PROPERTY LINE (LIMIT OF VEGETATION REMOVAL)

LIMIT OF WORK LINE (PROPERTY LINE)

BENCHMARK: SQUARE PAINT AT NORTHWEST SIDE CONCRETE BASE LIGHT POLE FRONT NORTHWEST BOLT COVERS SECOND LIGHT POLE FROM TRAPEZ RD. EL=202.83'

SITE PREPARATION & DEMOLITION LEGEND

-  L.O.W. LIMIT OF WORK LINE
-  TEMPORARY CONSTRUCTION ENTRANCE
-  PROTECTED WETLAND
-  STRAW WATTLE
-  CONSTRUCTION FENCE, TYP.
-  PARK CLOSURE SIGN, REFER TO SPEC SECTION 01500
-  EXISTING TREES TO REMAIN WITH TREE PROTECTION
- TYP. TYPICAL

REFER TO L.101A FOR GENERAL AND SPECIAL NOTES

Carolyn Cooney & Associates

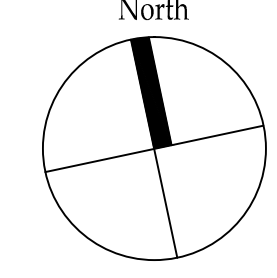
Landscape Architecture / Planning
13 Elm Street, Milford, MA 01757
Telephone 508 478 8426, Facsimile 508 478 8607

Site Engineering Consultants, Inc.
55 Grape Shot Road
Sharon, Massachusetts 02067
TEL: (781) 784-0326
FAX: (781) 784-0492
CONSULTING CIVIL ENGINEERS



No.	Description	Date
△	REVISED ADDENDUM #1	11/20/17

REVISIONS

North	
	

Project:
**CITY OF WALTHAM
CRAVERSON PLAYGROUND
16 PINE VALE ROAD
WALTHAM, MA 02451**

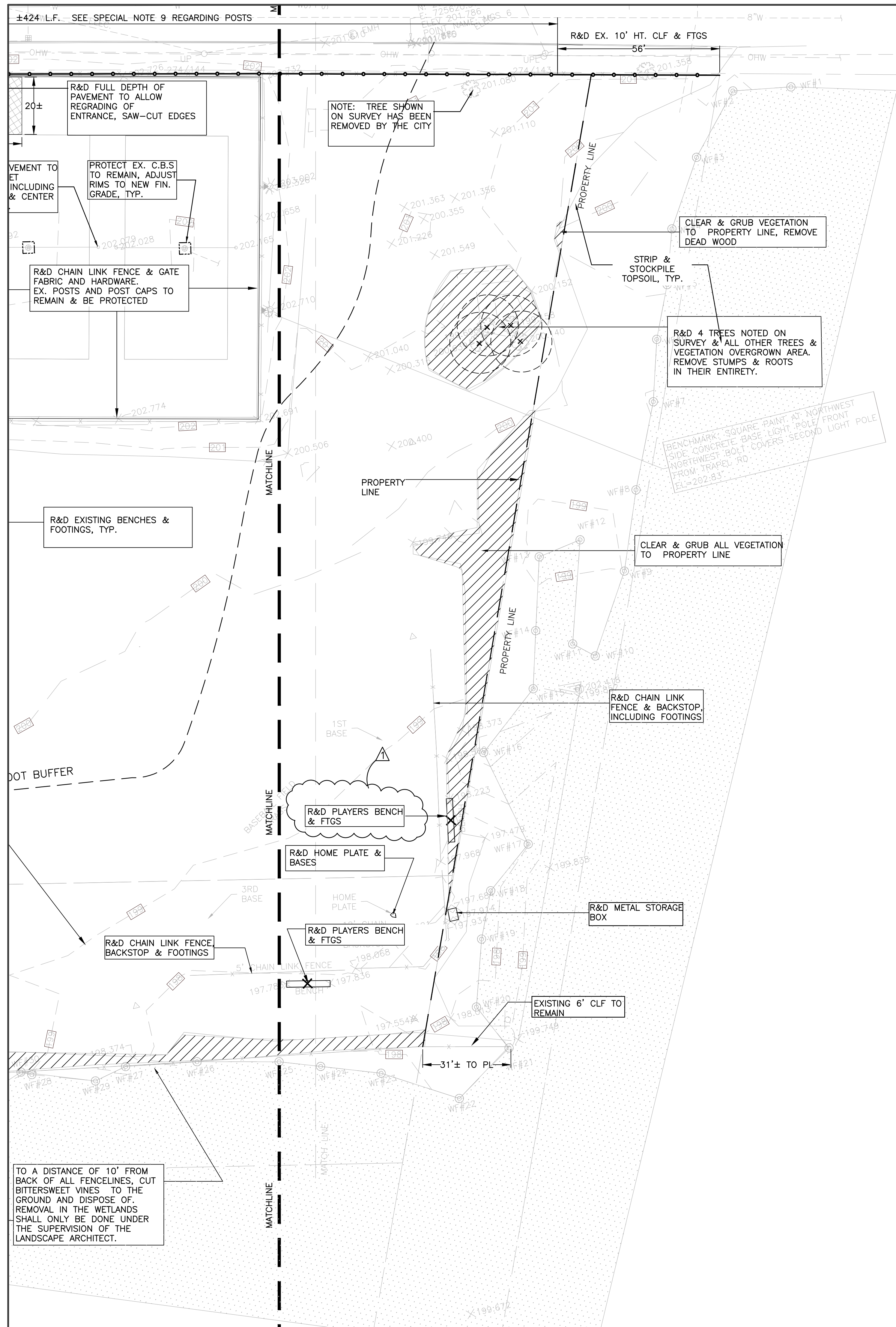
Prepared For:
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:
**SITE PREPARATION &
TEMPORARY CONTROLS**

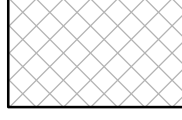
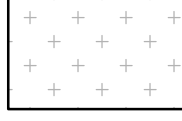

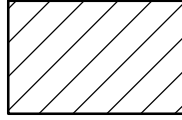
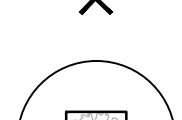


Scale 1"=20' Date OCT 31, 2017
Drawn By CCC
Checked By DRB
Approved By CCC
Project No. 1710.00



DWG No. **L.102A**



SITE PREPARATION & DEMOLITION LEGEND

-  R&D BITUMINOUS CONCRETE PAVING
-  R&D ENGINEERED WOOD FIBER MULCH & CURBING
-  WETLAND AREA, DO NOT DISTURB
-  R&D ALL VEGETATION, CLEAR & GRUB ROOTS, REMOVE STUMPS ENTIRELY
-  REMOVE & DISPOSE OF EXISTING SITE ELEMENTS
-  EXISTING TREES TO REMAIN, SEE SPECIAL NOTE 5
-  REMOVE EXISTING TREE & STUMP IN ENTIRETY
- TYP. TYPICAL
- R & D REMOVE AND DISPOSE
- R & S REMOVE AND SALVAGE
- R & R REMOVE AND REPLACE

REFER TO L.101 FOR GENERAL AND SPECIAL NOTES

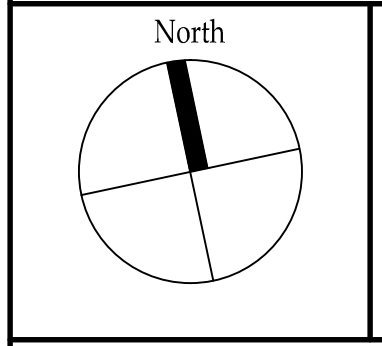
Carolyn Cooney & Associates
 Landscape Architecture / Planning
 13 Elm Street, Milford, MA 01757
 Telephone 508 478 8426, Facsimile 508 478 8607

Site Engineering Consultants, Inc.
 55 Grape Shot Road
 Sharon, Massachusetts 02067
 TEL: (781) 784-0326
 FAX: (781) 784-0492
 CONSULTING CIVIL ENGINEERS



No.	Description	Date
△	REVISED ADDENDUM #1	11/20/17

REVISIONS



Project:
**CITY OF WALTHAM
 CRAVERSON PLAYGROUND
 16 PINE VALE ROAD
 WALTHAM, MA 02451**

Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
**SITE PREPARATION &
 DEMOLITION PLAN**

Scale 1"=20' Date OCT 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By CCC
 Project No. 1710.00

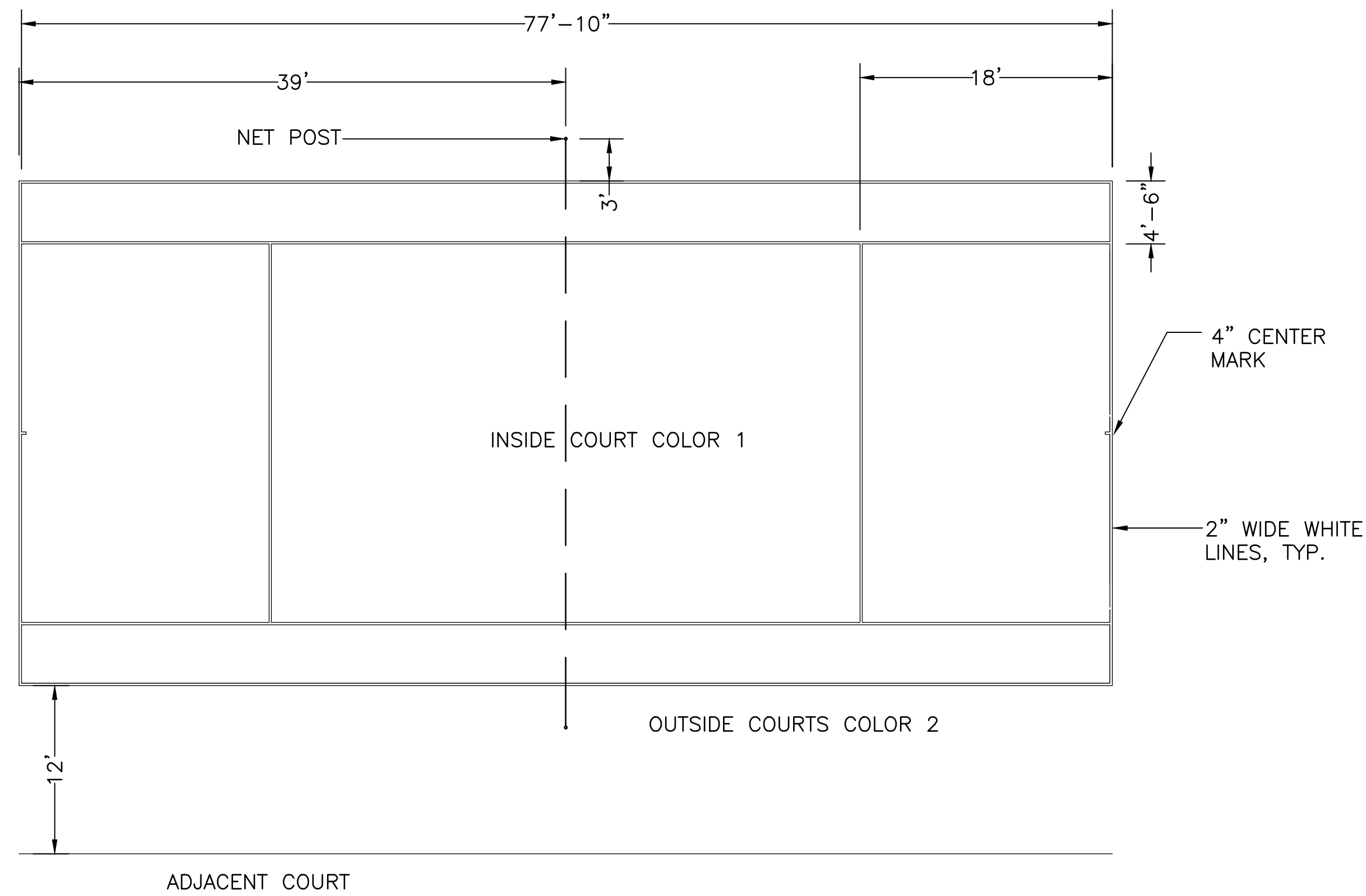


DWG No. **L.102**

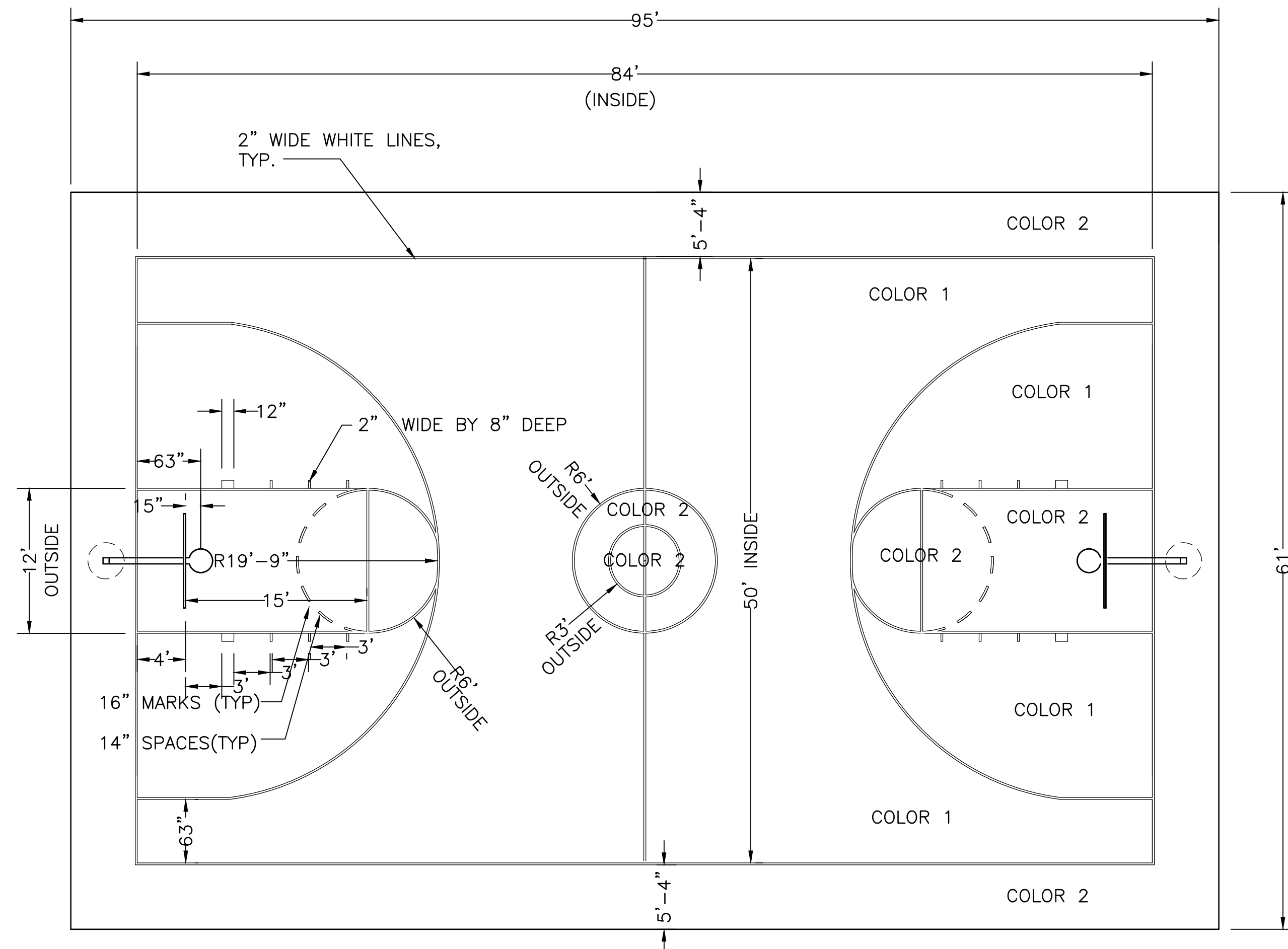
ALL MEASUREMENTS ARE TO THE OUTSIDE OF LINES

CENTER COURTS WITHIN EXISTING FENCE LINES

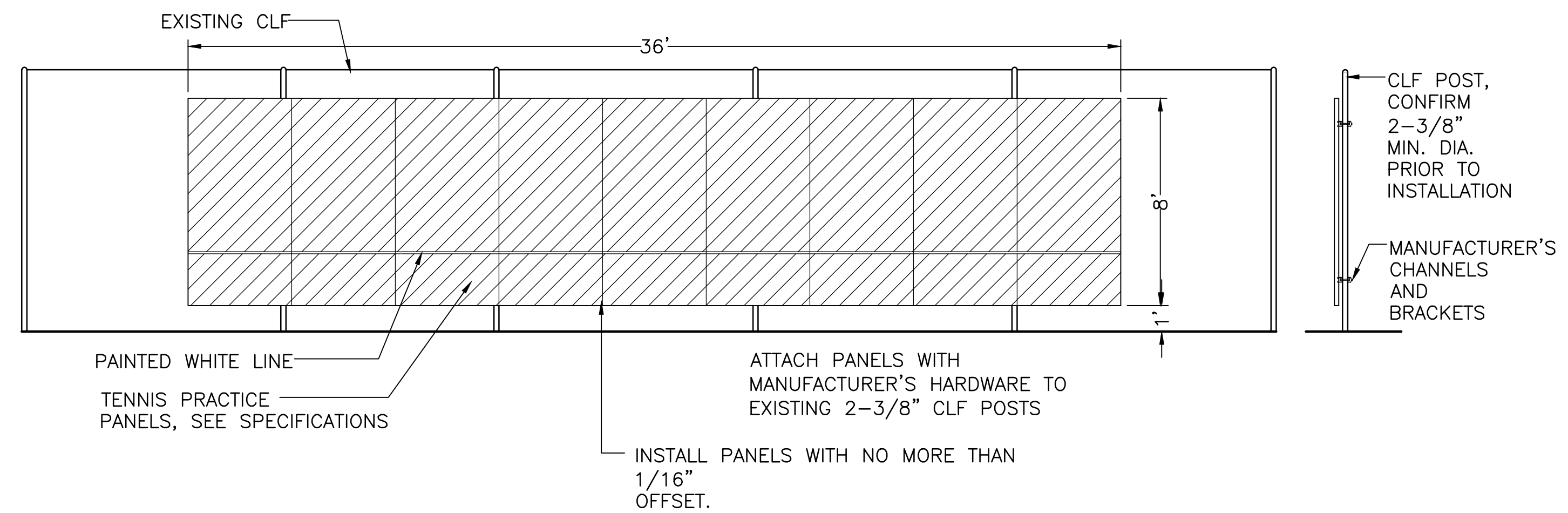
REFER TO DETAIL 2 - L.613 FOR TENNIS BACKBOARD DETAIL



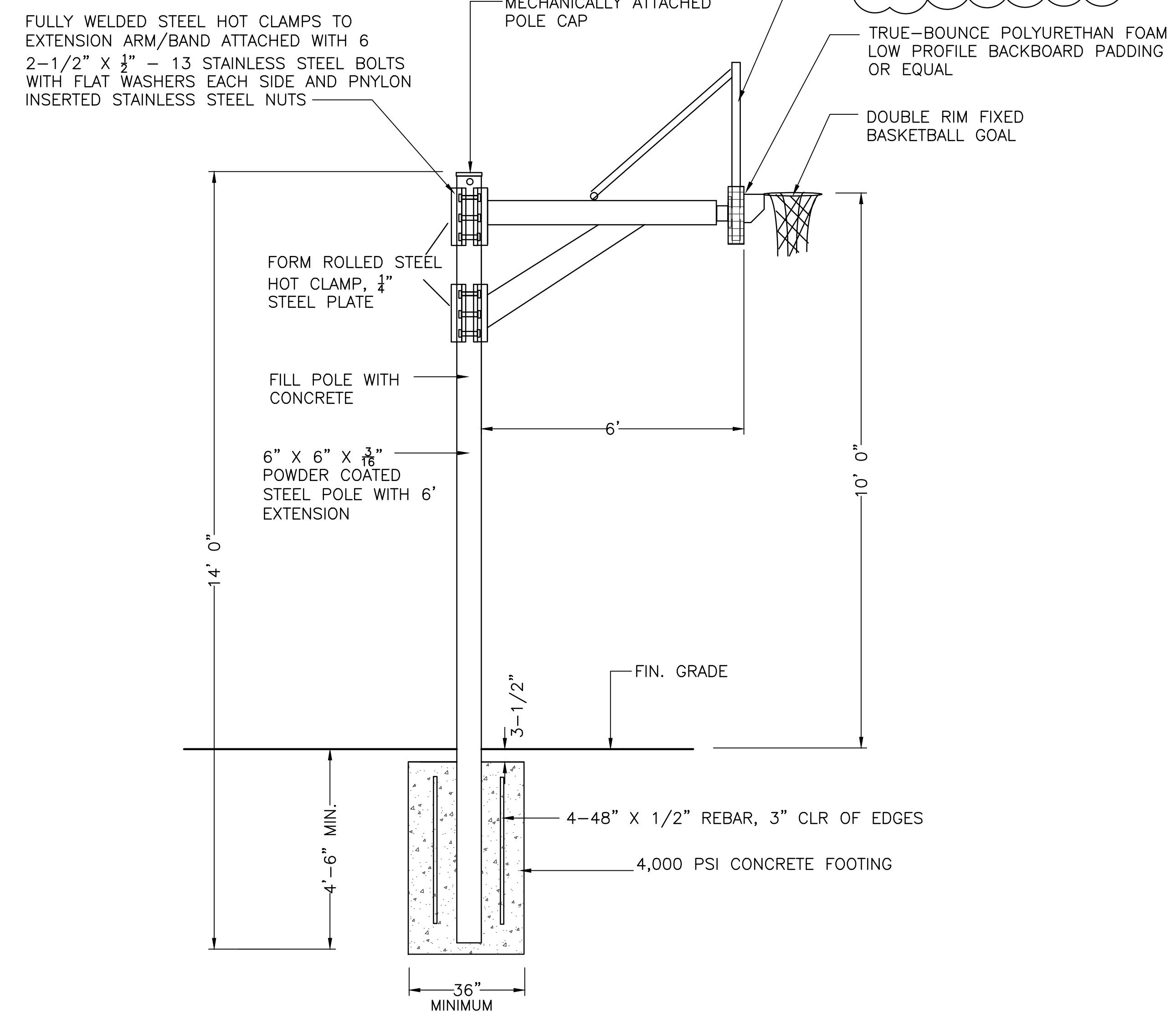
1 TENNIS COURT LAYOUT AND LINE STRIPING DETAIL
SCALE: 1/8" = 1'-0"



3 BASKETBALL COURT LINE PAINTING LAYOUT
SCALE: 1/8" = 1'-0"



ELEVATION
2 TENNIS BACKBOARDS (2 SETS OF 8' X 36')
SCALE: 1/4" = 1'



SECTIONAL ELEVATION
4 6' OFFSET BASKETBALL STANDARD - 2 REQUIRED
SCALE: 1/2" = 1'

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Sharon, Massachusetts 02067
TEL: (781) 784-0326
FAX: (781) 784-0492
CONSULTING CIVIL ENGINEERS



No.	Description	Date
1	REVISED ADDENDUM #1	11/20/17

REVISIONS

Project:

CITY OF WALTHAM
GRAVERSON PLAYGROUND
16 PINE VALE ROAD
WALTHAM, MA 02451

Prepared For:

CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453

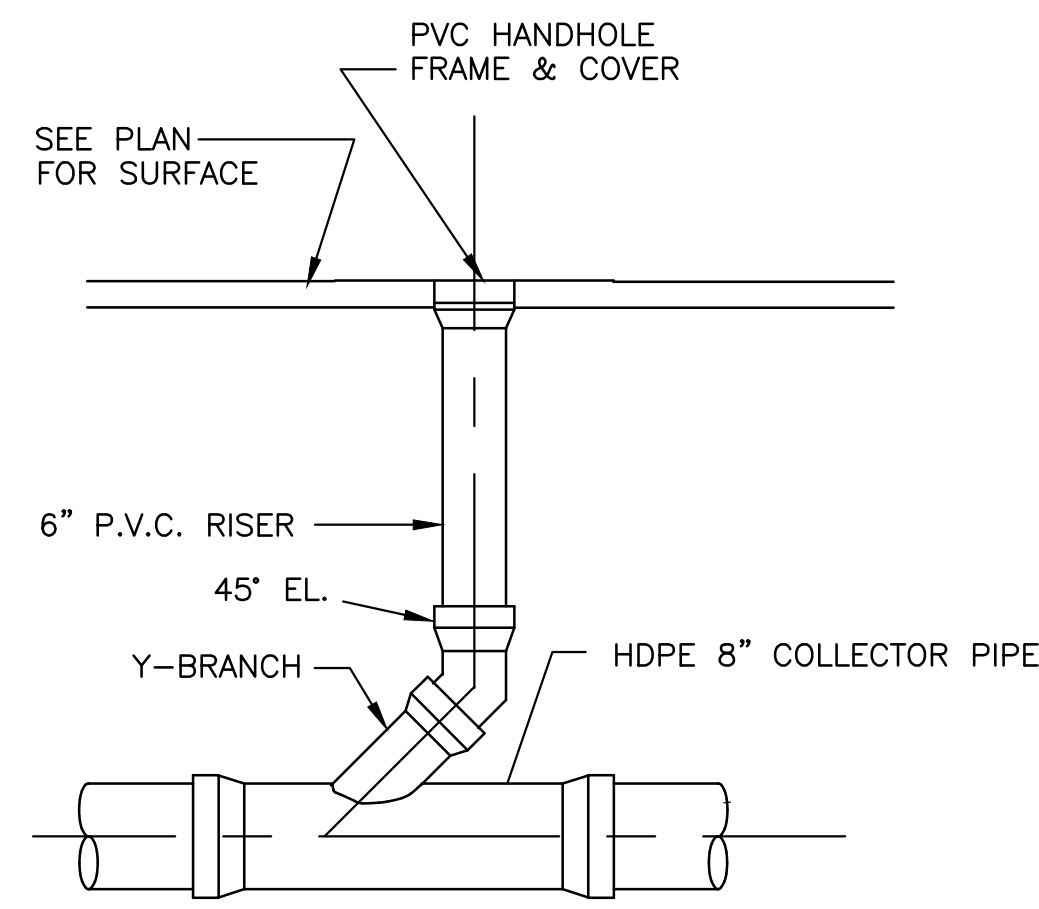
TITLE:

TENNIS/BBALL COURT
DETAILS

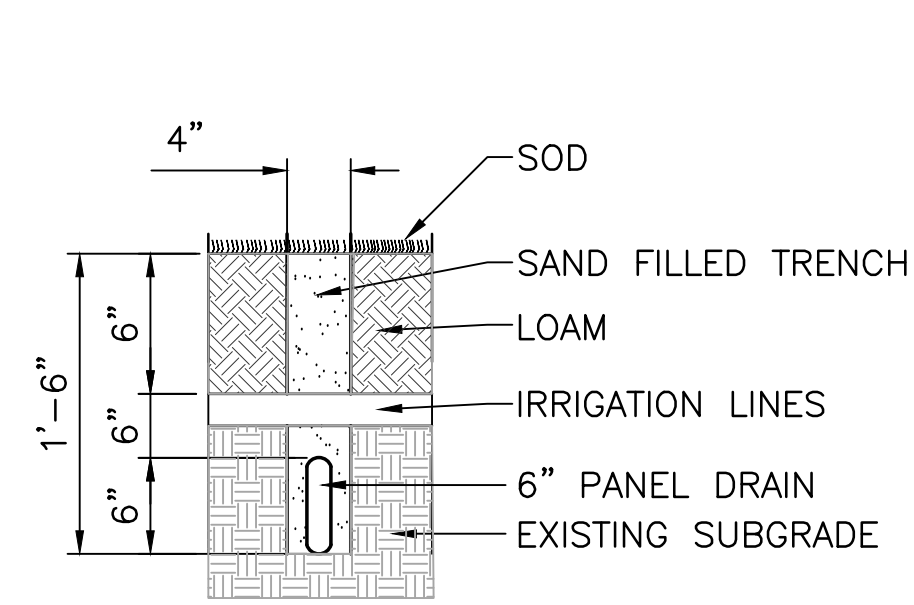
Scale AS NOTED Date OCT 31, 2017
Drawn By CCC
Checked By DRB
Approved By VH
Project No. 1710.00

DWG No.

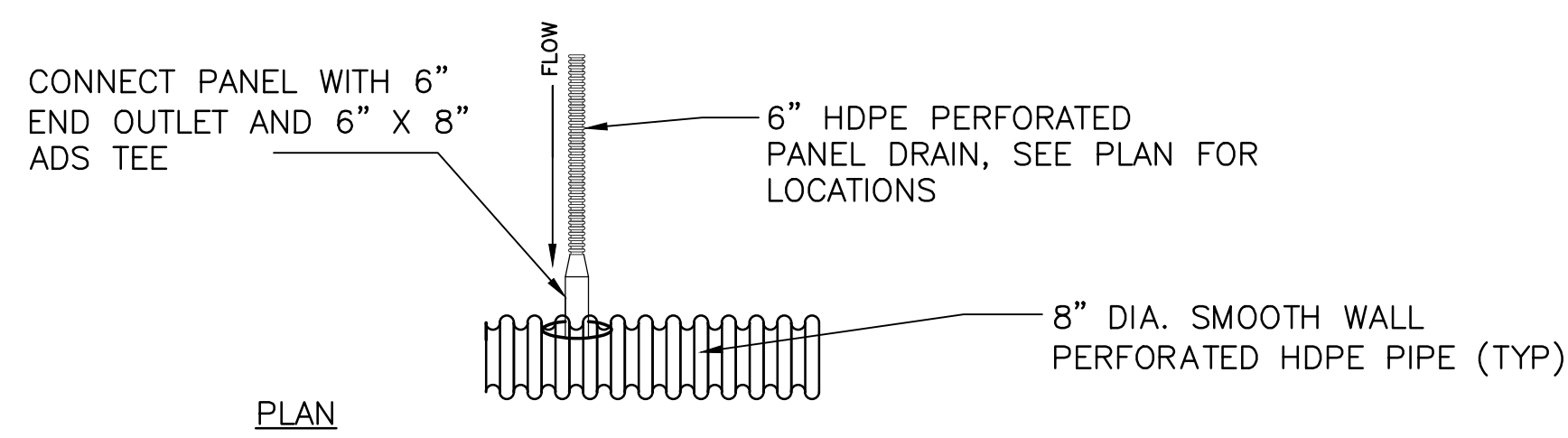
L.613



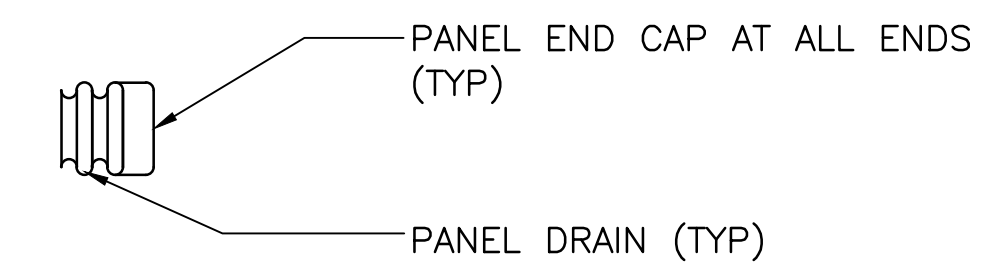
1 UNDERDRAIN CLEANOUT DETAIL
N.T.S.



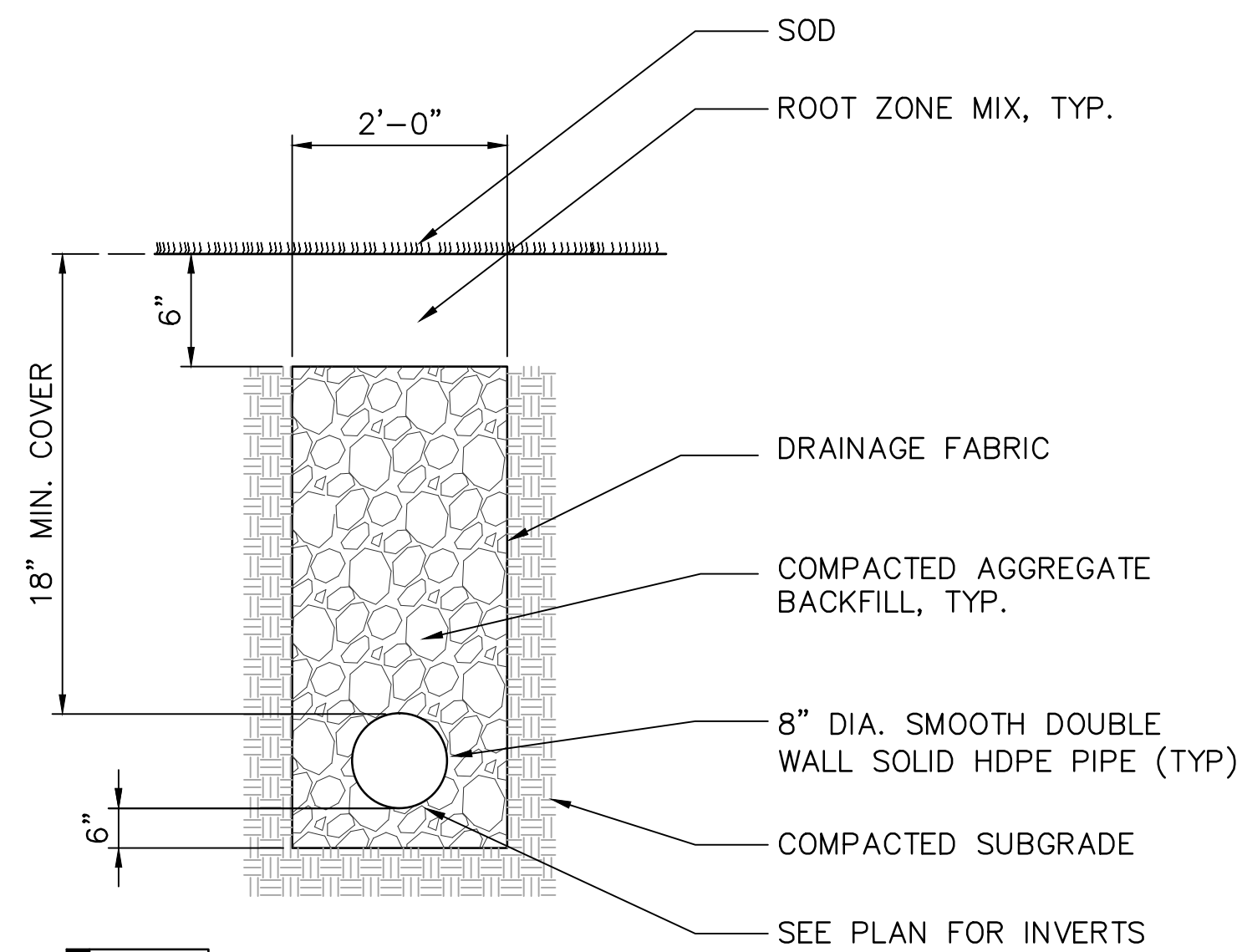
2 PANEL DRAIN DETAIL
N.T.S.



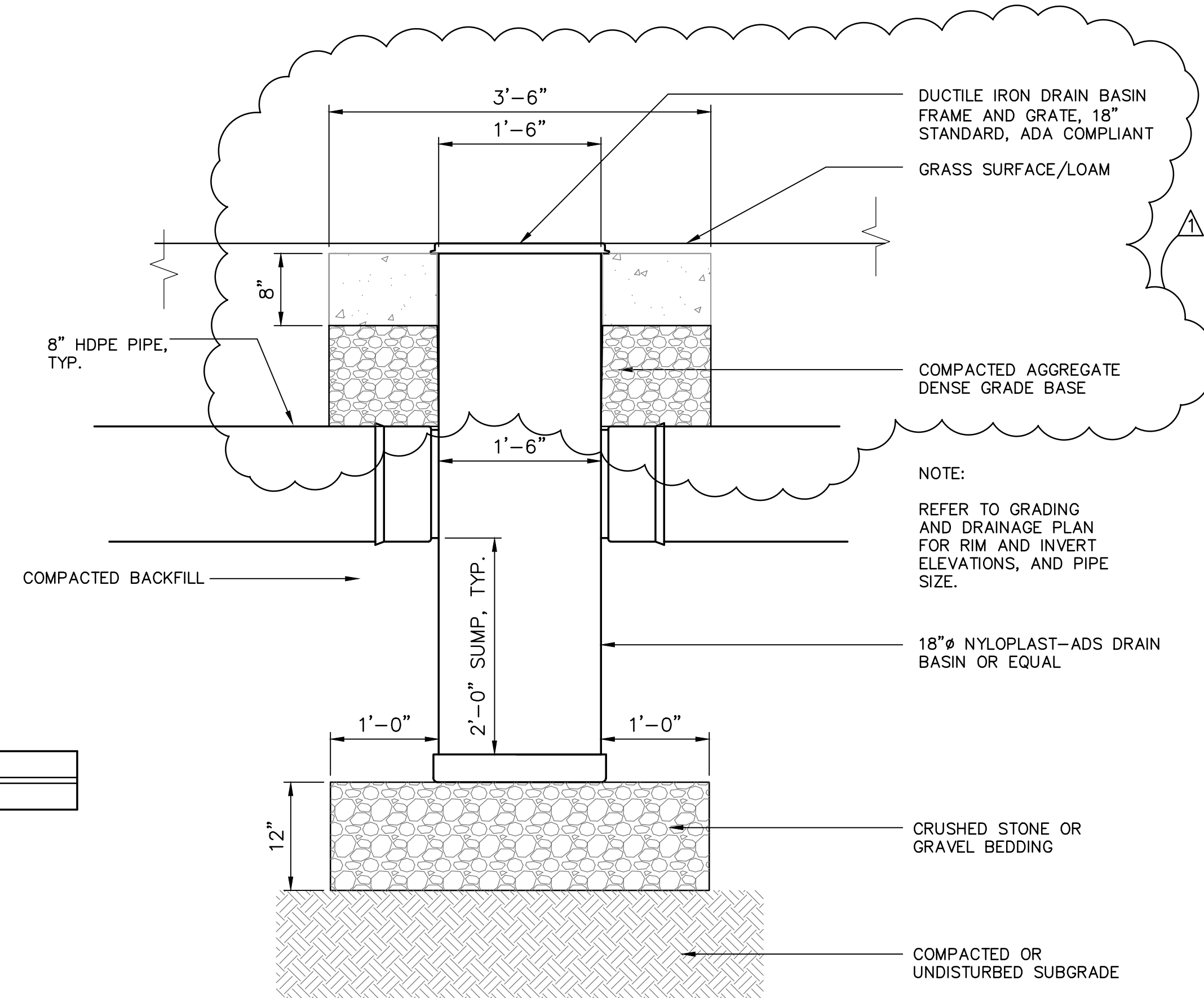
3 PANEL DRAIN CONNECTION DETAIL
N.T.S.



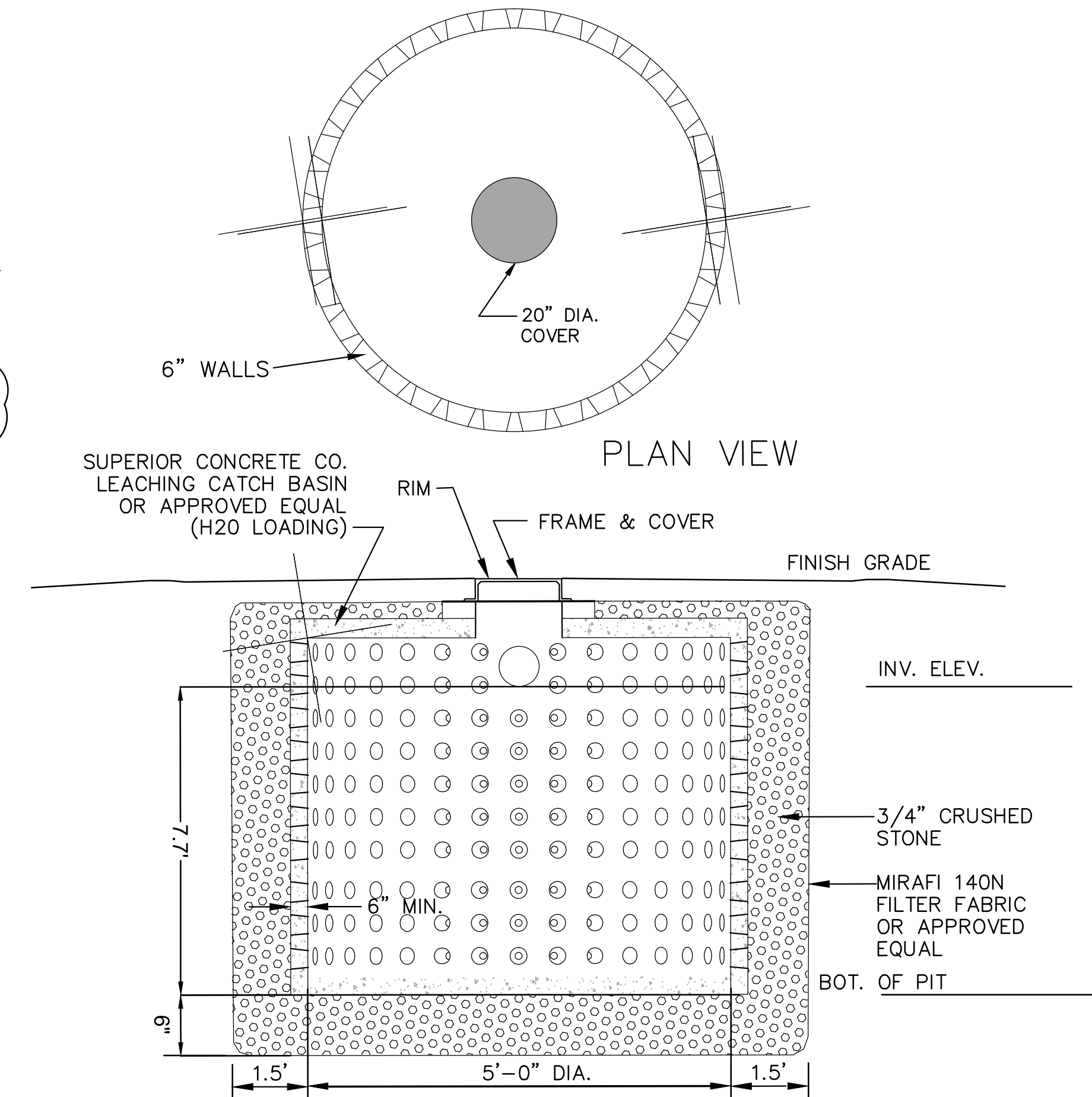
4 PANEL DRAIN END CAP DETAIL
N.T.S.



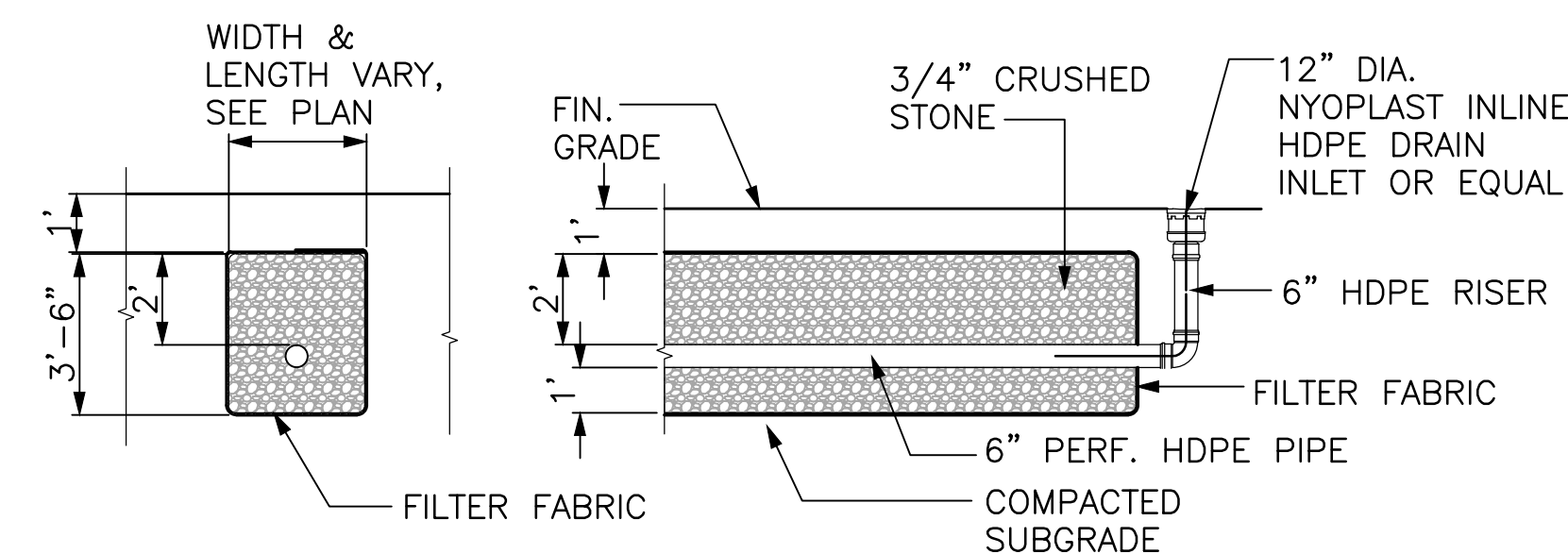
5 COLLECTOR PIPE
N.T.S.



6 DRAIN BASIN DETAIL, TYP.
N.T.S.



7 LEACHING BASIN DETAIL
N.T.S.



8 STONE INFILTRATION TRENCHES & BED WITH IN-LINE DRAINS
N.T.S.

Carolyn Cooney & Associates

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13 Elm Street, Millis, MA 01957
Telephone 508 478 8426, Facsimile 508 478 8607

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Sharon, Massachusetts 02067
TEL: (781) 784-0326
FAX: (781) 784-0492
CONSULTING CIVIL ENGINEERS



REVISIONS

No.	Description	Date
1	REVISED ADDENDUM #1	11/20/17

Project:

**CITY OF WALTHAM
GRAVERSON PLAYGROUND
16 PINE VALE ROAD
WALTHAM, MA 02451**

Prepared For:

**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02451**

TITLE:

**DRAINAGE
DETAILS 1**

Scale AS NOTED Date OCT 31, 2017
Drawn By DRB
Checked By CCC
Approved By CCC
Project No. 1710.00

DWG No.

L.625

Construction Documents

Improvements to Elsie Turner Field

421 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02452

OCTOBER 31, 2017

MAYOR JEANNETTE A. McCARTHY
CITY OF WALTHAM

CITY OF WALTHAM RECREATION DEPARTMENT
510 MOODY STREET
WALTHAM, MASSACHUSETTS 02453

LANDSCAPE ARCHITECT:
CAROLYN COONEY & ASSOCIATES

13 ELM STREET
MILFORD, MASSACHUSETTS 01757
TEL: (508) 478-8426
FAX: (508) 478-8607

SUBCONSULTANTS:
WILLIAMS & SPARGES, LLC
CIVIL ENGINEERS
189 NORTH MAIN STREET
MIDDLETON, MA 01949
(978) 539-8088

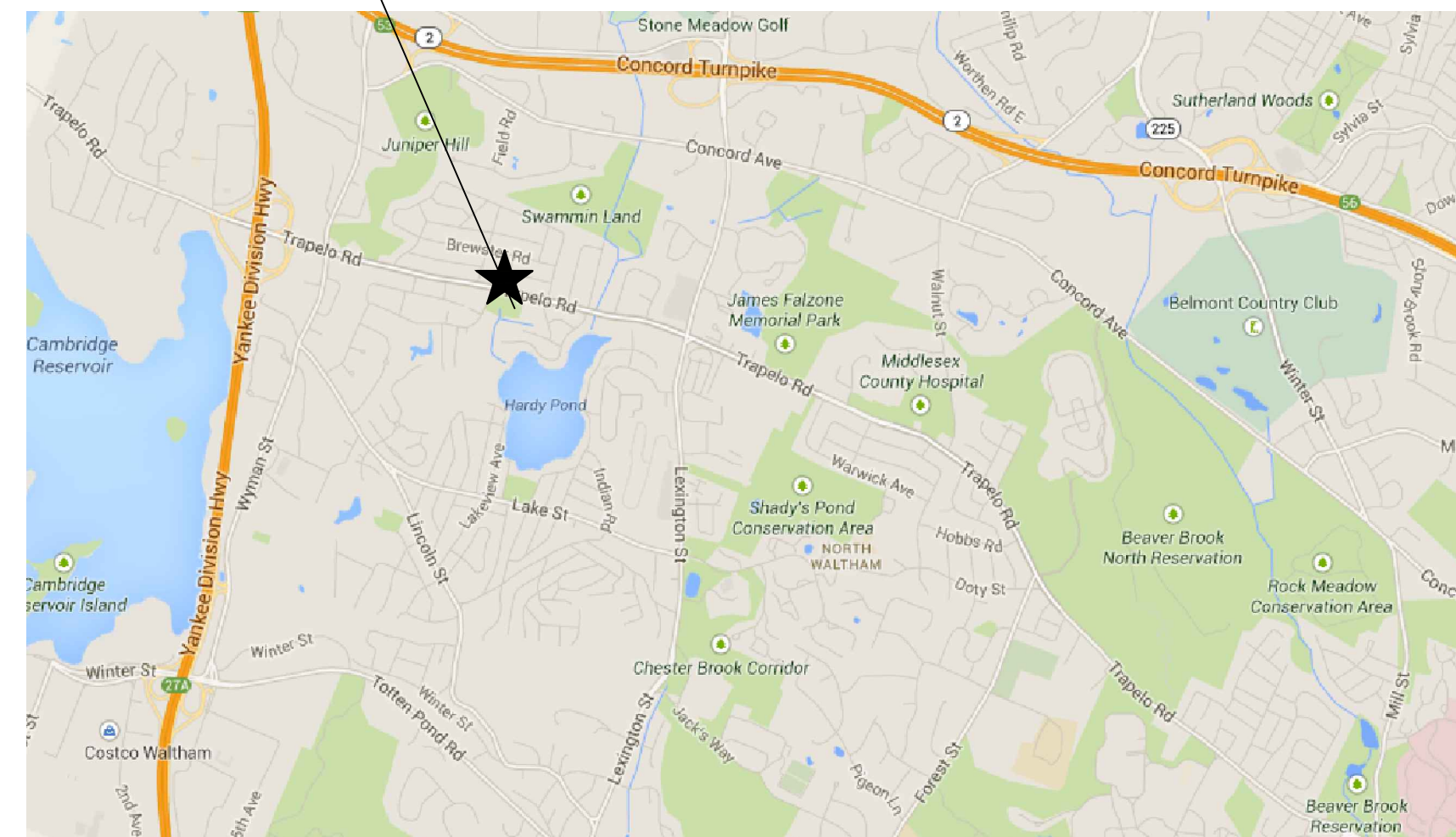
SHEPARD ENGINEERING, INC.
ELECTRICAL CONSULTANTS
1308 GRAFTON STREET
WORCESTER, MA 01604
(508) 757-7793

Index of Drawings

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SHT 2 OF 2	EXISTING CONDITIONS PLAN
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L.101,L.102,L.103	SITE PREPARATION PLAN
L.201,L.202	MATERIALS PLAN
L.301,L.302	LAYOUT PLAN
L.401,L.402	GRADING & DRAINAGE PLAN
L.451,L.452	UTILITY COORDINATION PLAN
L.501,L.502	PLANTING PLAN
L.601	SITE PREPARATION DETAILS
L.602	PAVING DETAILS
L.603	PAVING, CURBING & FLAGPOLE DETAILS
L.604	STEEL GATE DETAILS
L.605	FENCING DETAILS
L.606	BACKSTOP DETAILS
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L.608	WELDED WIRE FENCE DETAILS
L.609	RETAINING WALL ELEVATION
L.610	PLAY EQUIPMENT FOOTING DETAILS
L.611	PLAYGROUND ENLARGEMENT&FOOTING DTLS
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L.613	EXERCISE EQUIPMENT DETAILS
L.614	DUGOUT SHELTER DETAILS
L.615	SCOREBOARD/SOFTBALL FIELD DETAILS
L.616	FOUL POLE/BLEACHER DETAILS
L.617	FIELD LIGHTING LAYOUT & DETAILS
L.618	SITE FURNITURE DETAILS 1
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L.620	SHADE SHELTER DETAILS
L.621	PARKING LOT SIGNAGE/STRIPING
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L.623	(INTENTIONALLY OMITTED)
L.624	TRENCH DRAIN/LEACHING BASIN DETAILS
L.625	IRRIGATION WATER SERVICE DETAILS
L.626	IRRIGATION WATER SERVICE DETAILS
L.701, L.702	IRRIGATION PLAN
L.703	IRRIGATION DETAILS
ES-1A, E-1B	SITE PLAN: ELECTRICAL
ES-2	ELECTRICAL DETAILS
C-1	DRAINAGE DETAILS
S-1	RETAINING WALL DETAILS

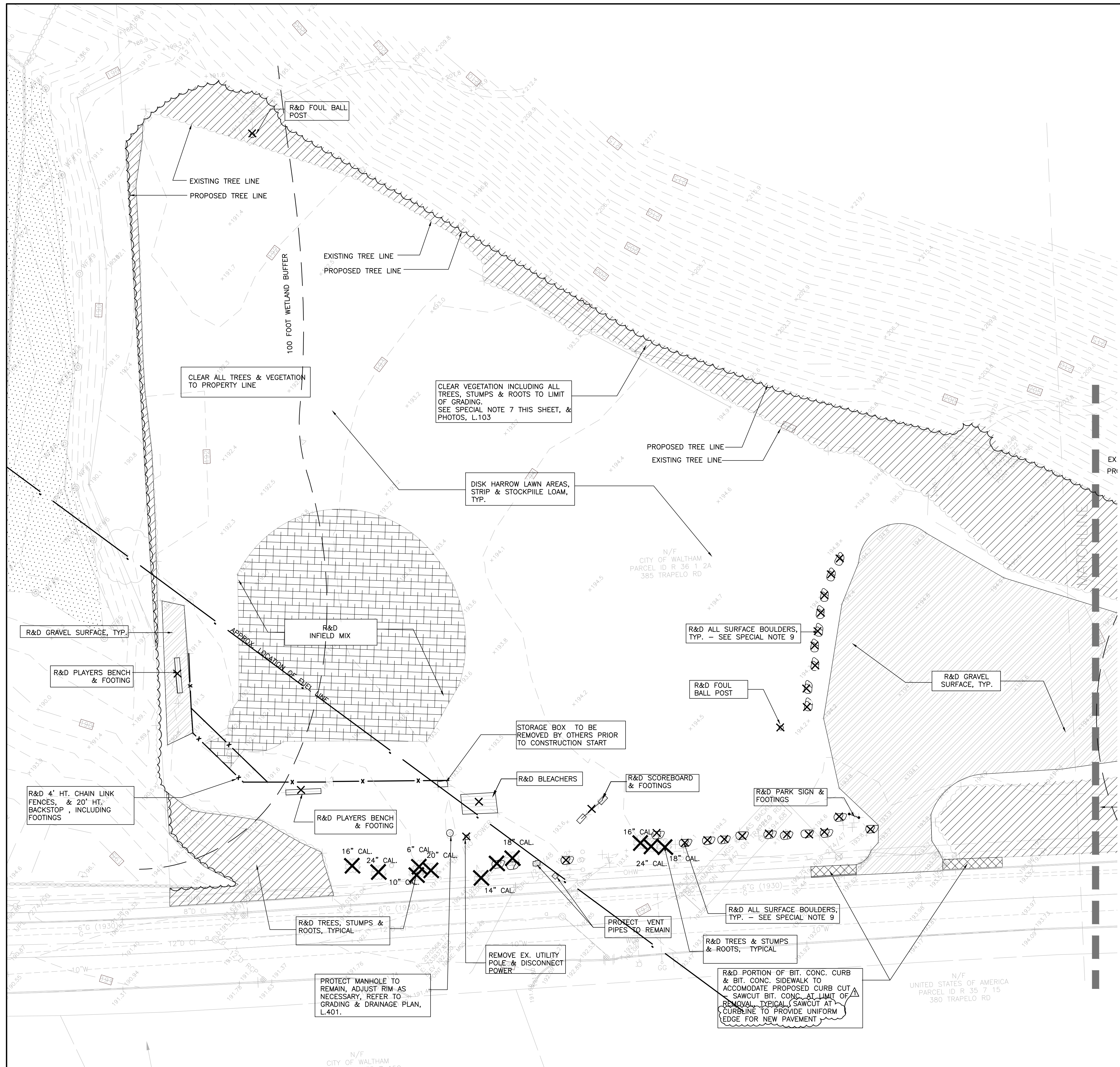
ELSIE TURNER FIELD
421 Trapele Rd

Locus Plan




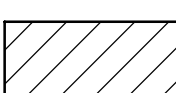





Survey
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
WESTFORD, MA

Supplemental Survey:
ALPHA SURVEYING & ENGINEERING, INC.
695 WAREHAM STREET
MIDDLEBOROUGH, MA 02346
(508) 295-5505



SITE PREPARATION & DEMOLITION LEGEND

-  PROTECTED WETLAND
 -  R&D BITUMINOUS CONCRETE PAVING
 -  R&D GRAVEL SURFACE
 -  R&D TREES, SHRUBS AND ALL OTHER VEGETATION. REMOVE STUMPS & ROOTS.
 -  R&D INFIELD MIX
 -  R&D CURB, TYP.
 -  REMOVE & DISPOSE OF EXISTING SITE ELEMENTS
- TYP. TYPICAL R & R REMOVE AND REPLACE
 R & D REMOVE AND DISPOSE R & S REMOVE AND SALVAGE

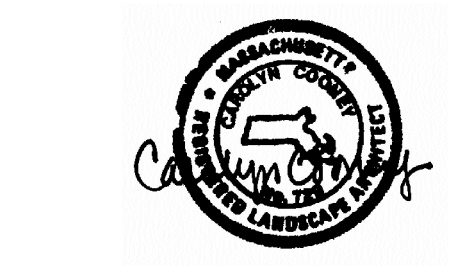
SPECIAL NOTES:

1. THE WORK OF THIS CONTRACT IS SUBJECT TO AN ORDER OF CONDITIONS ISSUED BY THE WALTHAM CONSERVATION COMMISSION. SEE SPEC SECTION 01571 AND APPENDIX A, ORDER OF CONDITIONS.
2. PRIOR TO BEGINNING CONSTRUCTION, PROVIDE EROSION CONTROLS AND DEP WETLANDS FILE NO. SIGN AS REQUIRED BY THE ORDER OF CONDITIONS. DO NOT BEGIN WORK UNTIL APPROVAL OF EROSION CONTROLS BY THE CONSERVATION COMMISSION. REFER TO SHEETS 101A & 101B FOR LOCATION OF EROSION CONTROLS. REFLAG WETLANDS IF FLAGS NOTED ON SURVEY ARE MISSING.
3. AN EXXON PETROLEUM PIPELINE (1-800-537-5000) UNDERLIES SOME OF THE PROPOSED IMPROVEMENTS. THE PIPELINE SHALL BE MARKED ON-SITE BY DIG-SAFE OR THE UTILITY OWNER. SHOULD THERE BE CONFLICTS WITH THE PROPOSED IMPROVEMENTS, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH EXCAVATION.
4. A SYNESYS FIBER OPTIC CABLE (1-800-286-6644) IS LOCATED ON-SITE AND SHALL BE MARKED IN THE FIELD BY DIG-SAFE OR THE UTILITY OWNER. SHOULD THERE BE CONFLICTS WITH THE PROPOSED IMPROVEMENTS, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH EXCAVATION.
5. PROVIDE 4 PARK CLOSURE SIGNS ATTACHED TO SECURITY FENCE (SEE SPECIFICATIONS SECTION 01500-TEMPORARY FACILITIES & CONTROLS).
6. THERE SHALL BE NO STOCKPILING OF LOAM WITHIN 50' OF THE WETLAND LINE PER ORDER OF CONDITIONS.
7. IT IS MANDATORY THAT THE CONTRACTOR VISIT THE SITE TO ASSESS THE AMOUNT AND TYPE OF VEGETATION, IN AREAS SHOWN BY HATCHING, THAT IS TO BE REMOVED.
8. DELIVER REMOVED GRANITE CURBING TO CPW STREET DEPT AT 167 LEXINGTON STREET, WALTHAM, MA.
9. THE CONTRACTOR SHALL, BASED ON VISUAL SITE INSPECTION, INCLUDE IN HIS/HER BID THE COSTS FOR REMOVAL & DISPOSAL OF ALL SURFACE ROCKS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS REGARDLESS OF INDIVIDUAL ROCK CUBIC YARDAGE. REMOVAL & DISPOSAL OF PARTIALLY BURIED OR COMPLETELY BURIED ROCKS OR BOULDERS WILL BE PAID FOR AS DESCRIBED IN SECTION 02200 - EARTHWORK.

GENERAL NOTES:

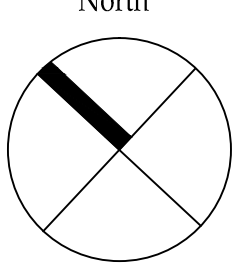
1. BIDDERS ARE REQUIRED TO INSPECT THE SITE TO VERIFY EXISTING CONDITIONS AND WILL BE HELD RESPONSIBLE FOR THE FULL EXTENT OF WORK REQUIRED. THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE THE REMOVAL OF ALL EXISTING SITE FEATURES NECESSARY TO CONSTRUCT PROPOSED SITE IMPROVEMENTS.
2. THE CONTRACTOR SHALL REPORT ALL DEVIATIONS IN THE EXISTING CONDITIONS TO THE LANDSCAPE ARCHITECT (508) 478-8426, PRIOR TO STARTING WORK.
3. LOCATION AND DEPTH OF UTILITIES ARE APPROXIMATE. NO GUARANTEE IS EXPRESSED OR IMPLIED THAT THE DRAWINGS INDICATE ALL UTILITIES WHICH MAY EXIST. PRIOR TO ALL EXCAVATION, CONTACT "DIG SAFE" (811) TO MARK LOCATION OF RECORDED UTILITIES.
4. THE CONTRACTOR SHALL PROTECT ADJUTING PROPERTIES AND EXISTING SITE ELEMENTS TO REMAIN. ANY DAMAGE INCURRED SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OF WALTHAM.
5. PROVIDE TEMPORARY 6' HT. CHAIN LINK SECURITY FENCE AS SHOWN ON THE PLANS THROUGHOUT THE CONSTRUCTION PERIOD. PROVIDE ADDITIONAL FENCING AS NECESSARY TO ADEQUATELY SECURE THE SITE. REFER TO SHEETS 101A & B, TEMPORARY CONTROLS.
6. THERE SHALL BE NO STOCKPILING OF MATERIALS OR HEAVY EQUIPMENT WITHIN THE CANOPY OF EXISTING TREES TO REMAIN. THE CONTRACTOR SHALL PERIODICALLY WATER THROUGHOUT THE CONSTRUCTION PERIOD ANY EXISTING TREES TO REMAIN WHOSE ROOTS HAVE BEEN DISTURBED BY EXCAVATION. MAINTAIN THROUGHOUT THE CONSTRUCTION PERIOD, A SOURCE OF WATER SUCH AS A WATER TRUCK OR PERMITTED CONNECTION TO CITY HYDRANT.
7. REMOVAL & DISPOSAL OF ITEMS SHALL INCLUDE FOOTINGS, REMOVAL & DISPOSAL OF TREES SHALL INCLUDE STUMPS AND ROOT SYSTEMS, UNLESS OTHERWISE NOTED.

Carolyn Cooney & Associates
 Landscape Architecture / Planning
 13 Elm Street, Milford, MA 01757
 Telephone 508 478 8426, Facsimile 508 478 8607



No.	Description	Date
1	REVISED ADDENDUM #1 ELEVATIONS	11/20/17

REVISIONS



Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 421 TRAPELO ROAD
 WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**


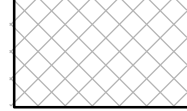


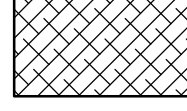


TITLE:
**SITE PREPARATION
 PLAN**

Scale 1"=20' Date OCT. 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By CCC
 Project No. 1710.00

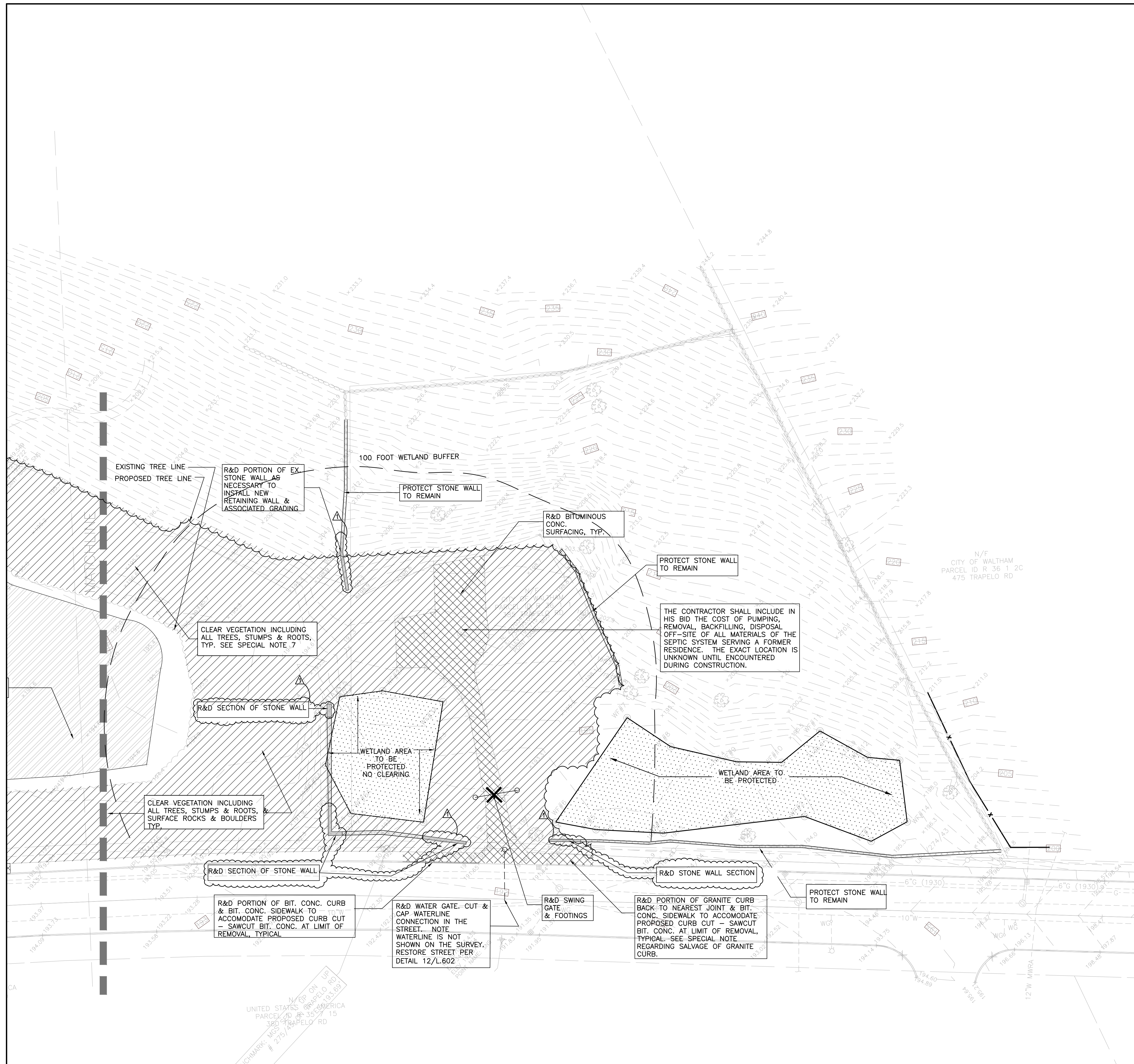
DWG No. **L.101**



SITE PREPARATION & DEMOLITION LEGEND

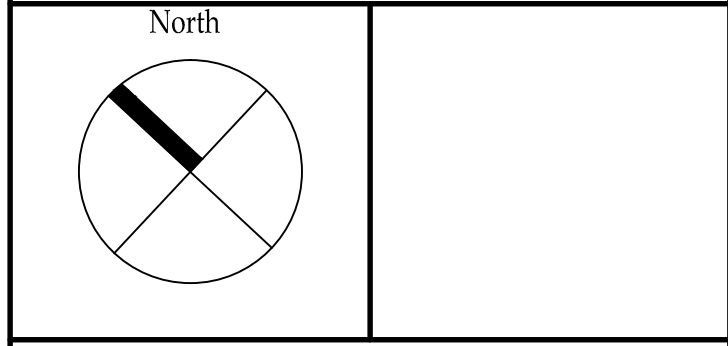
-  PROTECTED WETLAND
-  R&D BITUMINOUS CONCRETE PAVING
-  R&D GRAVEL SURFACE
-  R&D TREES, SHRUBS AND ALL OTHER VEGETATION. REMOVE STUMPS & ROOTS.
-  R&D INFIELD MIX
-  R&D CURB, TYP.
-  REMOVE & DISPOSE OF EXISTING SITE ELEMENTS

- TYP. TYPICAL
- R & D REMOVE AND DISPOSE
- R & R REMOVE AND REPLACE
- R & S REMOVE AND SALVAGE



No.	Description	Date
1	REVISED ADDENDUM #1 ELEVATIONS	11/20/17

REVISIONS



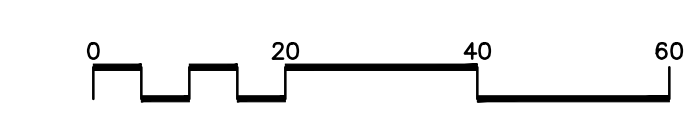
Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 421 TRAPELO ROAD
 WALTHAM, MA 02452**

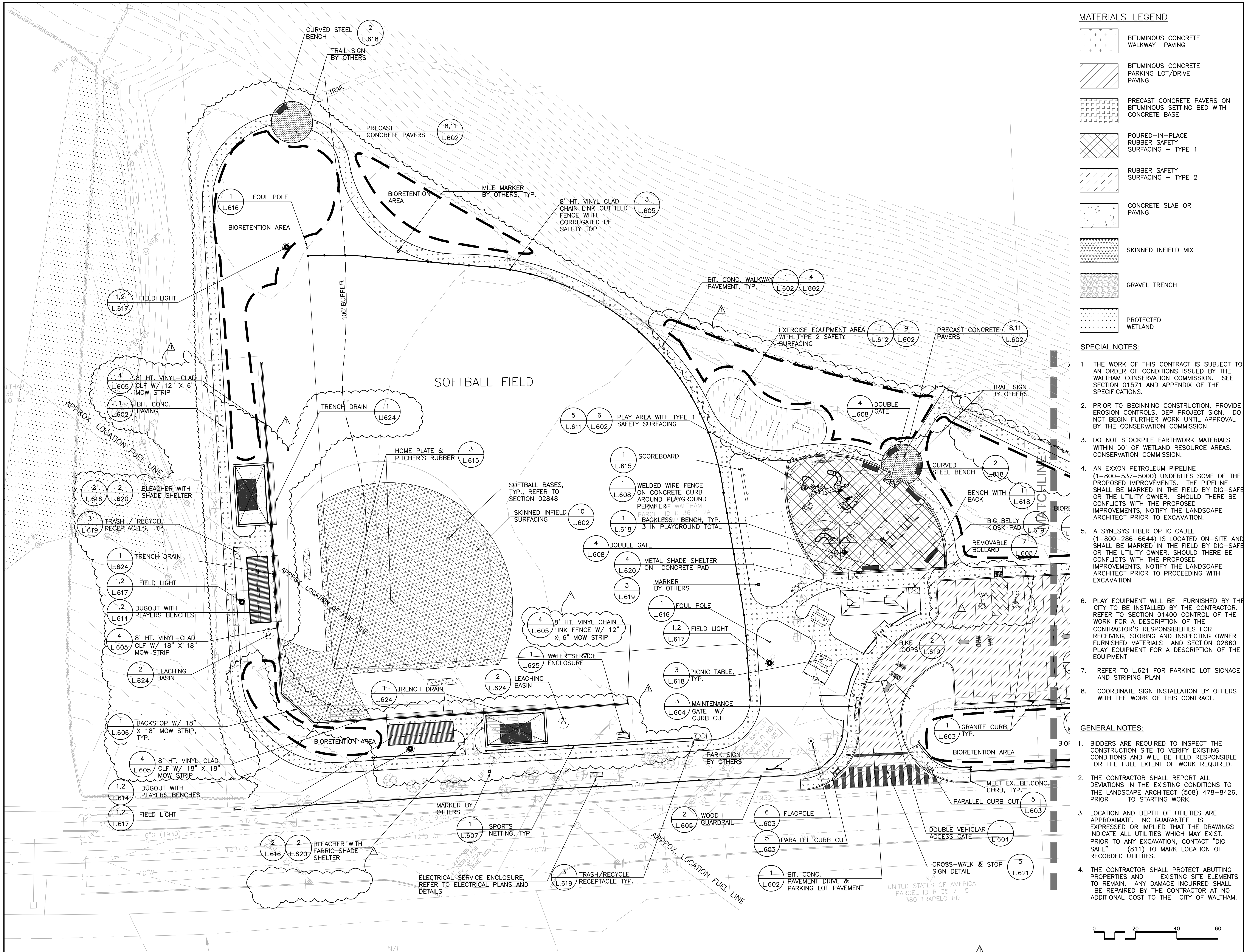
Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
SITE PREPARATION PLAN

Scale 1"=20' Date OCT. 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By CCC
 Project No. 1710.00

DWG No. **L.102**





MATERIALS LEGEND

- BITUMINOUS CONCRETE WALKWAY PAVING
- BITUMINOUS CONCRETE PARKING LOT/DRIVE PAVING
- PRECAST CONCRETE PAVERS ON BITUMINOUS SETTING BED WITH CONCRETE BASE
- POURED-IN-PLACE RUBBER SAFETY SURFACING - TYPE 1
- RUBBER SAFETY SURFACING - TYPE 2
- CONCRETE SLAB OR PAVING
- SKINNED INFIELD MIX
- GRAVEL TRENCH
- PROTECTED WETLAND

SPECIAL NOTES:

1. THE WORK OF THIS CONTRACT IS SUBJECT TO AN ORDER OF CONDITIONS ISSUED BY THE WALTHAM CONSERVATION COMMISSION. SEE SECTION 01571 AND APPENDIX OF THE SPECIFICATIONS.
2. PRIOR TO BEGINNING CONSTRUCTION, PROVIDE EROSION CONTROLS, DEP PROJECT SIGN. DO NOT BEGIN FURTHER WORK UNTIL APPROVAL BY THE CONSERVATION COMMISSION.
3. DO NOT STOCKPILE EARTHWORK MATERIALS WITHIN 50' OF WETLAND RESOURCE AREAS. CONSERVATION COMMISSION.
4. AN EXXON PETROLEUM PIPELINE (1-800-537-5000) UNDERLIES SOME OF THE PROPOSED IMPROVEMENTS. THE PIPELINE SHALL BE MARKED IN THE FIELD BY DIG-SAFE OR THE UTILITY OWNER. SHOULD THERE BE CONFLICTS WITH THE PROPOSED IMPROVEMENTS, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATION.
5. A SYNESYS FIBER OPTIC CABLE (1-800-286-6644) IS LOCATED ON-SITE AND SHALL BE MARKED IN THE FIELD BY DIG-SAFE OR THE UTILITY OWNER. SHOULD THERE BE CONFLICTS WITH THE PROPOSED IMPROVEMENTS, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH EXCAVATION.
6. PLAY EQUIPMENT WILL BE FURNISHED BY THE CITY TO BE INSTALLED BY THE CONTRACTOR. REFER TO SECTION 01400 CONTROL OF THE WORK FOR A DESCRIPTION OF THE CONTRACTOR'S RESPONSIBILITIES FOR RECEIVING, STORING AND INSPECTING OWNER FURNISHED MATERIALS AND SECTION 02860 PLAY EQUIPMENT FOR A DESCRIPTION OF THE EQUIPMENT
7. REFER TO L.621 FOR PARKING LOT SIGNAGE AND STRIPING PLAN
8. COORDINATE SIGN INSTALLATION BY OTHERS WITH THE WORK OF THIS CONTRACT.

GENERAL NOTES:

1. BIDDERS ARE REQUIRED TO INSPECT THE CONSTRUCTION SITE TO VERIFY EXISTING CONDITIONS AND WILL BE HELD RESPONSIBLE FOR THE FULL EXTENT OF WORK REQUIRED.
2. THE CONTRACTOR SHALL REPORT ALL DEVIATIONS IN THE EXISTING CONDITIONS TO THE LANDSCAPE ARCHITECT (508) 478-8426, PRIOR TO STARTING WORK.
3. LOCATION AND DEPTH OF UTILITIES ARE APPROXIMATE. NO GUARANTEE IS EXPRESSED OR IMPLIED THAT THE DRAWINGS INDICATE ALL UTILITIES WHICH MAY EXIST. PRIOR TO ANY EXCAVATION, CONTACT "DIG SAFE" (811) TO MARK LOCATION OF RECORDED UTILITIES.
4. THE CONTRACTOR SHALL PROTECT ADJUTING PROPERTIES AND EXISTING SITE ELEMENTS TO REMAIN. ANY DAMAGE INCURRED SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OF WALTHAM.

Carolyn Cooney & Associates

Landscape Architecture / Planning

13 Elm Street, Milford, MA 01757
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No.	Description	Date
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No.	Description	Date

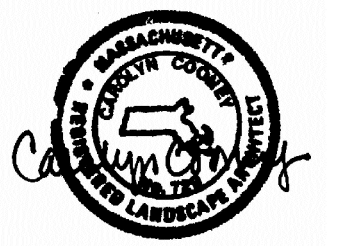
Project:
**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**



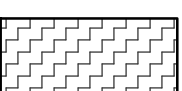

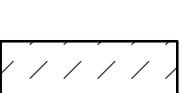

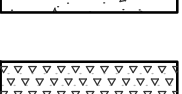

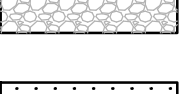
TITLE:
MATERIALS PLAN

Scale 1"=20' Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By CCC
Project No. 1710.00

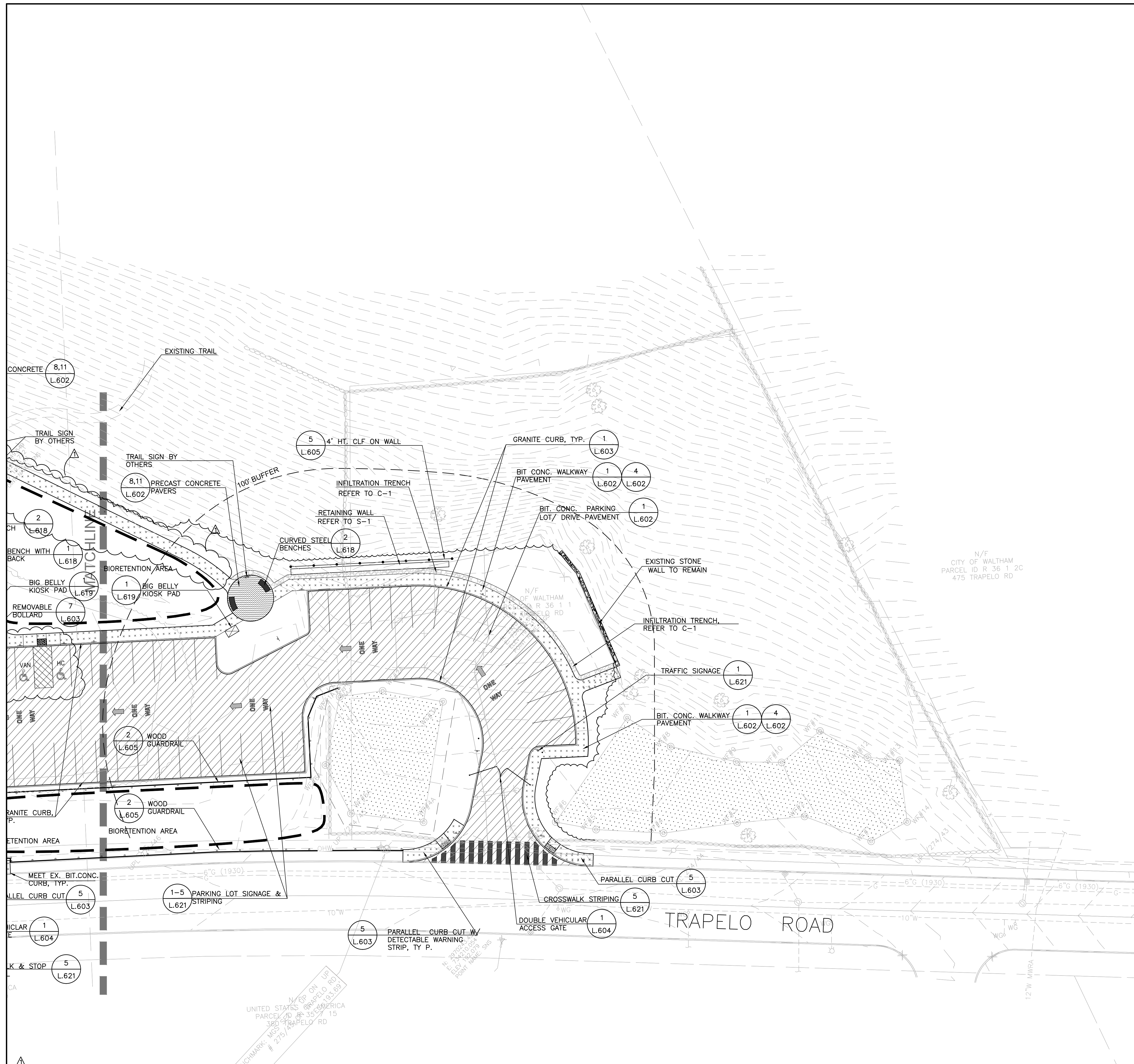
DWG No. **L.201**



MATERIALS LEGEND

-  BITUMINOUS CONCRETE WALKWAY PAVING
-  BITUMINOUS CONCRETE PARKING LOT/DRIVE PAVING
-  PRECAST CONCRETE PAVERS ON BITUMINOUS SETTING BED WITH CONCRETE BASE
-  POURED-IN-PLACE RUBBER SAFETY SURFACING - TYPE 1
-  RUBBER SAFETY SURFACING - TYPE 2
-  CONCRETE SLAB OR PAVING
-  INFIELD MIX, TYP.
-  GRAVEL TRENCH
-  PROTECTED WETLAND

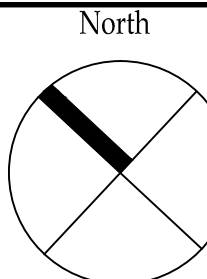
REFER TO L.201 FOR MATERIALS GENERAL AND SPECIFIC NOTES



No.	Description	Date
1	REVISED ADDENDUM #1	11/20/17

REVISIONS

North



Project:

**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:

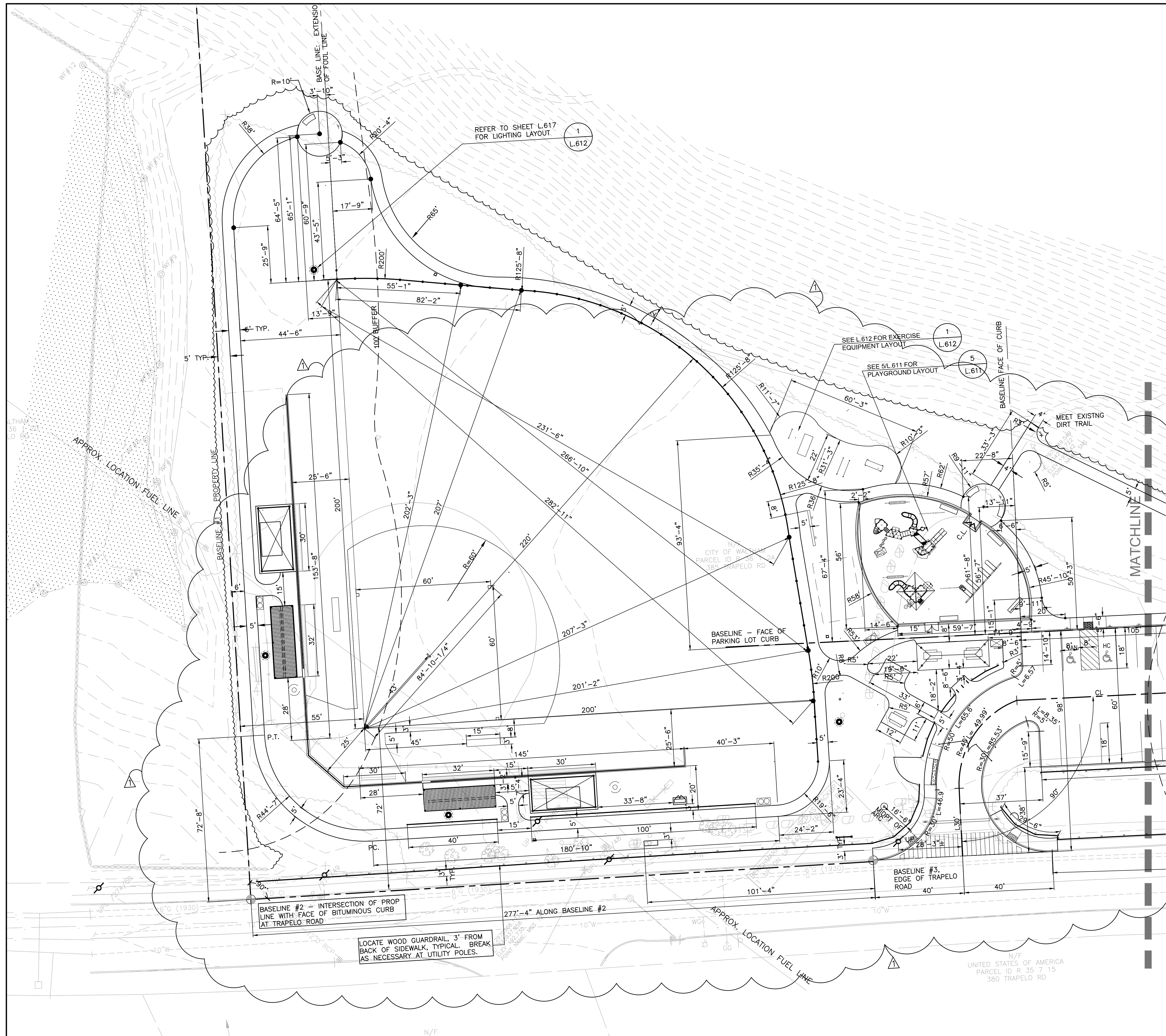
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:

**MATERIALS
PLAN**

Scale 1"=20' Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By CCC
Project No. 1710.00

DWG No. **L.202**



SPECIAL NOTES:

1. THE LAYOUT OF MAJOR PATHS, WALLS, CURBING, PARKING LOT, DRIVES AND BALL FIELD SHALL BE DONE BY A REGISTERED SURVEYOR.
2. LAYOUT OF SOFTBALL FIELD IS FROM B PROPERTY LINE AND PERPENDICULAR LINE AT INTERSECTION OF PL WITH FACE OF EX. BITUMINOUS CURB ON TRAPELO ROAD.
3. LAYOUT OF UPPER REST AREA AND PATHS IS FROM FROM EXTENSION OF FOUL LINE.
4. LAYOUT OF PARKING LOT ENTRANCE BEGINS 277'-4" ALONG BASELINE #2.
5. LAYOUT OF PLAYGROUND AREA IS FROM BASELINE THAT IS AN EXTENSION OF LINE ALONG FACE OF PARKING LOT CURB.

GENERAL NOTES:

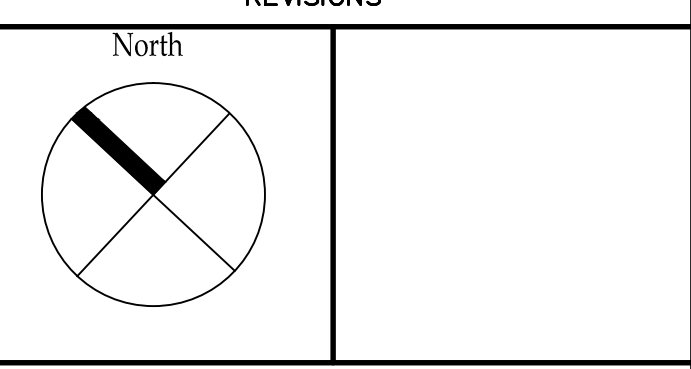
1. LAYOUT LINES, OFFSET, OR REFERENCES TO LOCATING OBJECTS ARE EITHER PARALLEL, PERPENDICULAR OR RADIAL UNLESS OTHERWISE DESIGNATED.
2. SITE FEATURES SHALL BE LAID OUT AND STAKED FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE. ANY REQUIRED ADJUSTMENTS TO LAYOUT SHALL BE UNDERTAKEN AS DIRECTED AT NO ADDITIONAL COST TO THE OWNER.
3. PLAY EQUIPMENT SHALL BE LAID OUT PRIOR TO PROCEEDING WITH ANY PORTION OF THE INSTALLATION. PRIOR TO INSTALLATION THE LAYOUT SHALL BE REVIEWED BY A CPSI (CERTIFIED PLAYGROUND SAFETY INSPECTOR) TO ENSURE COMPLIANCE WITH THE RELEVANT CODES.

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 13 Elm Street, Milford, MA 01757
 Telephone 508 478 8426, Facsimile 508 478 8607



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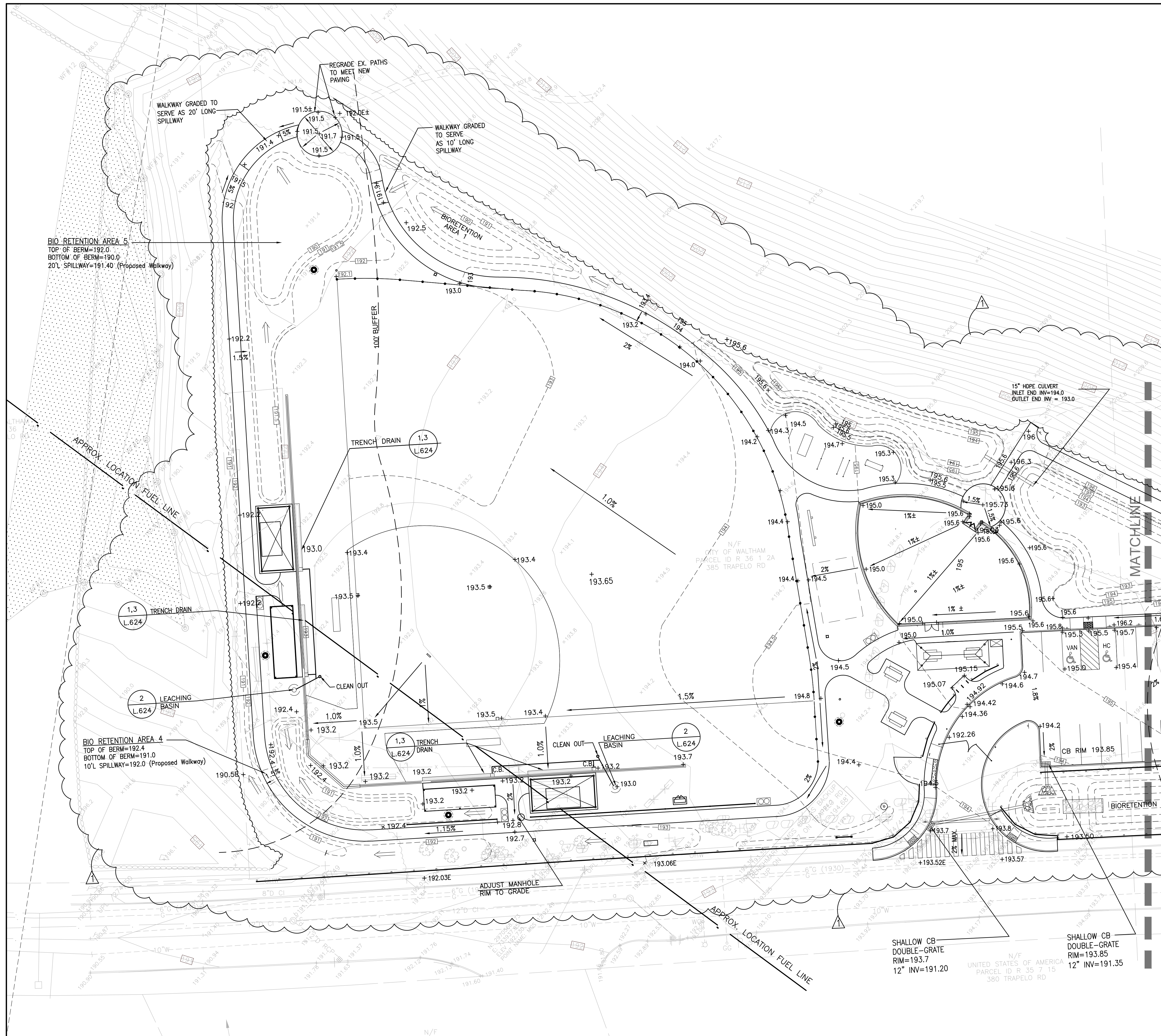
Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 421 TRAPELO ROAD
 WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
LAYOUT PLAN

Scale 1"=20' Date OCT. 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By CCC
 Project No. 1710.00

DWG No. **L.301**



GRADING NOTES

GENERAL NOTES:

1. BIDDERS ARE REQUIRED TO INSPECT THE CONSTRUCTION SITE TO VERIFY EXISTING CONDITIONS AND WILL BE HELD RESPONSIBLE FOR THE FULL EXTENT OF WORK REQUIRED.
2. THE CONTRACTOR SHALL REPORT DEVIATIONS IN THE EXISTING CONDITIONS TO THE LANDSCAPE ARCHITECT (508) 478-8426, PRIOR TO STARTING WORK.
3. LOCATION AND DEPTH OF UTILITIES ARE APPROXIMATE. NO GUARANTEE IS EXPRESSED OR IMPLIED THAT THE DRAWINGS INDICATE ALL UTILITIES WHICH MAY EXIST. PRIOR TO ANY EXCAVATION, CONTACT "DIG SAFE" (811) A MINIMUM OF 72 HOURS PRIOR TO BEGINNING GRADING OPERATIONS TO MARK LOCATION OF RECORDED UTILITIES. NOTIFY ALL CORPORATIONS, COMPANIES, INDIVIDUALS OR LOCAL AUTHORITIES OWNING OR HAVING JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS AREAS DISTURBED BY EXCAVATION.
4. THE CONTRACTOR SHALL PROTECT ALL ABUTTING PROPERTIES AND EXISTING SITE ELEMENTS TO REMAIN. ANY DAMAGE INCURRED SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OF WALTHAM.
5. PROVIDE GRADE STAKES SHOWING DEPTH OF VARIOUS MATERIALS AND LIMIT OF GRADING FOR REVIEW BY THE LANDSCAPE ARCHITECT IN THE FIELD BEFORE FINAL GRADING OPERATIONS.
6. GRADING IS TO BE SMOOTH AND CONTINUOUS.
7. CROSS-SLOPES OF PAVEMENT SHALL NOT EXCEED 2%, AND LONGITUDINAL SLOPES SHALL NOT EXCEED 5%. VERIFY CONFORMANCE WITH ADA AND MAAB STANDARDS AND WHERE DISCREPANCIES ARE FOUND TO EXIST, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING. THERE ARE NO CONSTRUCTION TOLERANCES ALLOWED BY ADA OR MAAB STANDARDS.

SPECIAL NOTES:

1. LASER GRADING EQUIPMENT SHALL BE USED TO ACHIEVE FINAL GRADING OF THE SOFTBALL FIELD. REFER TO SECTION 02200 - EARTHWORK.
2. REFER TO C.1 FOR DRAINAGE DETAILS.
3. AN EXXON PETROLEUM PIPELINE (1-800-537-5000) UNDERLIES SOME OF THE PROPOSED IMPROVEMENTS. THE PIPELINE SHALL BE MARKED ON-SITE BY DIG-SAFE. SHOULD THERE BE CONFLICTS WITH THE PROPOSED IMPROVEMENTS, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH EXCAVATION.
4. A SYNESYS FIBER OPTIC CABLE (1-800-286-6644) IS LOCATED ON-SITE AND SHALL BE MARKED IN THE FIELD BY DIG-SAFE. SHOULD THERE BE CONFLICTS WITH THE PROPOSED IMPROVEMENTS, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH EXCAVATION.
5. THE CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE COSTS FOR REMOVAL & DISPOSAL OF ALL ROCKS SITTING ON THE SURFACE WHOSE REMOVAL IS NECESSARY TO CONSTRUCTION OF PROPOSED IMPROVEMENTS, REGARDLESS OF INDIVIDUAL ROCK CUBIC YARDAGE. REMOVAL & DISPOSAL OF PARTIALLY BURIED OR COMPLETELY BURIED SUBSURFACE ROCKS OR BOULDERS WILL BE PAID FOR AS DESCRIBED IN SECTION 02200 - EARTHWORK.
6. THE WORK OF THIS CONTRACT IS SUBJECT TO AN ORDER OF CONDITIONS ISSUED BY THE WALTHAM CONSERVATION COMMISSION. SEE SPEC SECTION 01571 AND APPENDIX A, ORDER OF CONDITIONS.

Carolyn Cooney & Associates

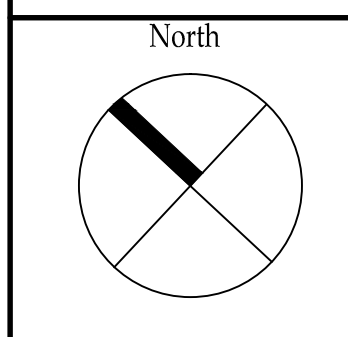
Landscape Architecture / Planning

13 Elm Street, Milford, MA 01757
Telephone 508 478 8426, Facsimile 508 478 8607



No.	Description	Date
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REVISIONS



Project:

**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:

**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:

**GRADING & DRAINAGE
PLAN**

Scale 1"=20' Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By CCC
Project No. 1710.00

DWG No.

L.401





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No.	Description	Date
1	REVISED ADDENDUM #1	11/20/17

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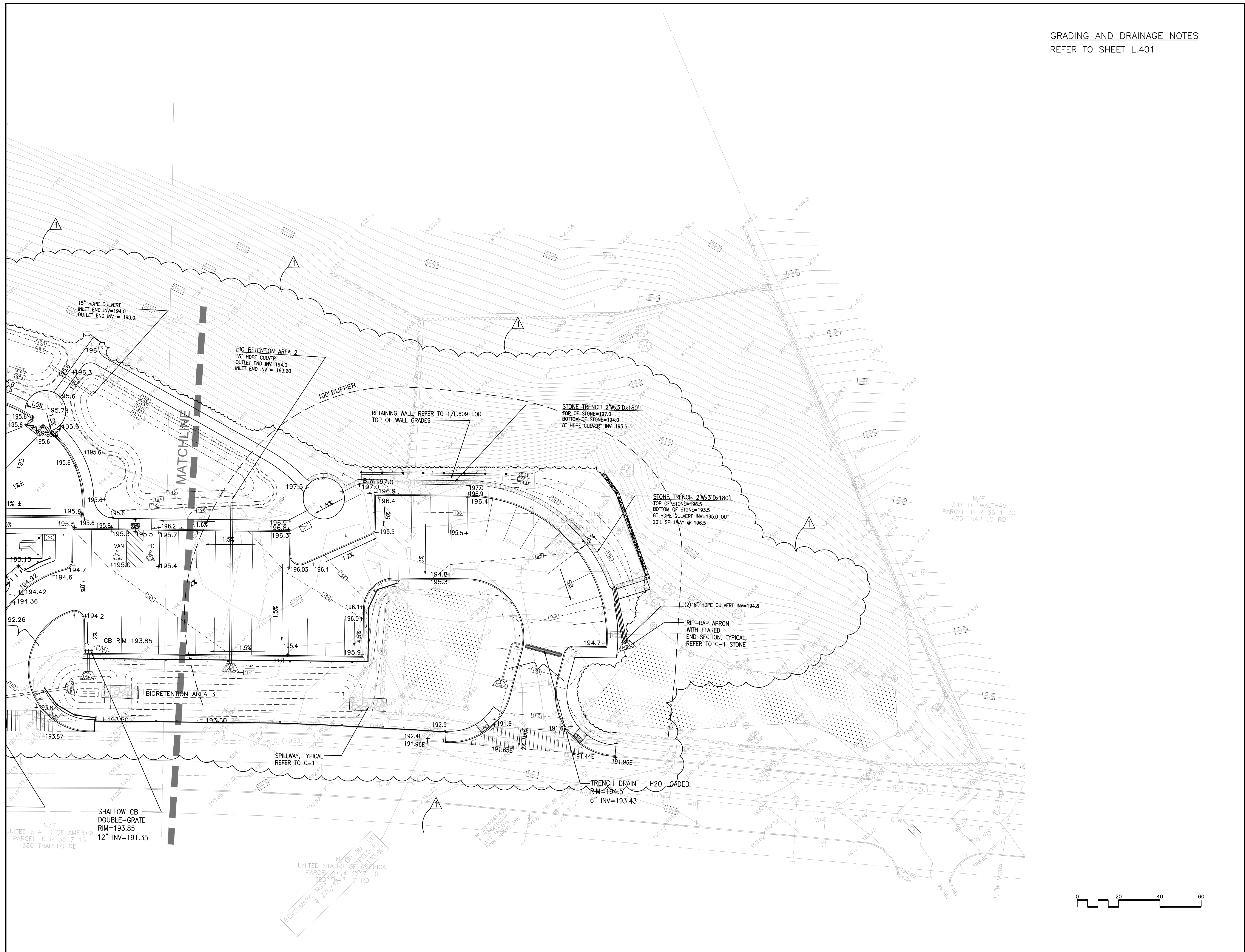
Project:
**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

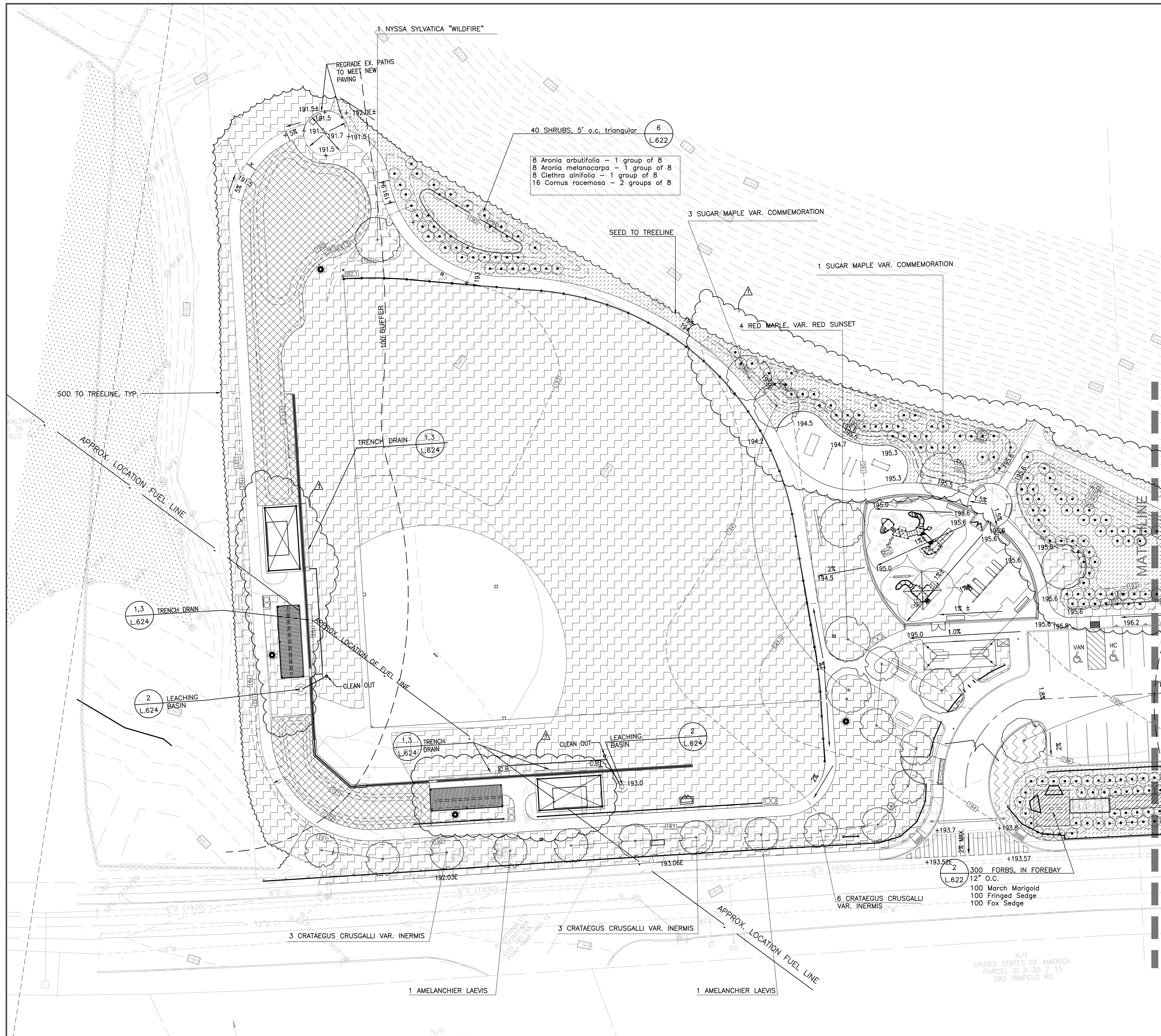
Prepared For:
**CITY OF WALTHAM
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510 MOODY STREET
WALTHAM, MA 02453**

TITLE:
**GRADING & DRAINAGE
PLAN**

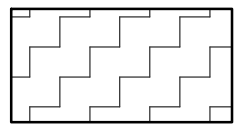

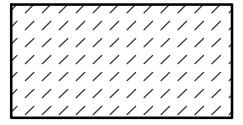
Scale 1"=20' Date OCT. 31, 2017
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Project No. 1710.00

DWG No. **L.402**





LEGEND

-  SOD
-  BIORETENTION BASIN MIX #1 - MOWABLE
-  BIORETENTION BASIN MIX - #2 - NO MOW

- PLANTING NOTES:**
1. PROVIDE 6" OF COMPACTED LOAM IN LAWN, GRASS, PLANTING AND BIORETENTION AREAS.
 2. SEED OR SODDING SHALL BE TO THE LIMIT OF PROPOSED TREELINE.
 3. HYDROSEED BIORETENTION AREA SIDE-SLOPES AND BOTTOMS INCLUDING AREAS SCHEDULED FOR SHRUB AND FORB PLANTING.
 4. PROVIDE SOIL AMENDMENTS AS RECOMMENDED BY THE SOILS TESTING AGENCY. DO NOT PROVIDE PHOSPHATE FERTILIZER UNLESS RECOMMENDED BY THE SOILS TESTING AGENCY, AND USE ONLY AT RECOMMENDED RATES FOR PLANT ESTABLISHMENT.
 5. APPLY FERTILIZER WITH A DROP-TYPE SPREADER. USE OF BROADCAST SPREADERS OR HAND SPREADING IS NOT ACCEPTABLE. IMMEDIATELY CLEAN UP ANY AREA WHERE FERTILIZER HAS BEEN ACCIDENTALLY DROPPED ONTO PAVEMENT.
 6. DO NOT APPLY FERTILIZER OUTSIDE THE GROWING SEASON DEFINED AS APRIL 15TH TO OCTOBER 31ST.
 7. NO NITROGEN OR PHOSPHATE SHALL BE APPLIED DURING RAINFALL OR BEFORE PREDICTION OF RAIN.
 8. SUBSTITUTIONS FOR SPECIES/SIZES WILL NOT BE APPROVED IF THE PLANT MATERIAL IS AVAILABLE FROM A COMMERCIAL NURSERY WITHIN A 50 MILE RADIUS OF THE SITE. THE CONTRACTOR IS OBLIGATED TO PURCHASE MATERIAL FROM MORE THAN ONE VENDOR, IF NECESSARY TO OBTAIN THE SPECIFIED SPECIES AND SIZES.
 9. THE CONTRACTOR SHALL SUPPLY FRESHLY DUG MATERIAL IF AVAILABLE.
 10. IF PLANTING OCCURS IN THE FALL, THE LANDSCAPE ARCHITECT SHALL HAVE THE OPTION OF SUBSTITUTING FOR FALL HAZARD SPECIES IN LIEU OF ACCEPTING ABOVE GROUND SPRING DUG MATERIAL.
 11. ALL PLANT MATERIAL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO SHIPMENT TO THE SITE.
 12. NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 2 WEEKS BEFORE NURSERY TAGGING IS SCHEDULED.

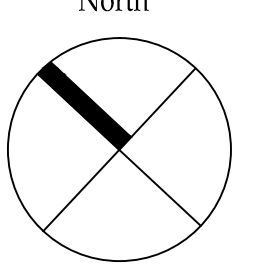
Carolyn Cooney & Associates
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No.	Description	Date
1	REVISED ADDENDUM #1 ELEVATIONS	11/20/17

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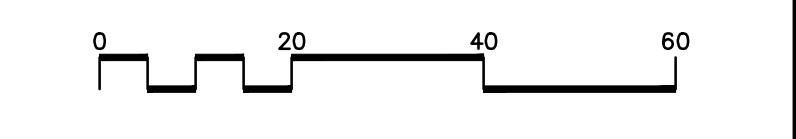
Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 421 TRAPELO ROAD
 WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
PLANTING PLAN

Scale 1"=20' Date OCT. 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By CCC
 Project No. 1710.00

DWG No. **L.501**





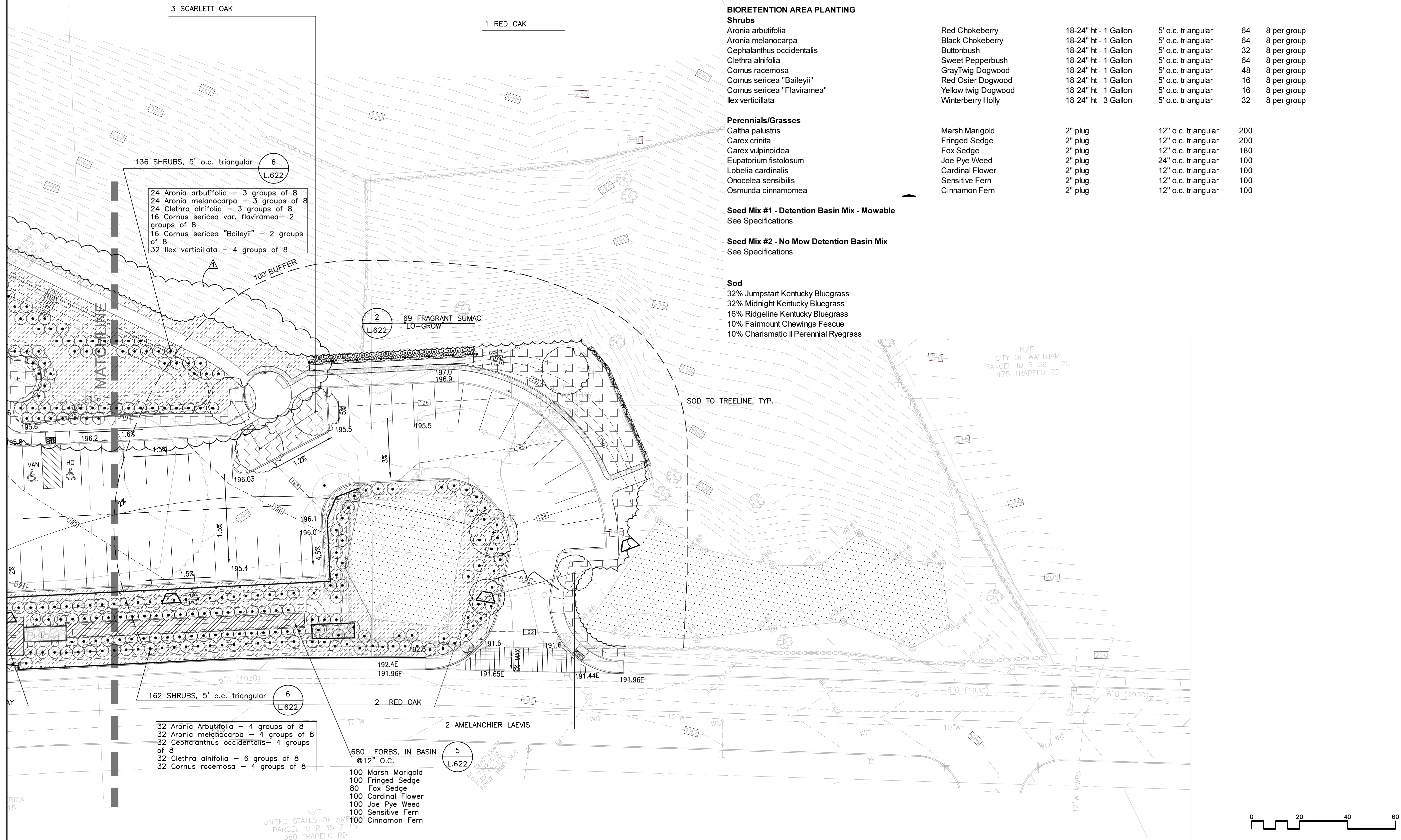
PLANT SCHEDULE

SCIENTIFIC NAME	SYMBOL	COMMON NAME	SIZE	SPACING	QUANTITY	COMMENTS
SHADE TREES						
Acer rubrum "Red Sunset"		Red Maple	2 to 2-1/2" Caliper	As Shown	4	Amended loam backfill
Acer saccharum "Commemoration"		Allegheny Serviceberry	2-1/2 to 3" Caliper	As Shown	4	Amended loam backfill
Nyssa sylvatica "Wildfire"		Tupelo	2-1/2 to 3" Caliper	As Shown	1	Amended loam backfill
Quercus coccinea		Scarlett Oak	2 to 2-1/2" Caliper	As Shown	3	Amended loam backfill
Quercus rubrum		Red Oak	2 to 2-1/2" Caliper	As Shown	3	Amended loam backfill
SMALL TREES						
Amelanchier laevis		Shadblow Serviceberry	#10	As Shown	4	Amended loam backfill
Crataegus crusgalli var. inermis		Thornless Cockspur Hawthorne	2 to 2-1/2" Caliper	As Shown	12	Amended loam backfill
SHRUBS						
Rhus aromatica "Lo Grow"		Fragrant Sumac "Lo Grow"	1 Gallon	2' o.c.	69	Mulched bed
BIORETENTION AREA PLANTING						
Shrubs						
Aronia arbutifolia		Red Chokeberry	18-24" ht - 1 Gallon	5' o.c. triangular	64	8 per group
Aronia melanocarpa		Black Chokeberry	18-24" ht - 1 Gallon	5' o.c. triangular	64	8 per group
Cephalanthus occidentalis		Butonbush	18-24" ht - 1 Gallon	5' o.c. triangular	32	8 per group
Clethra alnifolia		Sweet Pepperbush	18-24" ht - 1 Gallon	5' o.c. triangular	64	8 per group
Cornus racemosa		Gray Twig Dogwood	18-24" ht - 1 Gallon	5' o.c. triangular	48	8 per group
Cornus sericea "Baileyi"		Red Osier Dogwood	18-24" ht - 1 Gallon	5' o.c. triangular	16	8 per group
Cornus sericea "Flaviramea"		Yellow Twig Dogwood	18-24" ht - 1 Gallon	5' o.c. triangular	16	8 per group
Ilex verticillata		Winterberry Holly	18-24" ht - 3 Gallon	5' o.c. triangular	32	8 per group
Perennials/Grasses						
Caltha palustris		Marsh Marigold	2" plug	12" o.c. triangular	200	
Carex crinita		Fringed Sedge	2" plug	12" o.c. triangular	200	
Carex vulpinoidea		Fox Sedge	2" plug	12" o.c. triangular	180	
Eupatorium fistulosum		Joe Pye Weed	2" plug	24" o.c. triangular	100	
Lobelia cardinalis		Cardinal Flower	2" plug	12" o.c. triangular	100	
Onoclea sensibilis		Sensitive Fern	2" plug	12" o.c. triangular	100	
Osmunda cinnamomea		Cinnamon Fern	2" plug	12" o.c. triangular	100	

Seed Mix #1 - Detention Basin Mix - Mowable
See Specifications

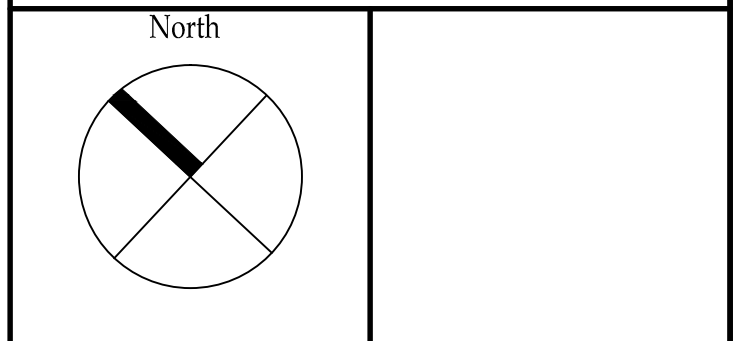
Seed Mix #2 - No Mow Detention Basin Mix
See Specifications

Sod
32% Jumpstart Kentucky Bluegrass
32% Midnight Kentucky Bluegrass
16% Ridgeline Kentucky Bluegrass
10% Fairmount Chewings Fescue
10% Charismatic II Perennial Ryegrass



REVISIONS

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Project:
**CITY OF WALTHAM
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421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:
PLANTING PLAN

Scale 1"=20' Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By CCC
Project No. 1710.00

DWG No. **L.502**





No.	Description	Date
△	REVISED ADDENDUM #1	11/20/17

REVISIONS

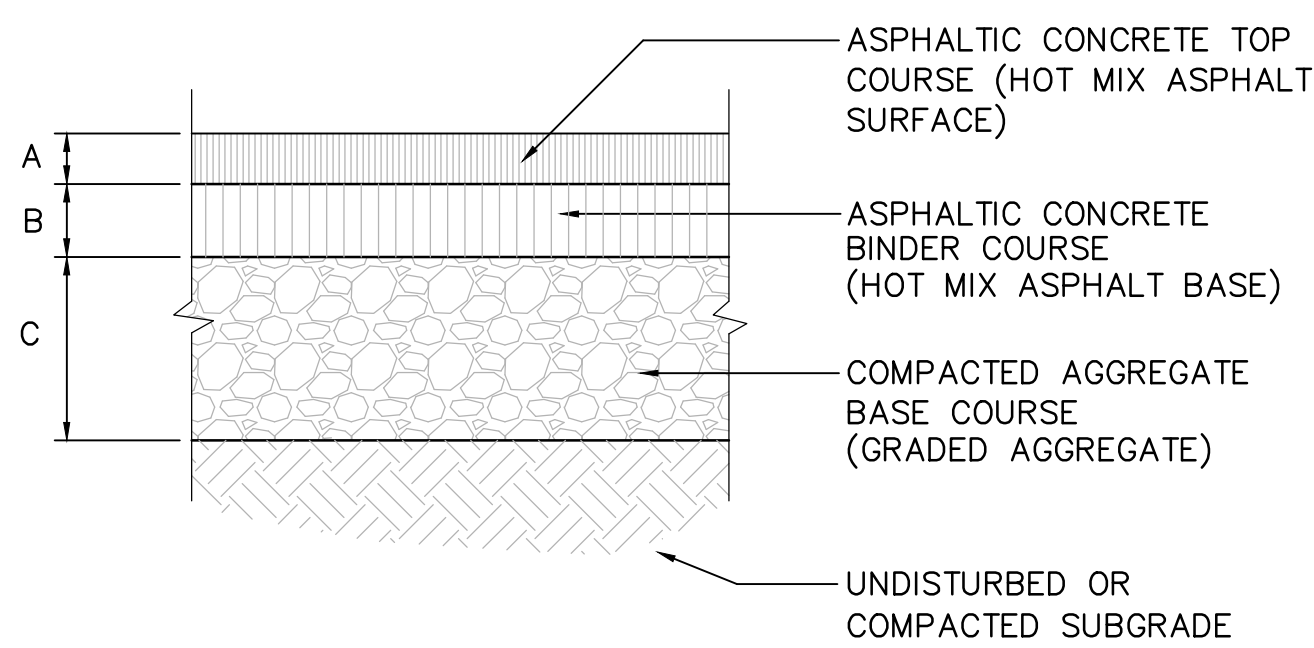
Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 421 TRAPELO ROAD
 WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
PAVING DETAILS

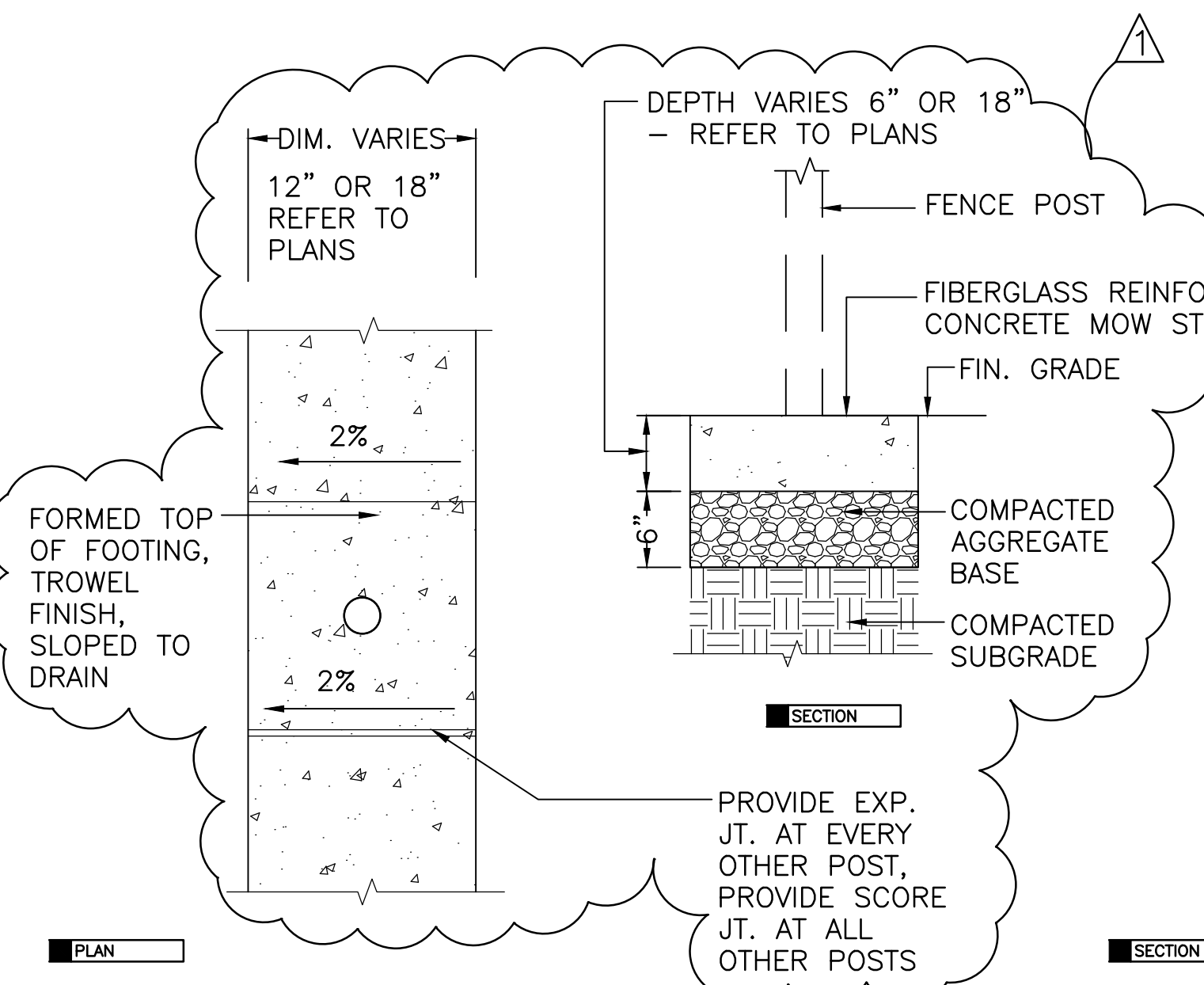
Scale AS NOTED Date OCT. 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By VH
 Project No. 1710.00

DWG No. **L.602**

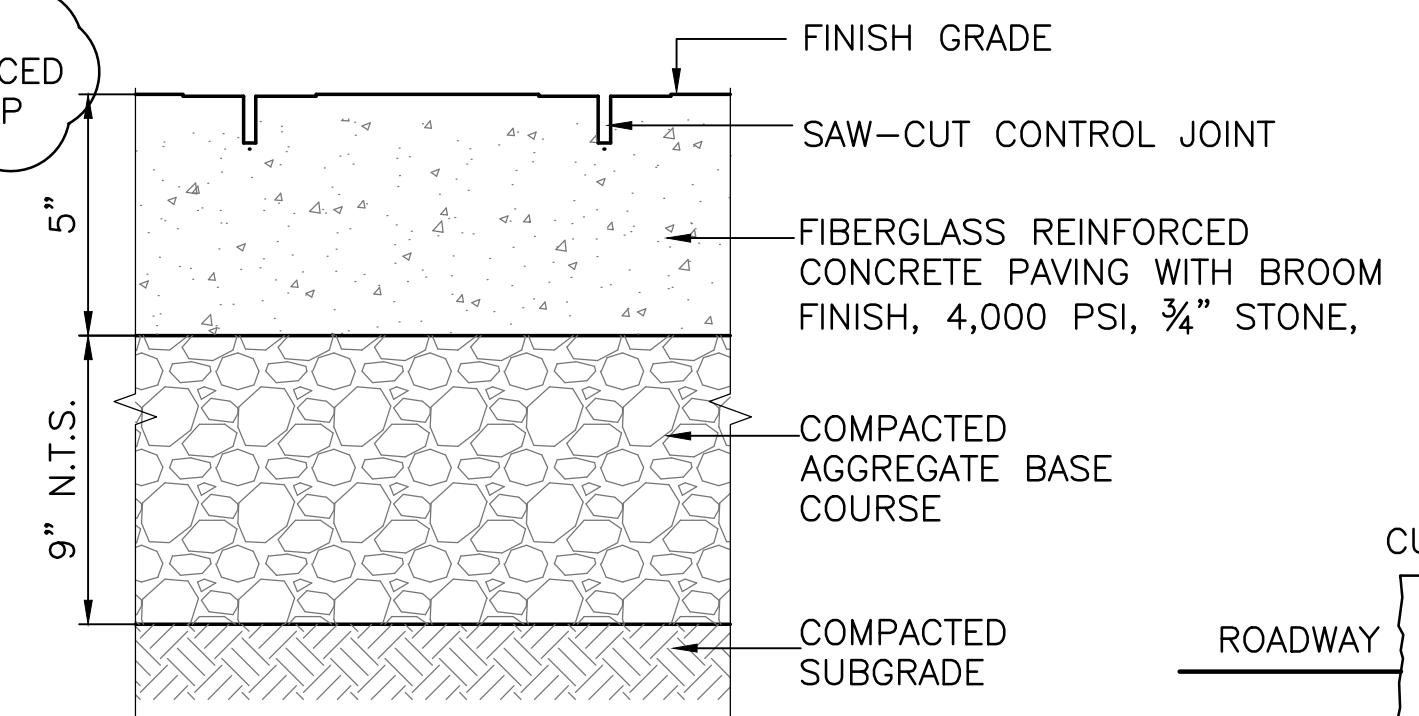


THICKNESS (INCHES)			
	DRIVES	PARKING LOT	WALKS/PATHS
A	1-1/2	1-1/2	1-1/2
B	2-1/2	2-1/2	1-1/2
C	12	12	9

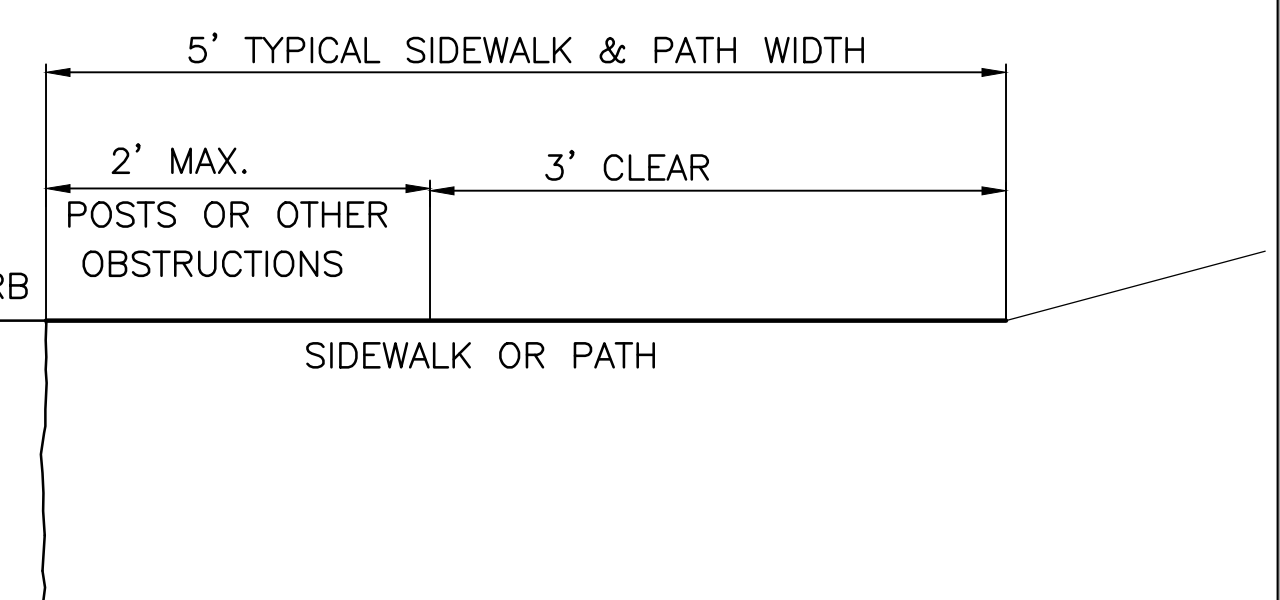
1 BITUMINOUS CONCRETE PAVEMENT
 SCALE: 1" = 1'-0"



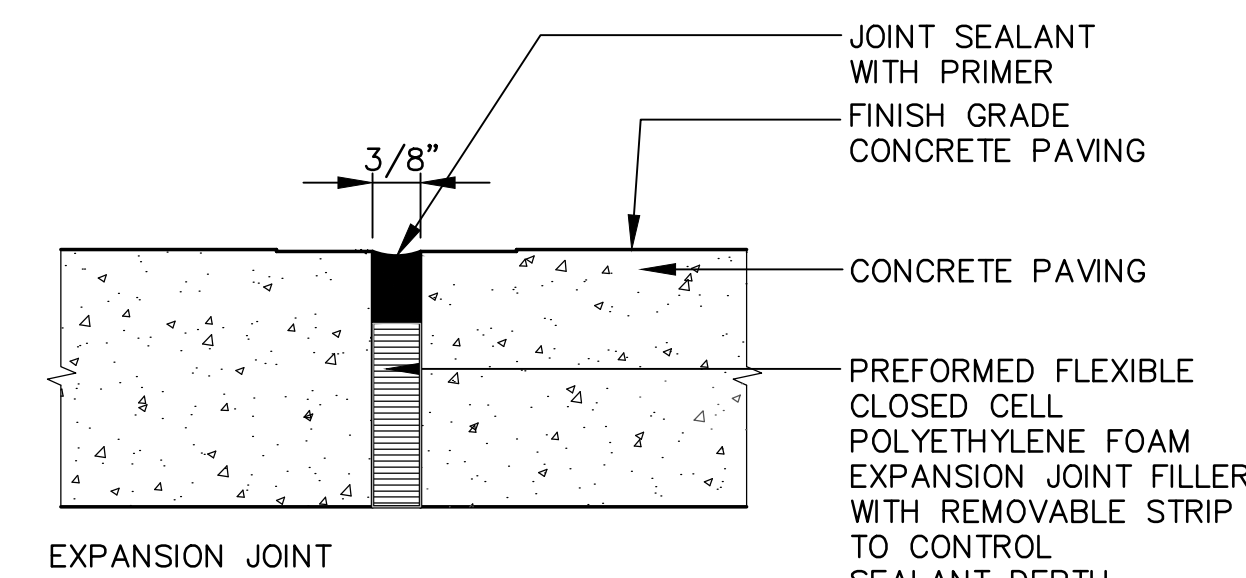
2 CONCRETE MOW STRIP
 SCALE: 1" = 1'-0"



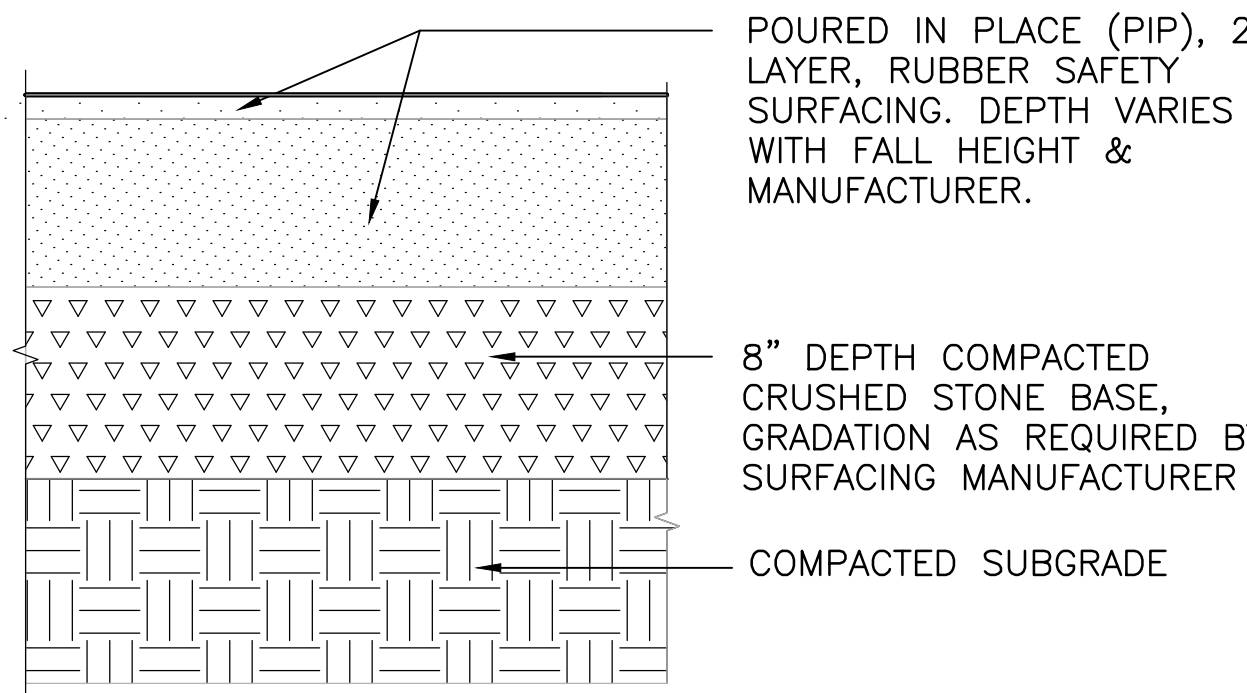
3 CONCRETE PAVEMENT AND PADS
 SCALE: 3" = 1'-0"



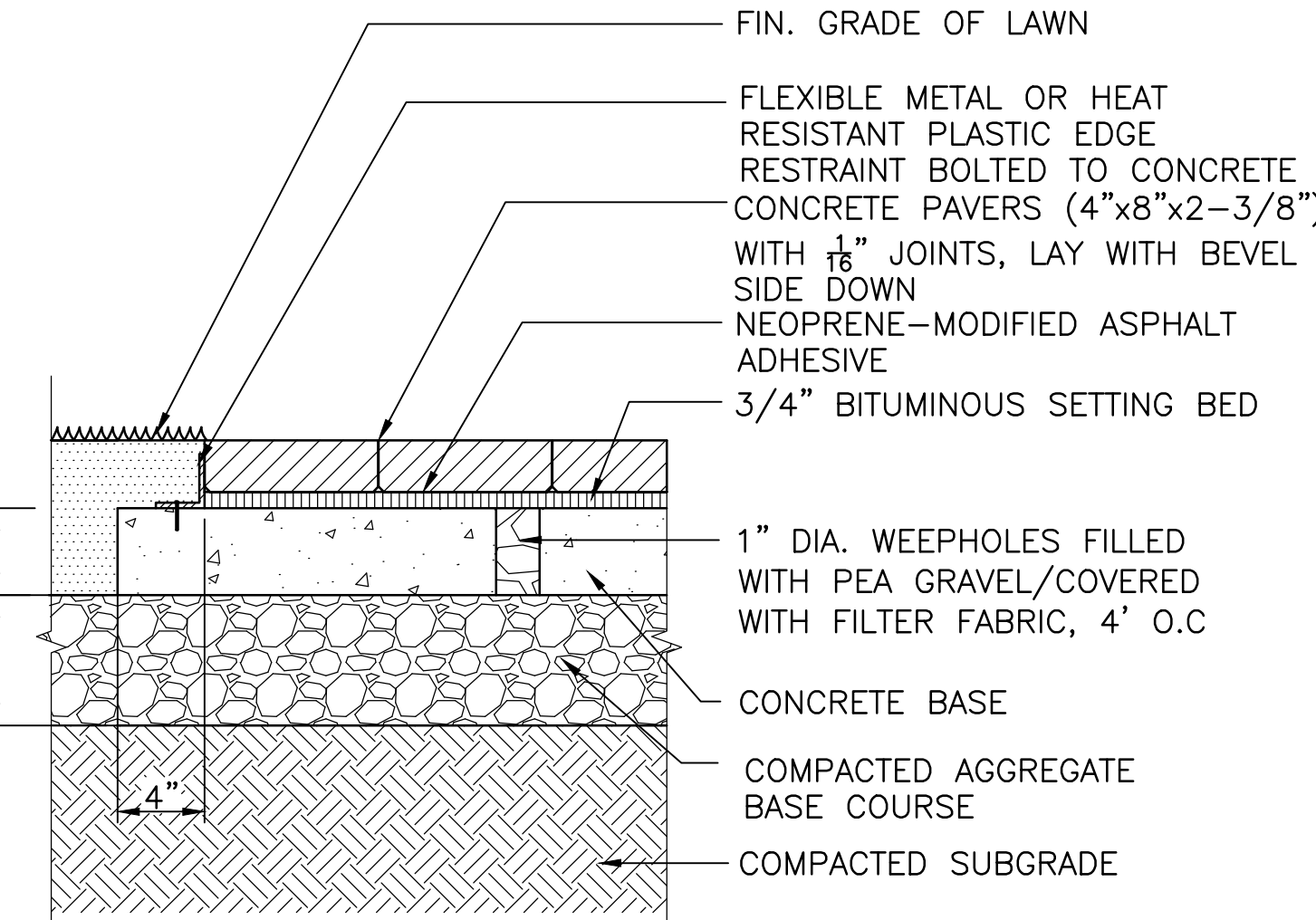
4 SIDEWALK/WALKWAY SECTION
 SCALE: 1" = 1'-0"



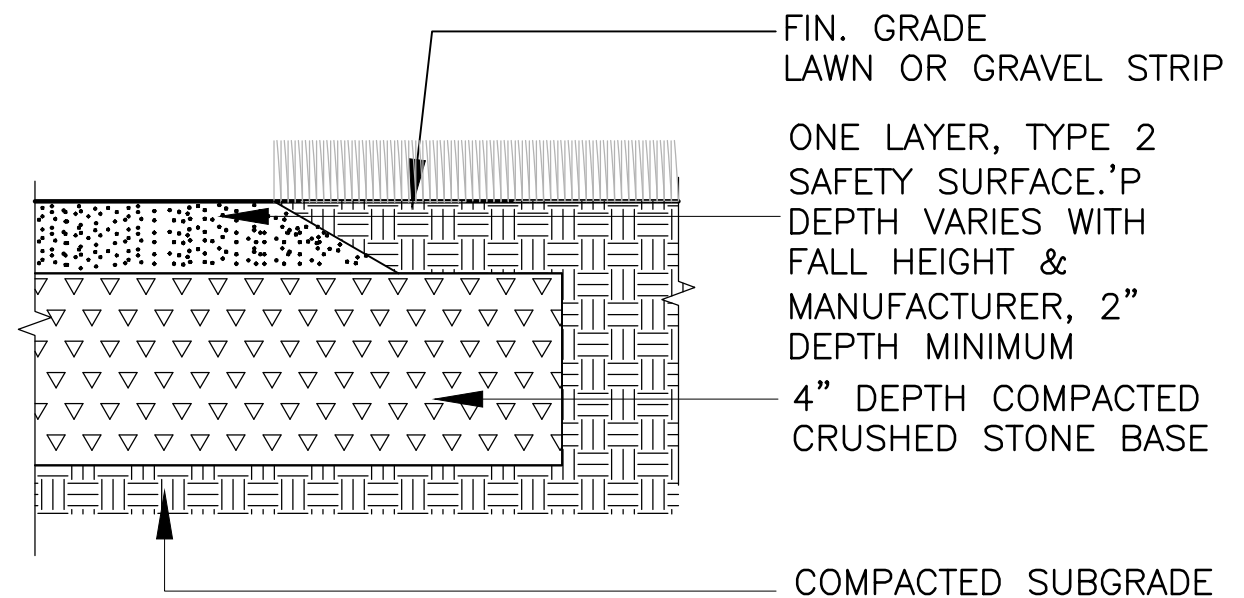
5 CONCRETE PAVING JOINT DETAILS
 SCALE: N.T.S.



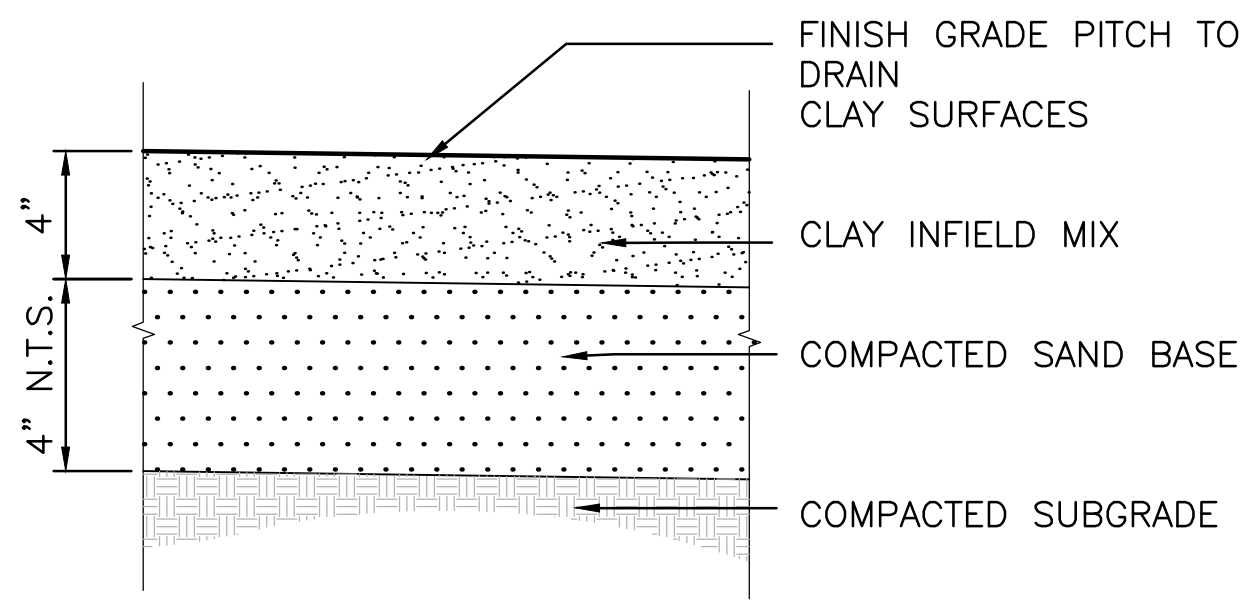
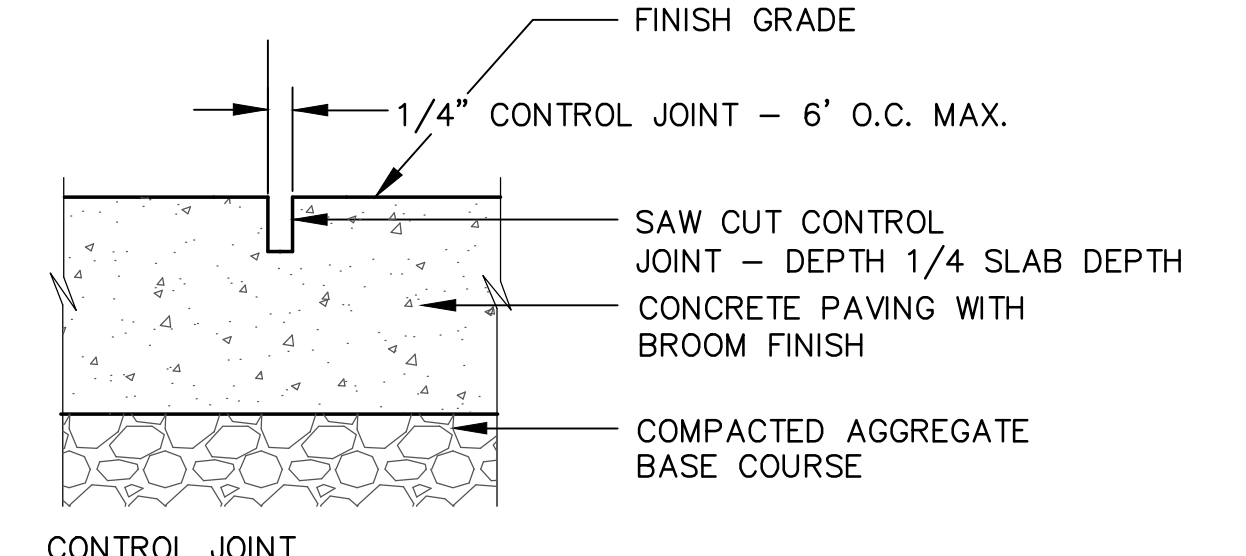
6 TYPE 1 SAFETY SURFACING - 2 LAYER PIP
 SCALE: 3" = 1'-0"



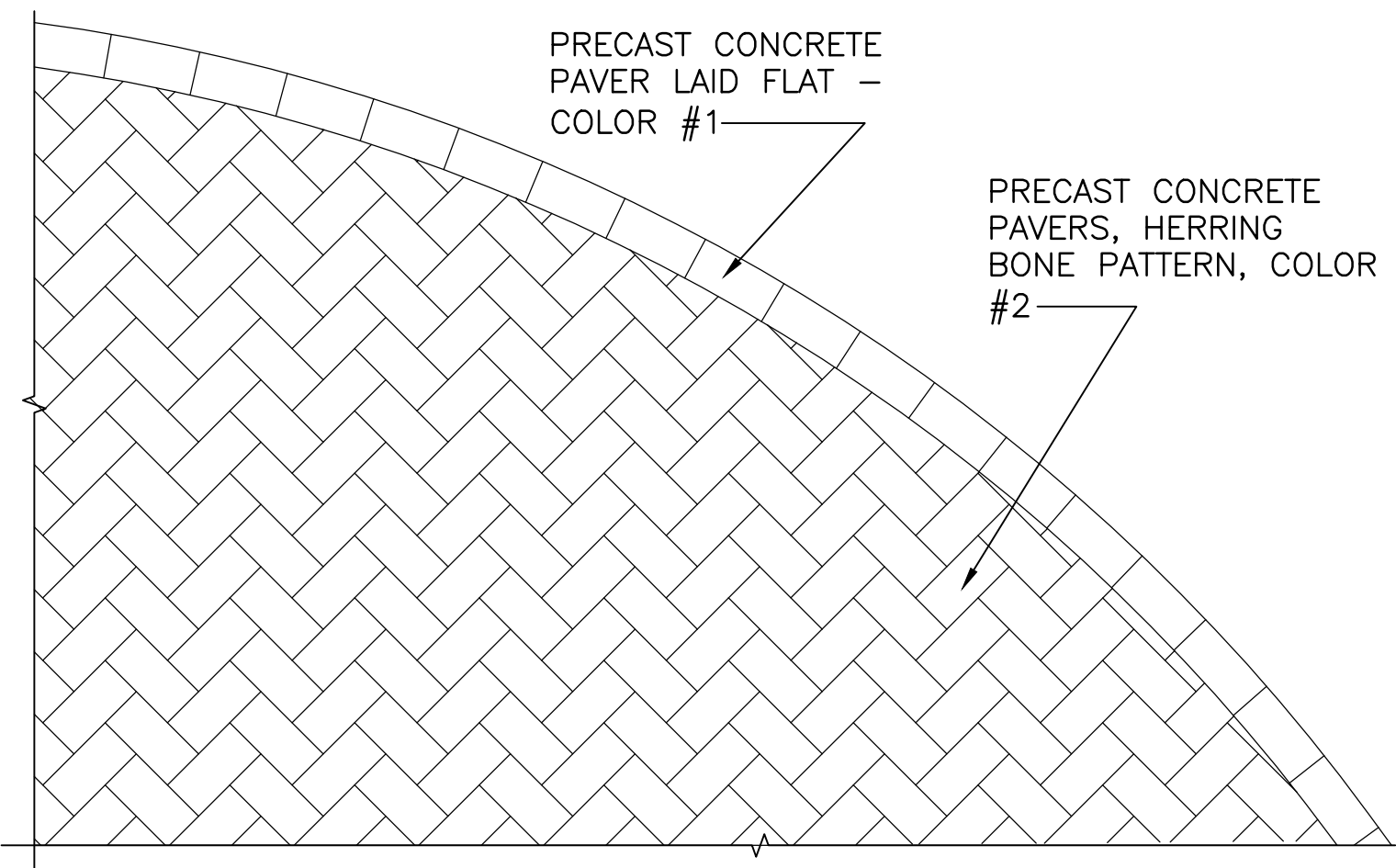
8 SCALE: PRECAST PAVERS ON CONCRETE BASE
 SCALE: 1-1/2" = 1'-0"



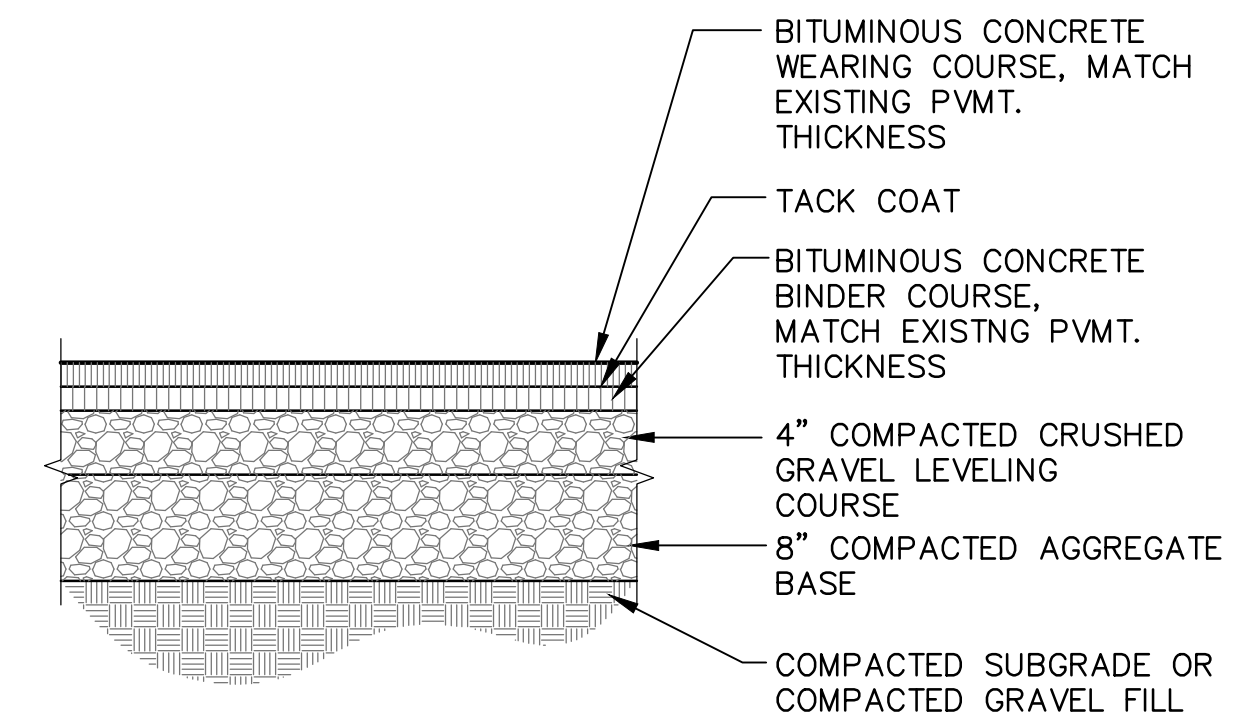
9 TYPE 2 - ONE LAYER SAFETY SURFACING AT EXERCISE AREA
 SCALE: N.T.S.



10 SKINNED INFIELD SURFACING
 SCALE: N.T.S.



11 PAVING PATTERN AT SITTING AREAS
 SCALE: 3/4" = 1'-0"



12 STREET RESTORATION DETAIL
 N.T.S.



No.	Description	Date
△	REVISED ADDENDUM #1	11/20/17

REVISIONS		

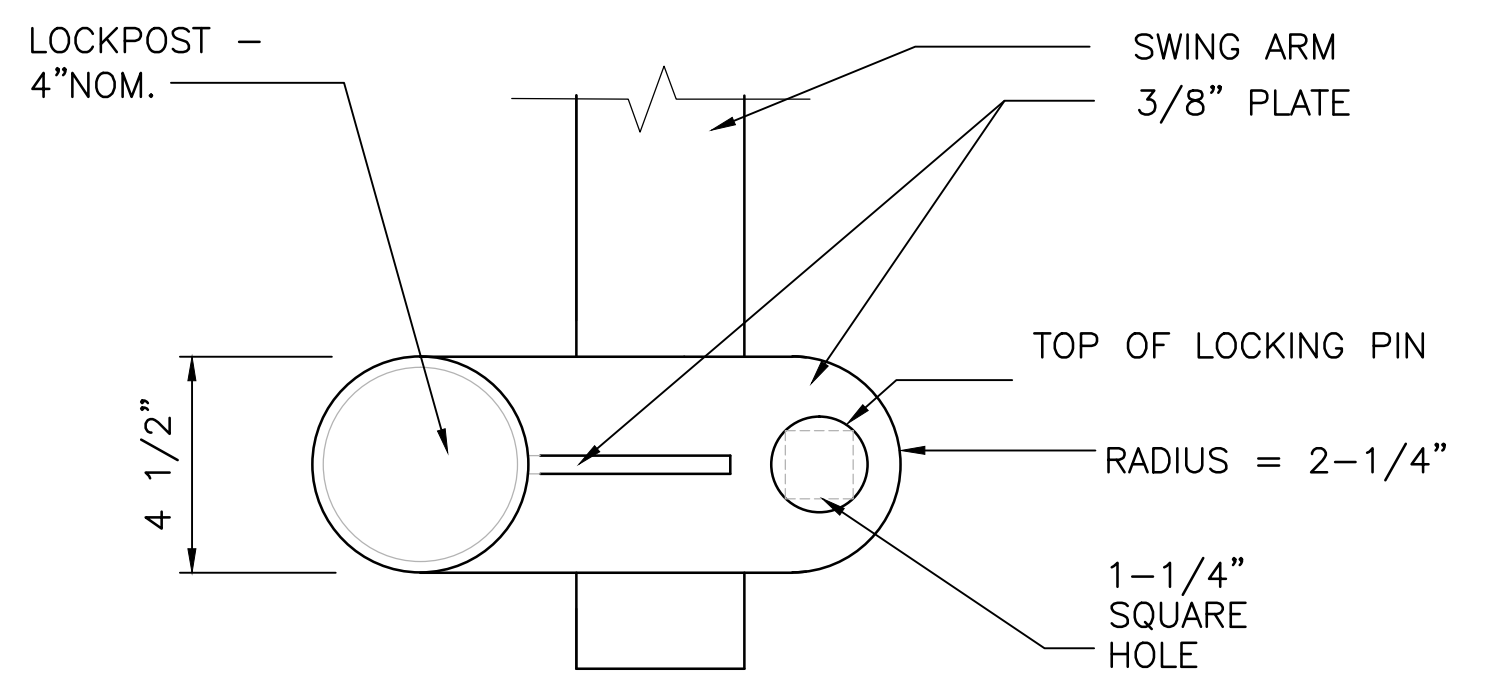
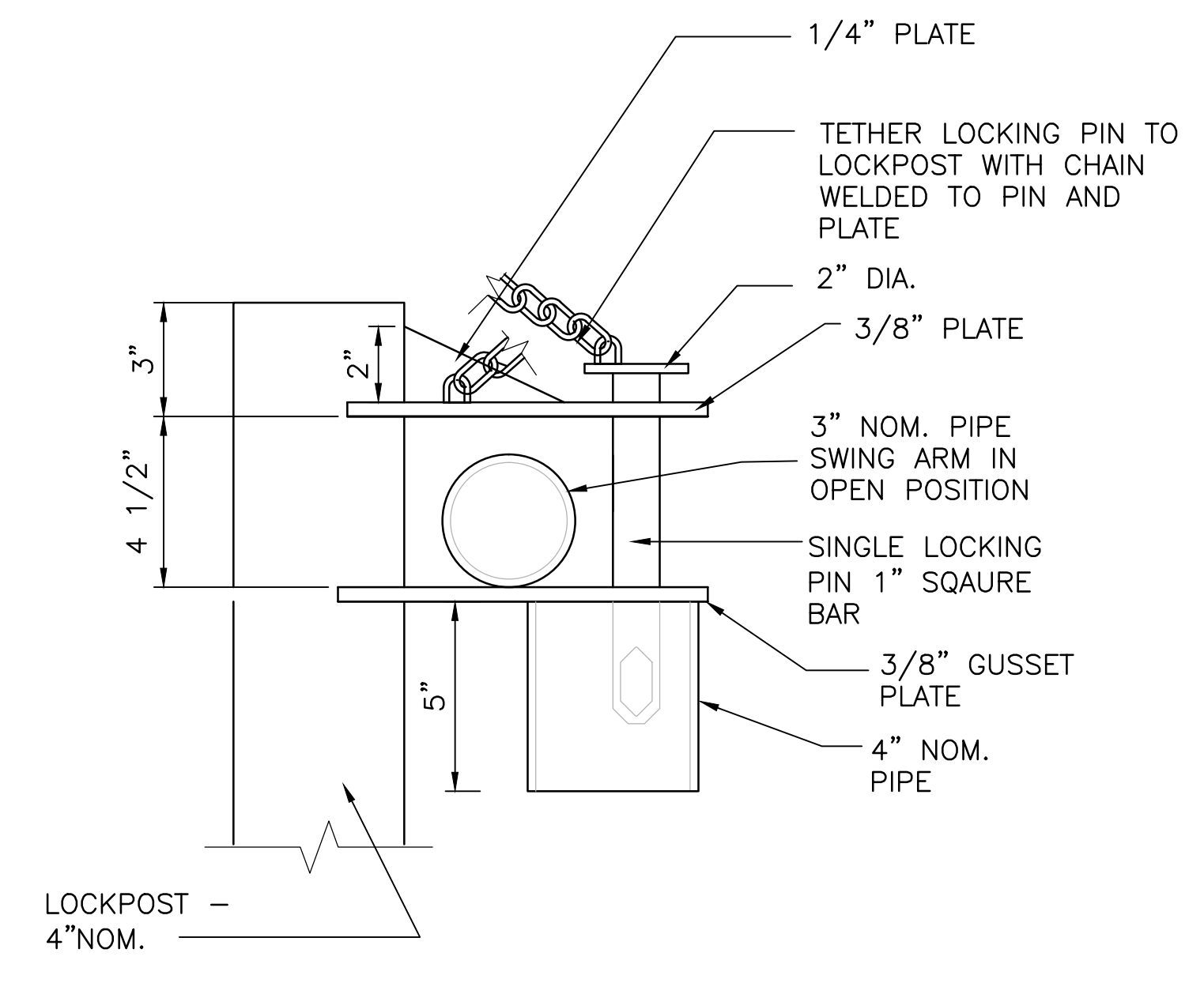
Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 421 TRAPELO ROAD
 WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
FENCING DETAILS

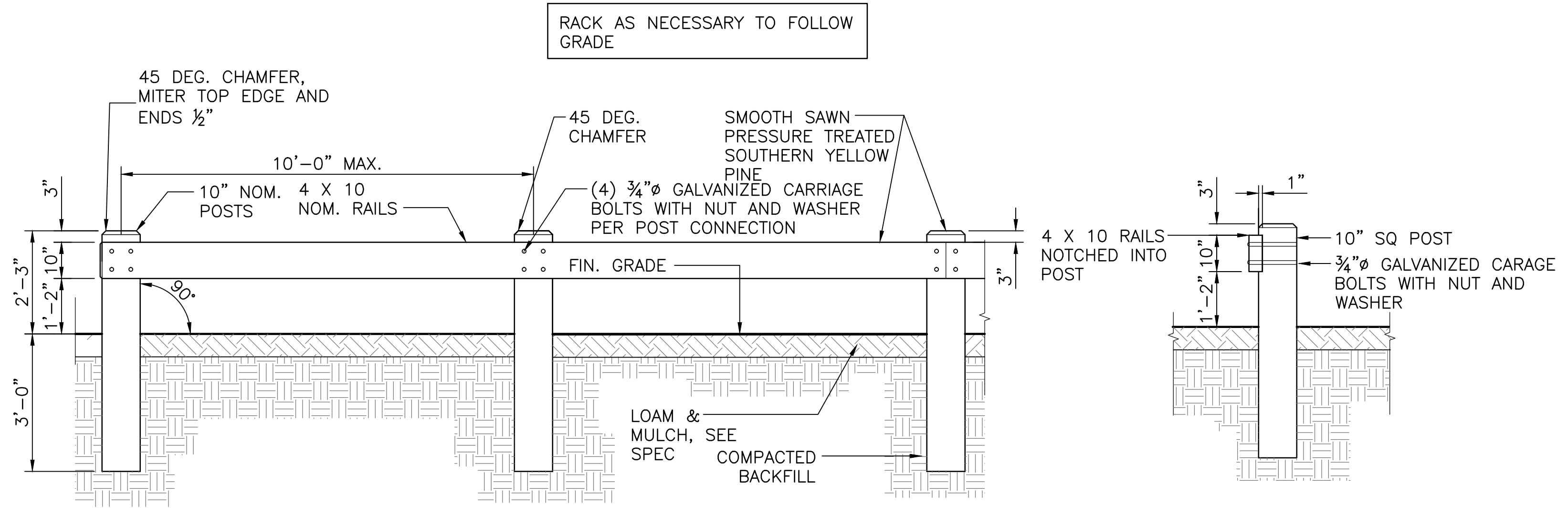
Scale AS NOTED Date OCT. 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By VH
 Project No. 1710.00

DWG No. **L.605**

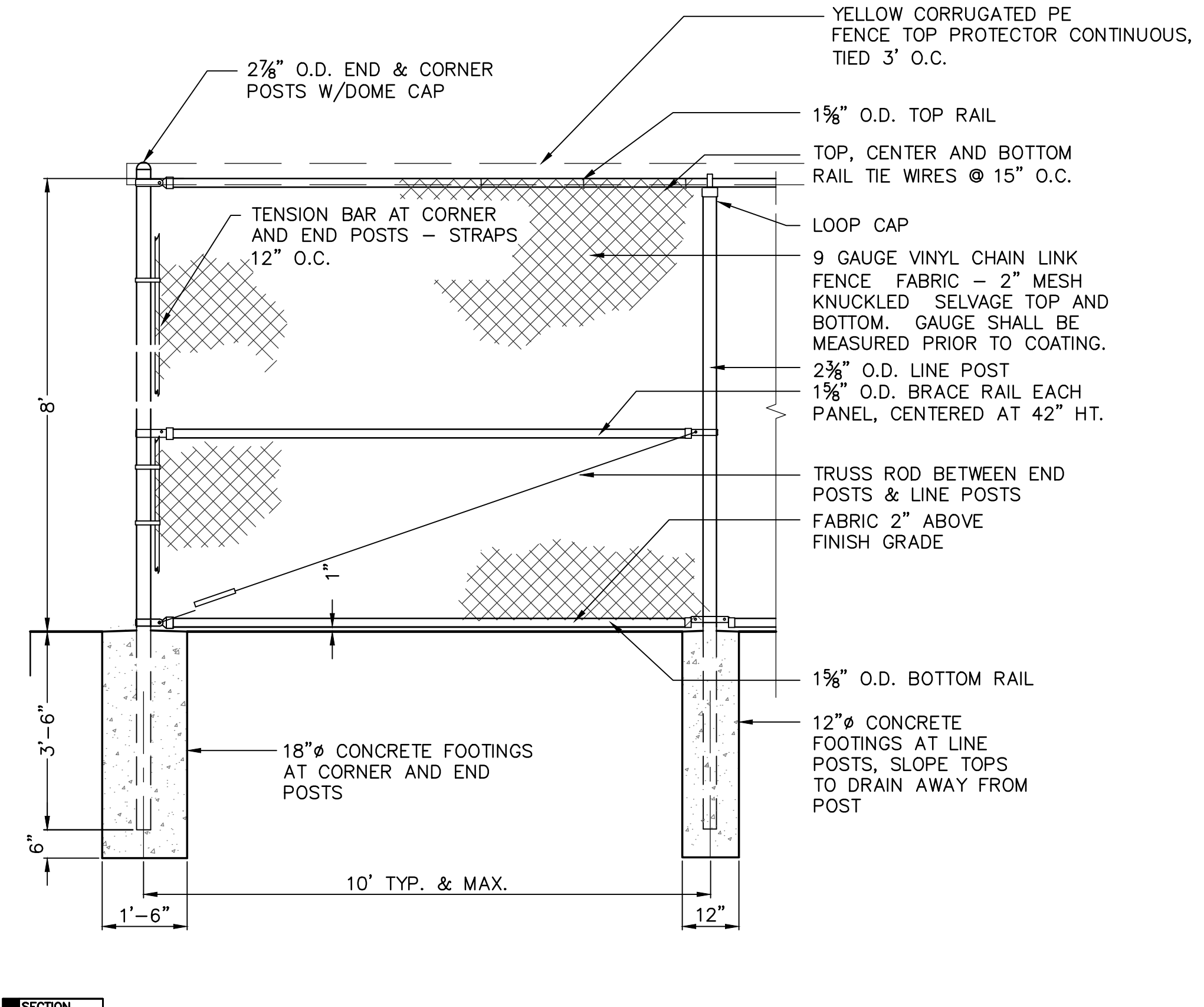


NOTE: PROVIDE STANCHION POST AT 180, IDENTICAL TO LOCK POST EXCEPT FOR ORIENTATION.

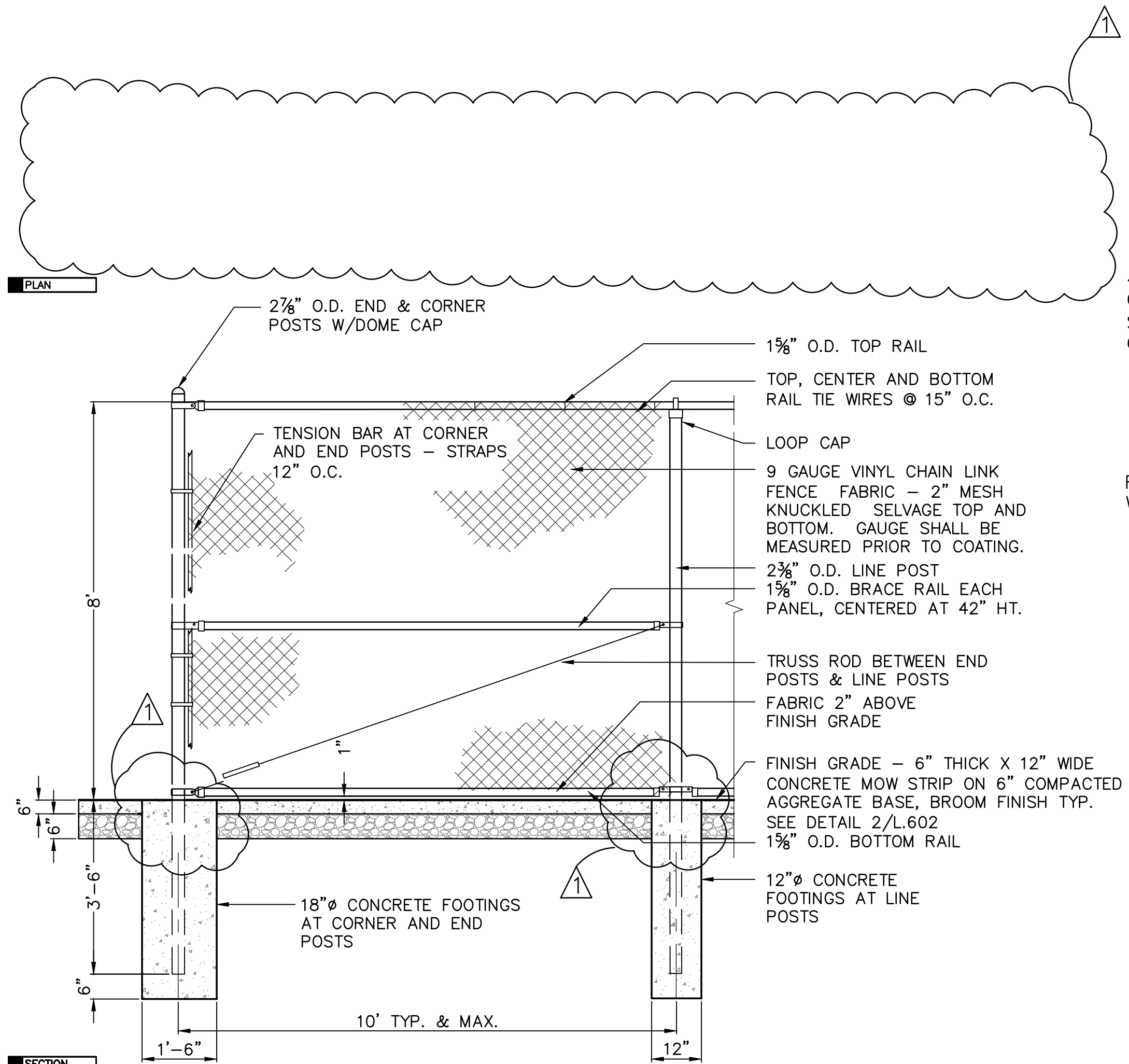
1 LOCKPOST AND STANCHION POST
 SCALE: ONE QUARTER SIZE



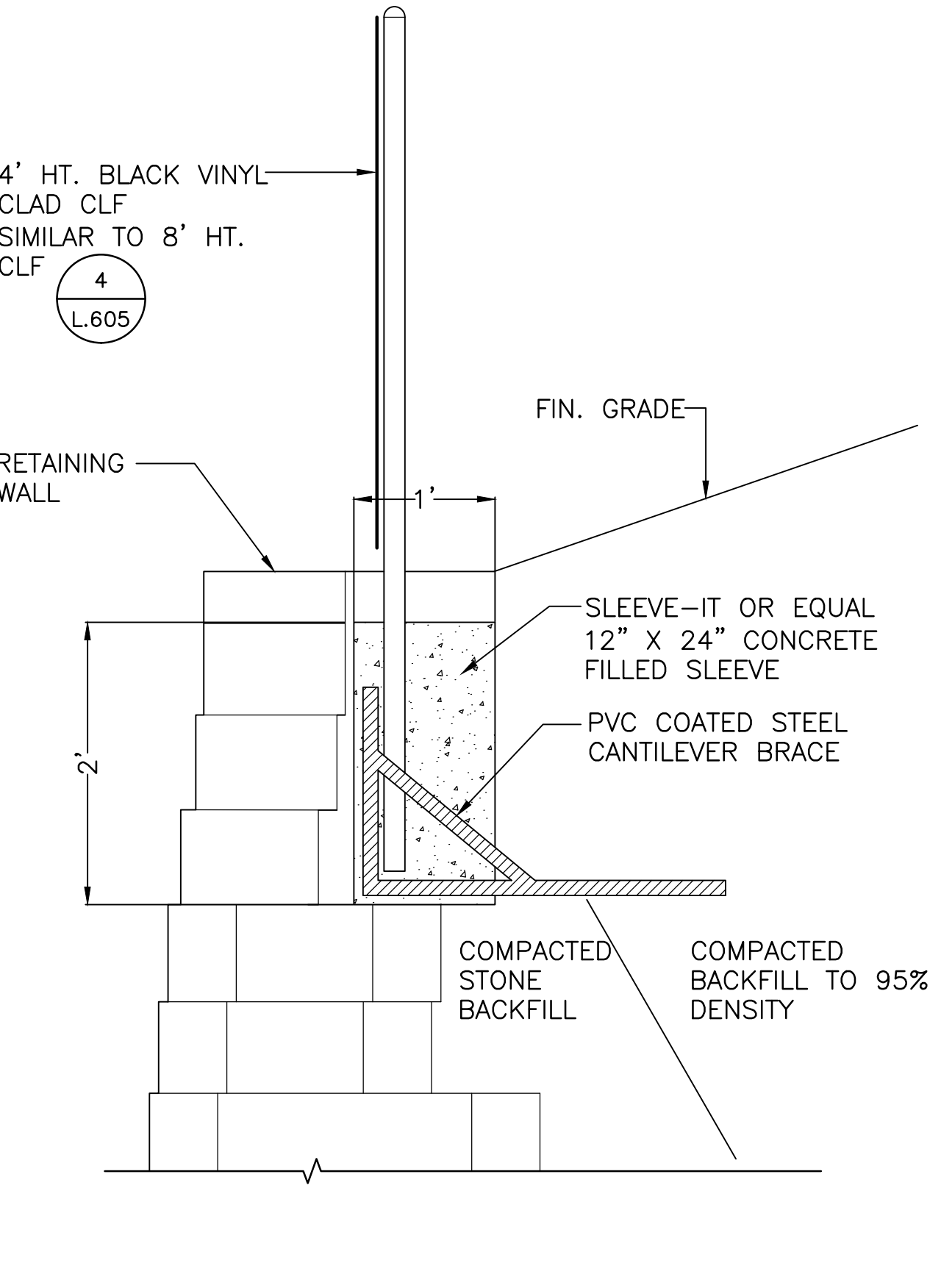
2 WOOD GUARDRAIL
 SCALE: 1/2" = 1'-0"



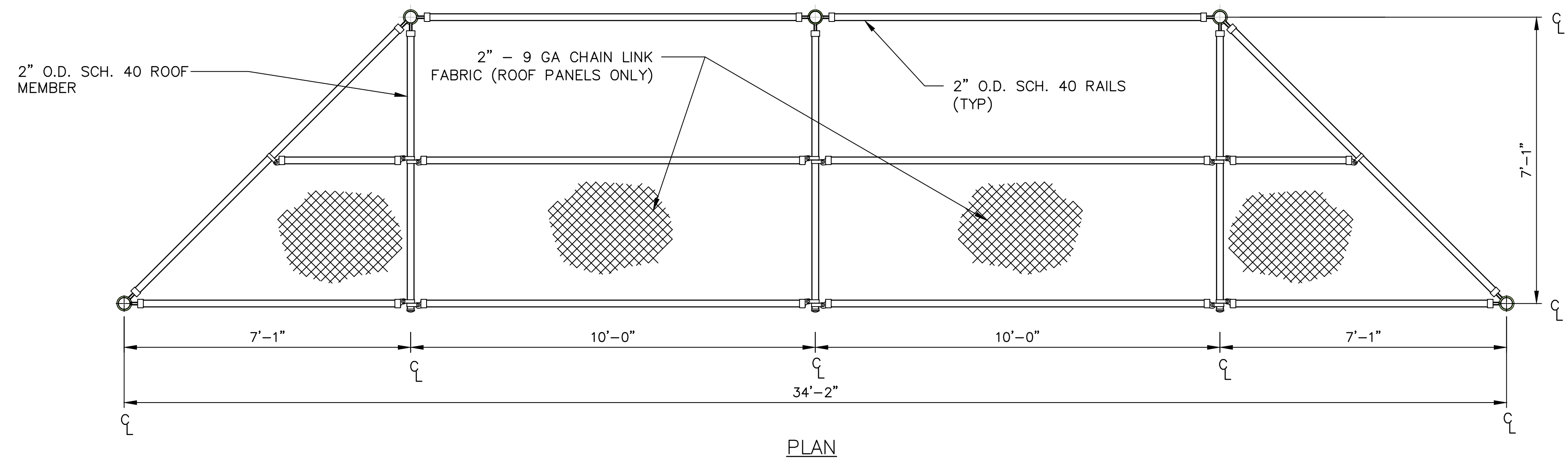
3 8' HT. CHAIN LINK FENCE AT OUTFIELD WITH TOP PROTECTOR
 SCALE: 1/2" = 1'-0"



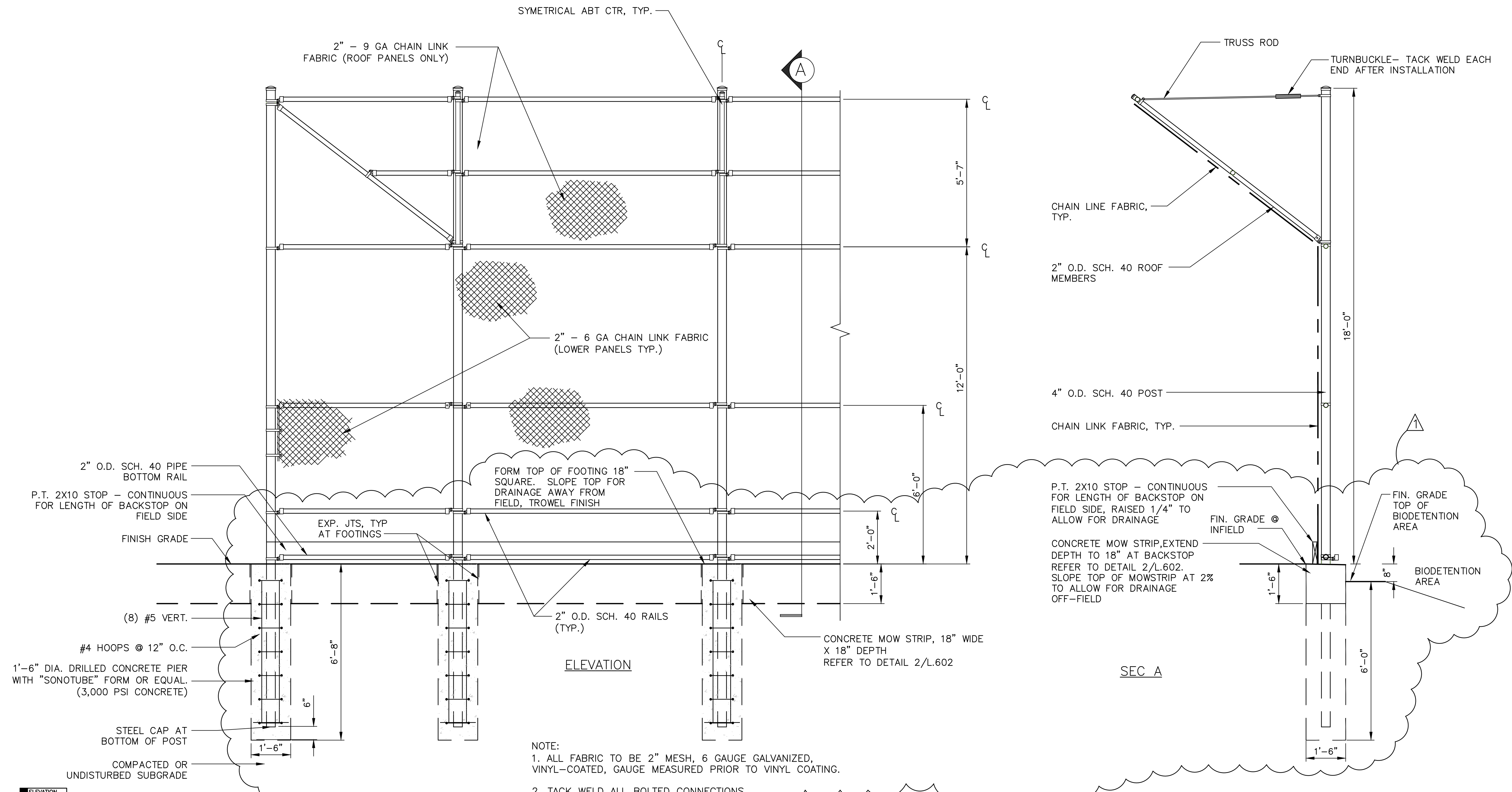
4 8' HT. CHAIN LINK FENCE AT SOFTBALL FIELD WITH MOW STRIP
 SCALE: 1/2" = 1'-0"



5 4' HT. CHAIN LINK FENCE ON WALL
 SCALE: 1" = 1'-0"



PLAN



ELEVATION

SEC A

NOTE:
 1. ALL FABRIC TO BE 2" MESH, 6 GAUGE GALVANIZED, VINYL-COATED, GAUGE MEASURED PRIOR TO VINYL COATING.
 2. TACK WELD ALL BOLTED CONNECTIONS

No.	Description	Date
1	REVISED ADDENDUM #1 ELEVATIONS	11/20/17

REVISIONS

Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 421 TRAPELO ROAD
 WALTHAM, MA 02452**

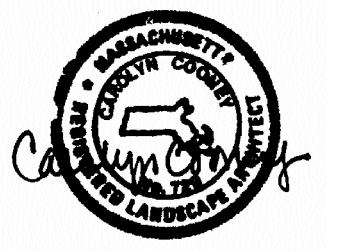
Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
**BACKSTOP
 DETAILS**

Scale AS NOTED Date OCT. 31, 2017
 Drawn By CCC
 Checked By DRB
 Approved By VH
 Project No. 1710.00

DWG No. **L.606**

1 SOFTBALL BACKSTOP
 SCALE: 1/2"=1'-0"



No.	Description	Date
△	NEW DWG ADDENDUM #1	11/20/17

REVISIONS	

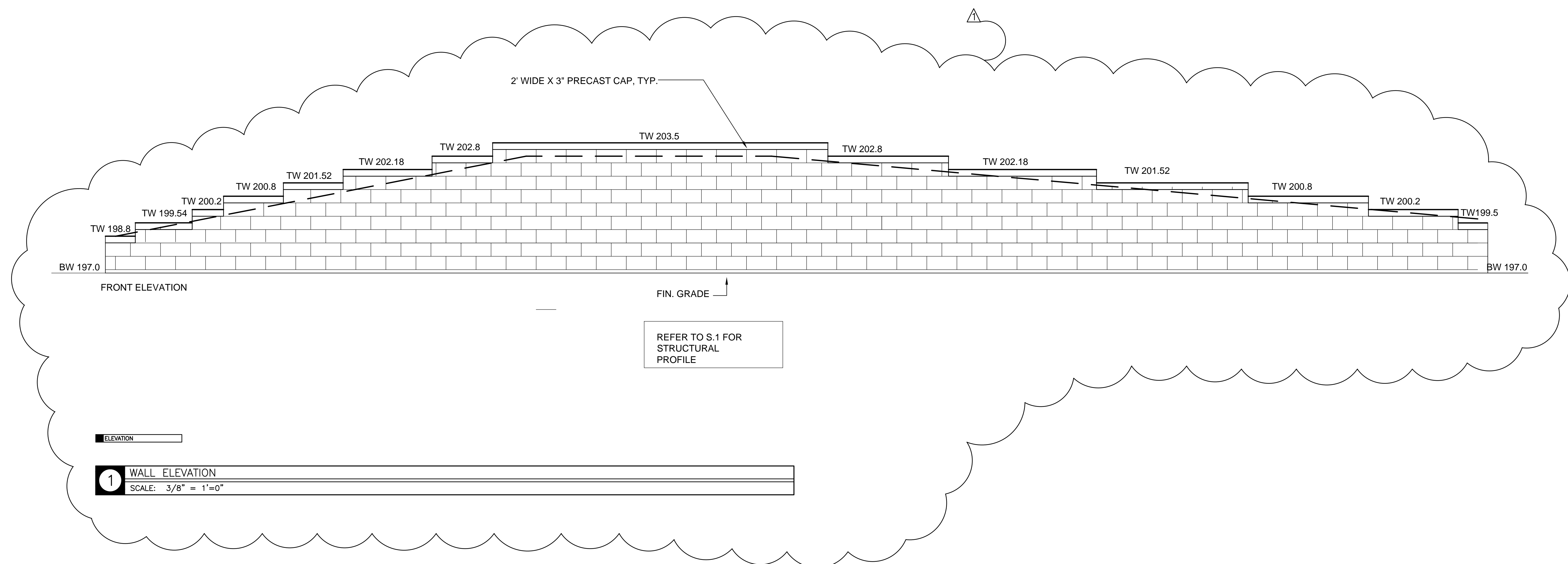
Project:
**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:
**RETAINING WALL
ELEVATION**

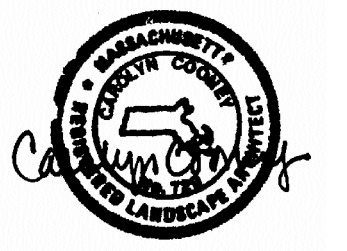
Scale AS NOTED Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By VH
Project No. 1710.00

DWG No. **L.609**



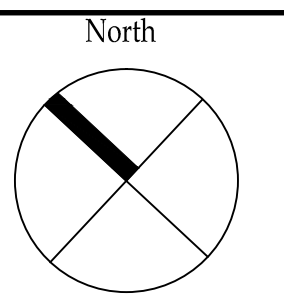
ELEVATION

1 WALL ELEVATION
SCALE: 3/8" = 1'-0"



REVIS	REVISIONS	
△	REVISED ADDENDUM #1	11/20/17
No.	Description	Date

REVISIONS



Project:

**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:

**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

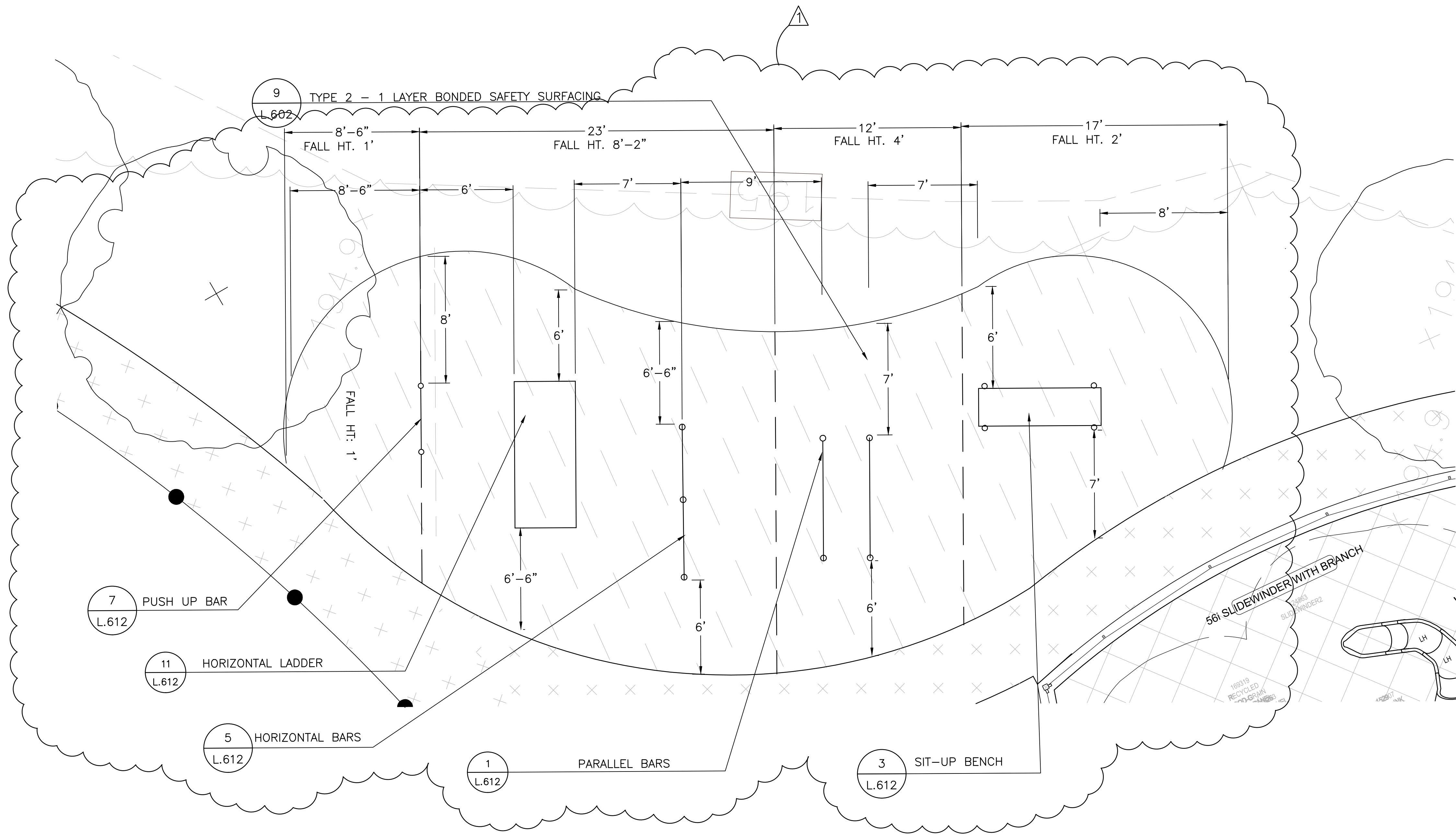
TITLE:

**EXERCISE AREA
ENLARGEMENT**

Scale AS NOTED Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By VH
Project No. 1710.00

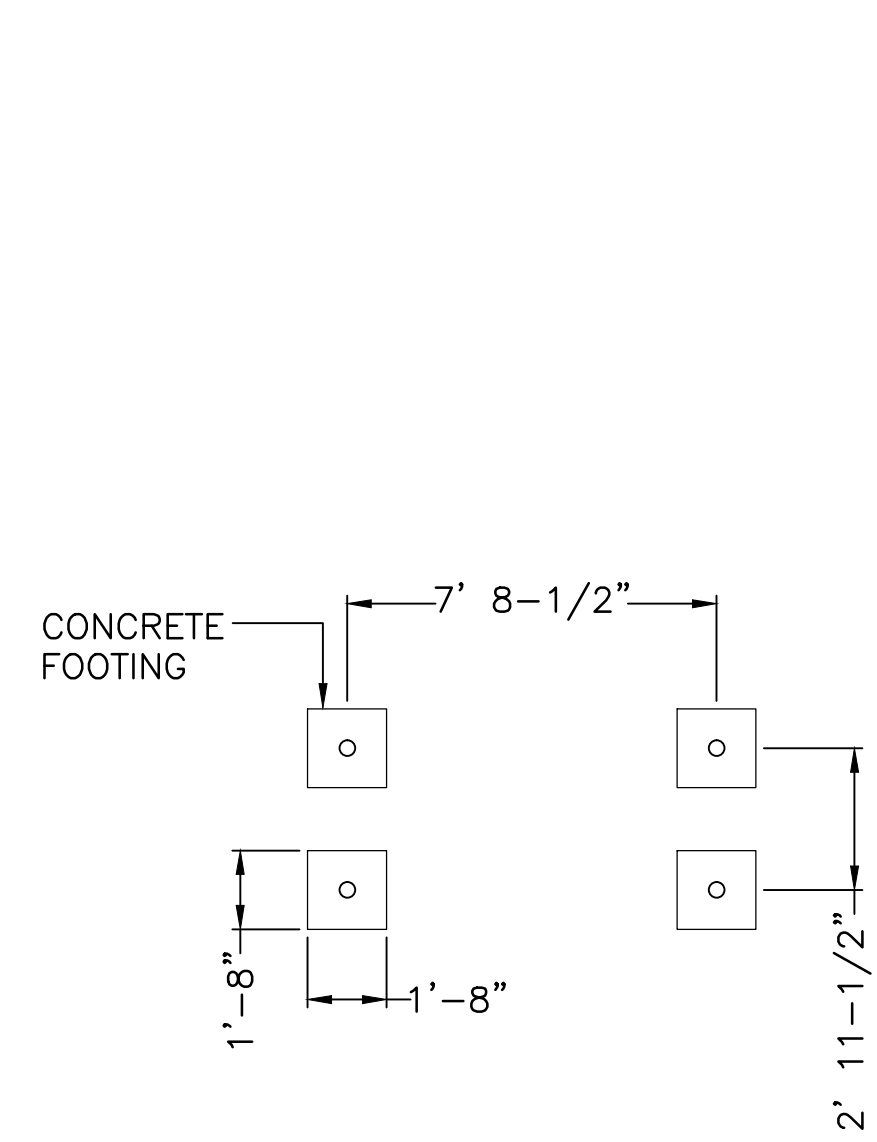
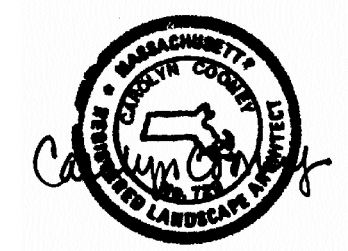
DWG No.

L.612

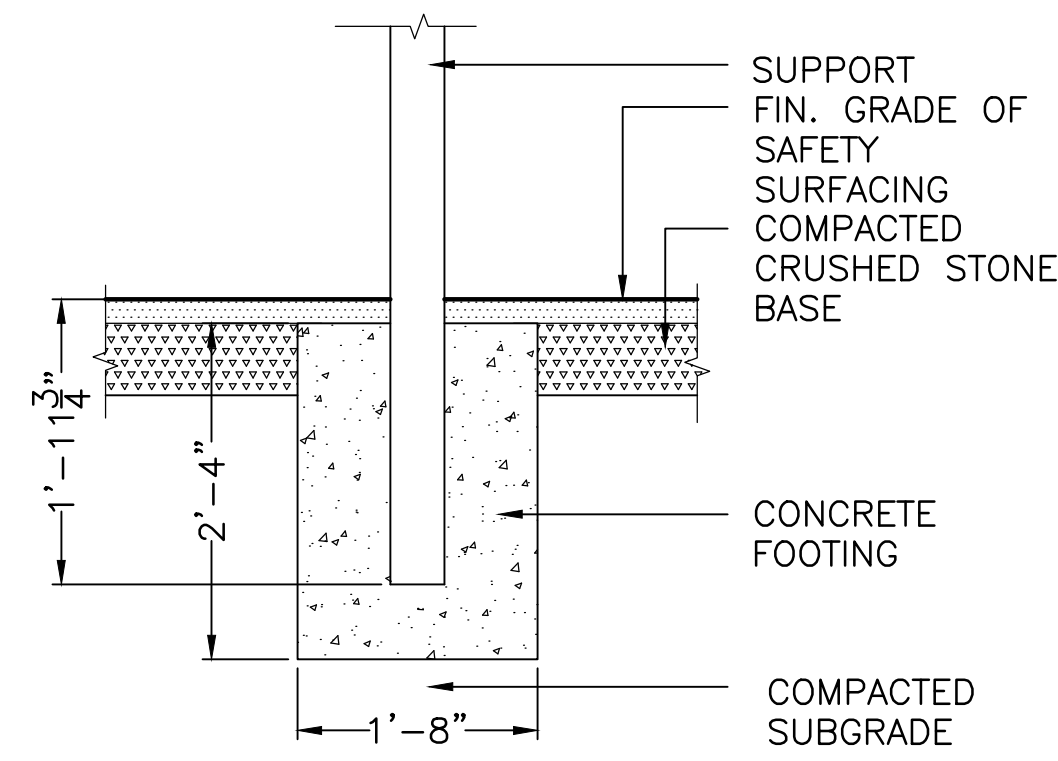


PLAN

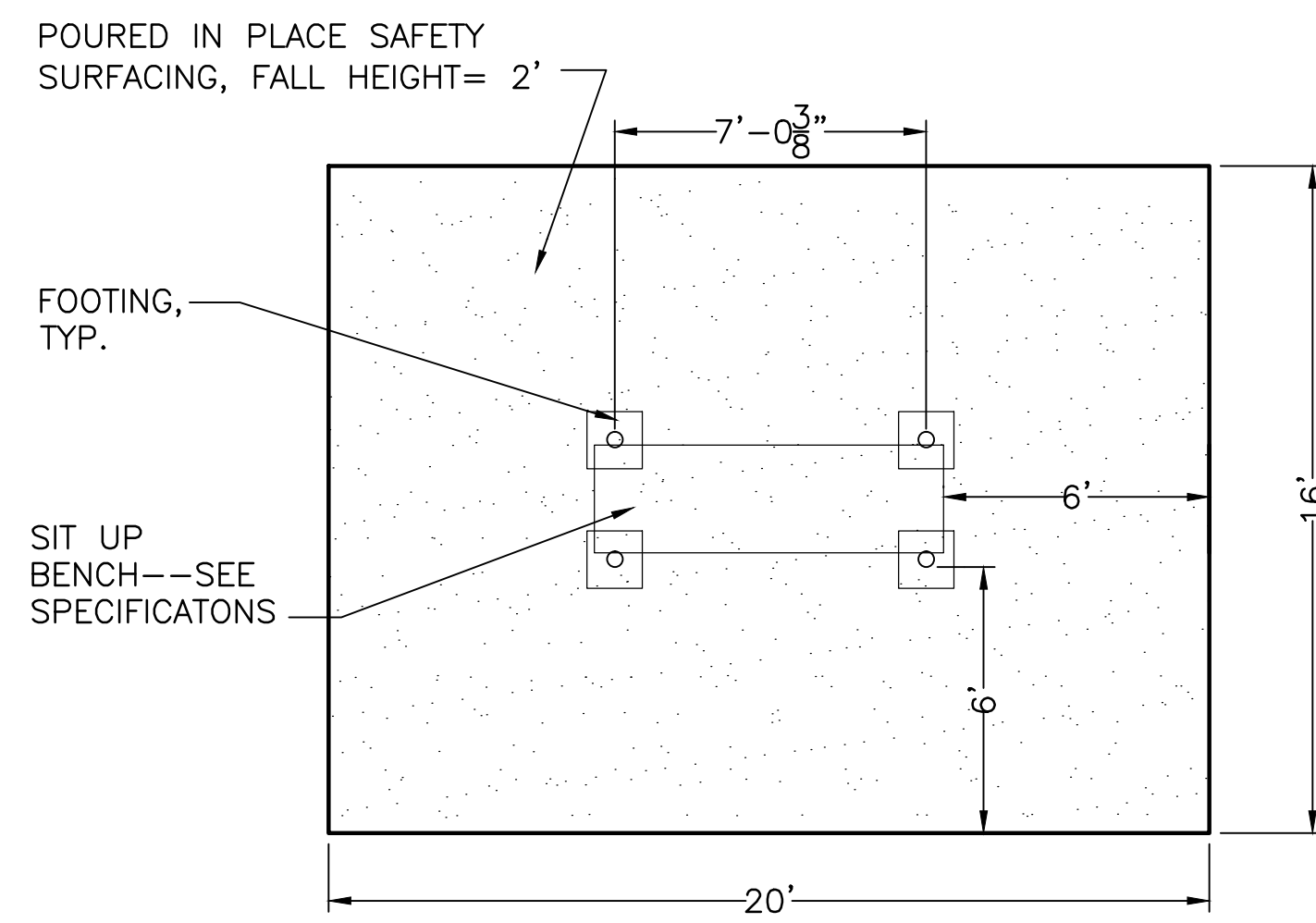
1 EXERCISE AREA ENLARGEMENT PLAN
SCALE: 1/4" = 1'-0"



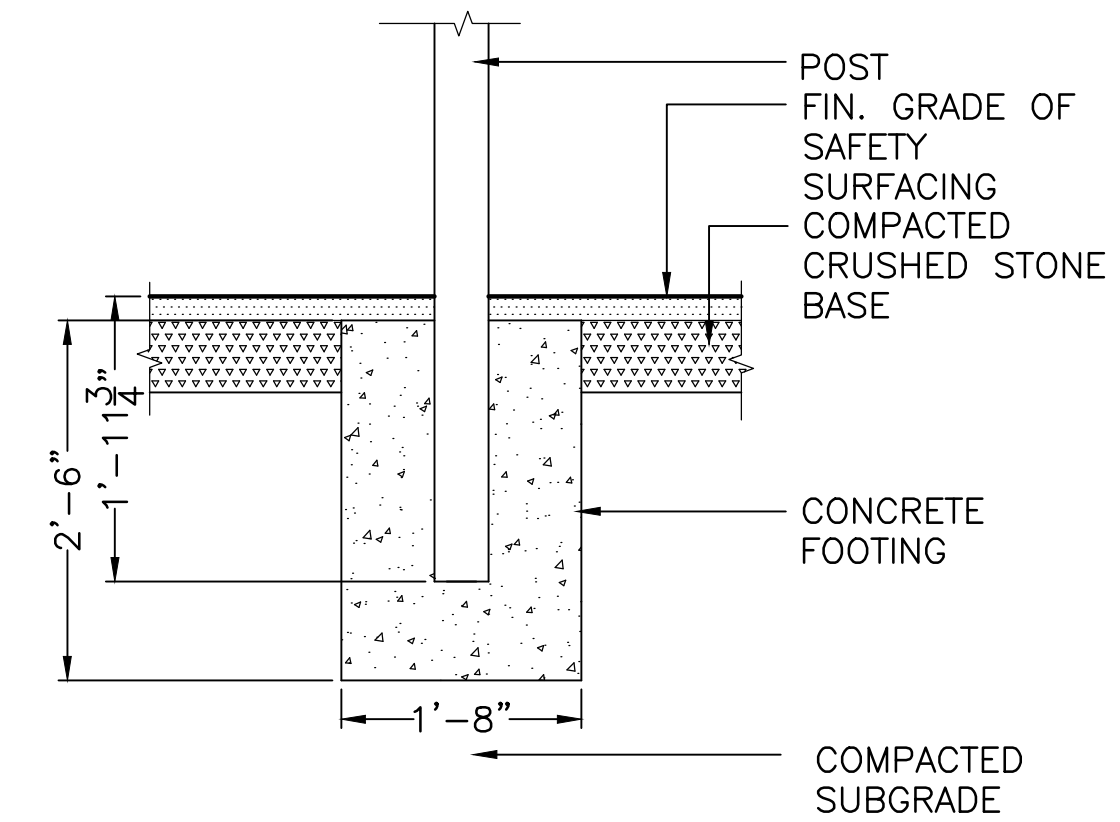
1 EXERCISE STATION - PARALLEL BARS
1/4" = 1'-0"



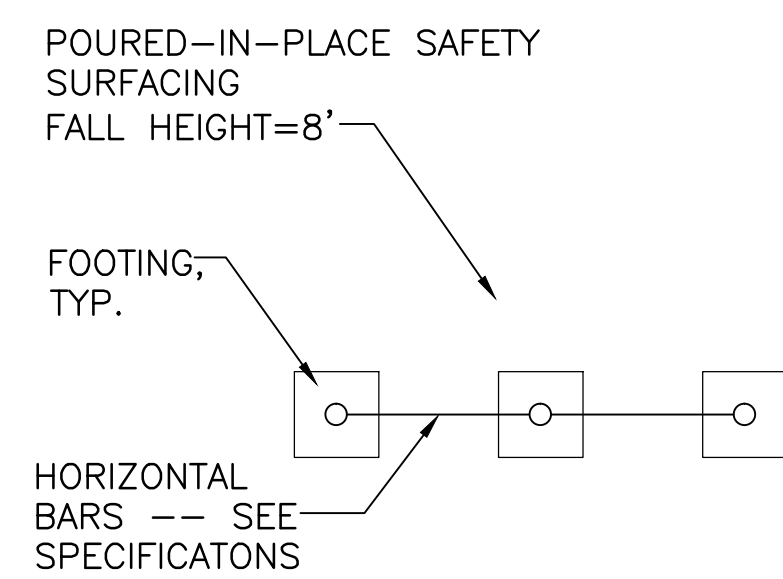
2 EXERCISE STATION - PARALLEL BARS
3/4" = 1'-0"



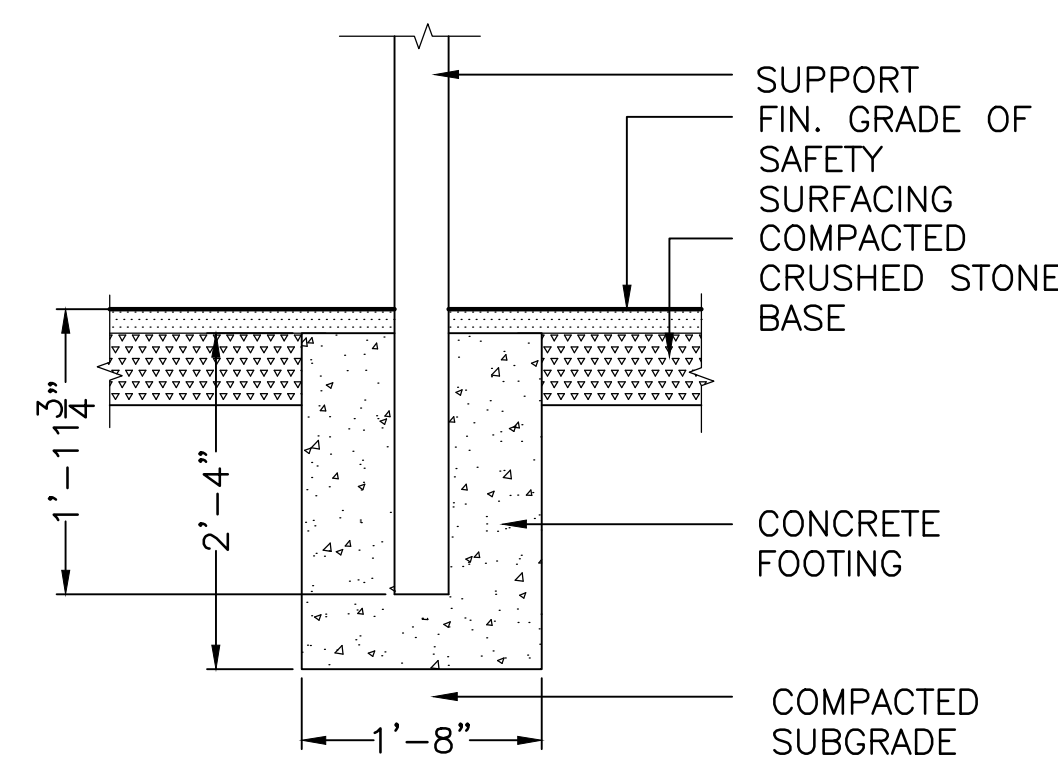
3 EXERCISE STATION - SIT UP BENCH
1/4" = 1'-0"



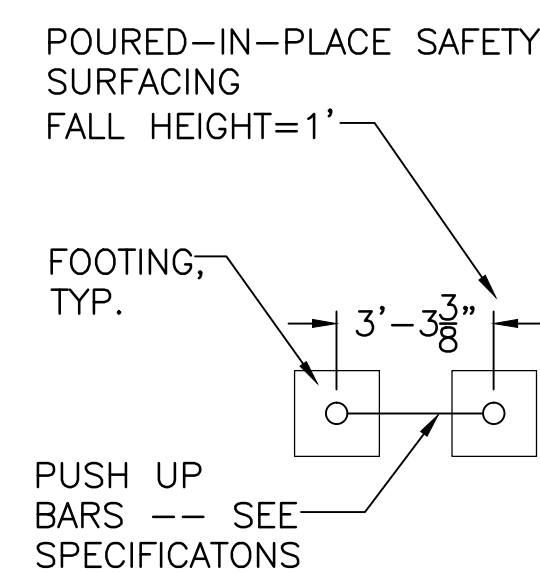
4 EXERCISE STATION - SIT UP BENCH FOOTINGS
3/4" = 1'-0"



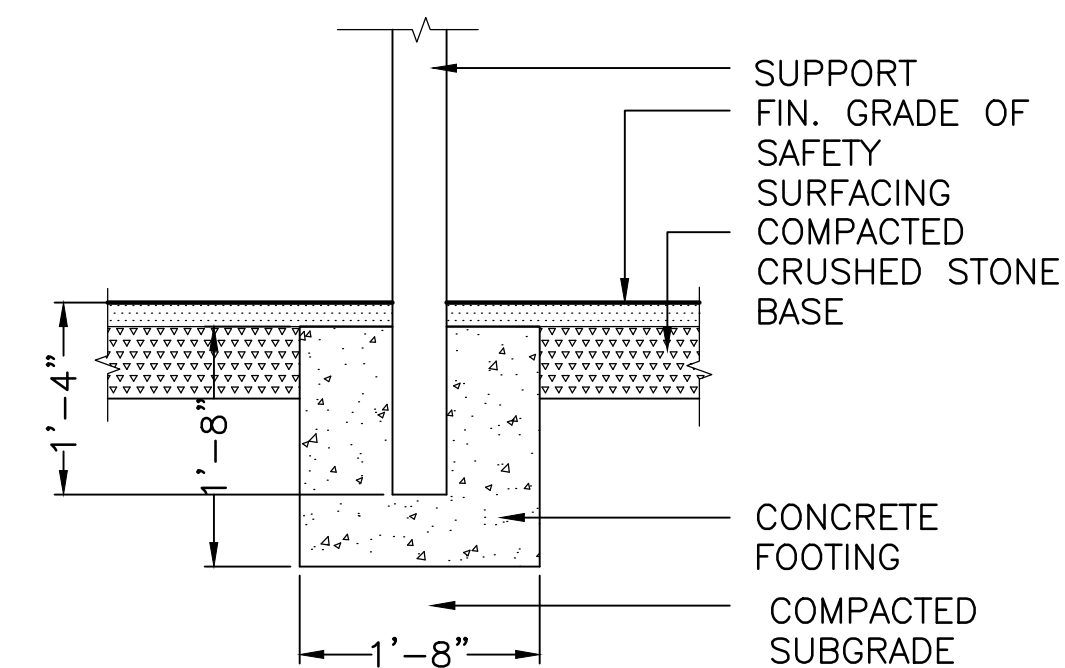
5 EXERCISE STATION - HORIZONTAL BARS
1/4" = 1'-0"



6 EXERCISE STATION - HORIZONTAL BARS - FTGS
3/4" = 1'-0"



7 EXERCISE STATION - PUSH UP BAR
1/4" = 1'-0"

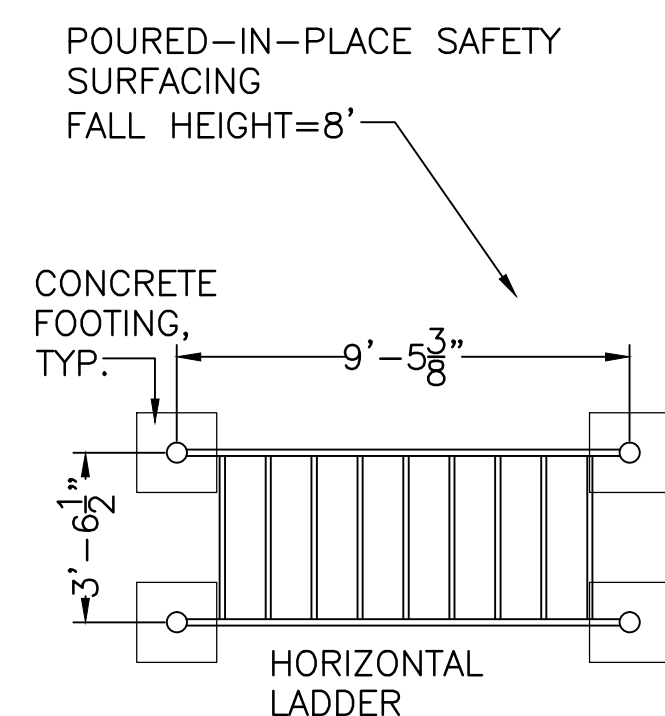


8 EXERCISE STATION - PUSH UP BAR FOOTINGS
3/4" = 1'-0"

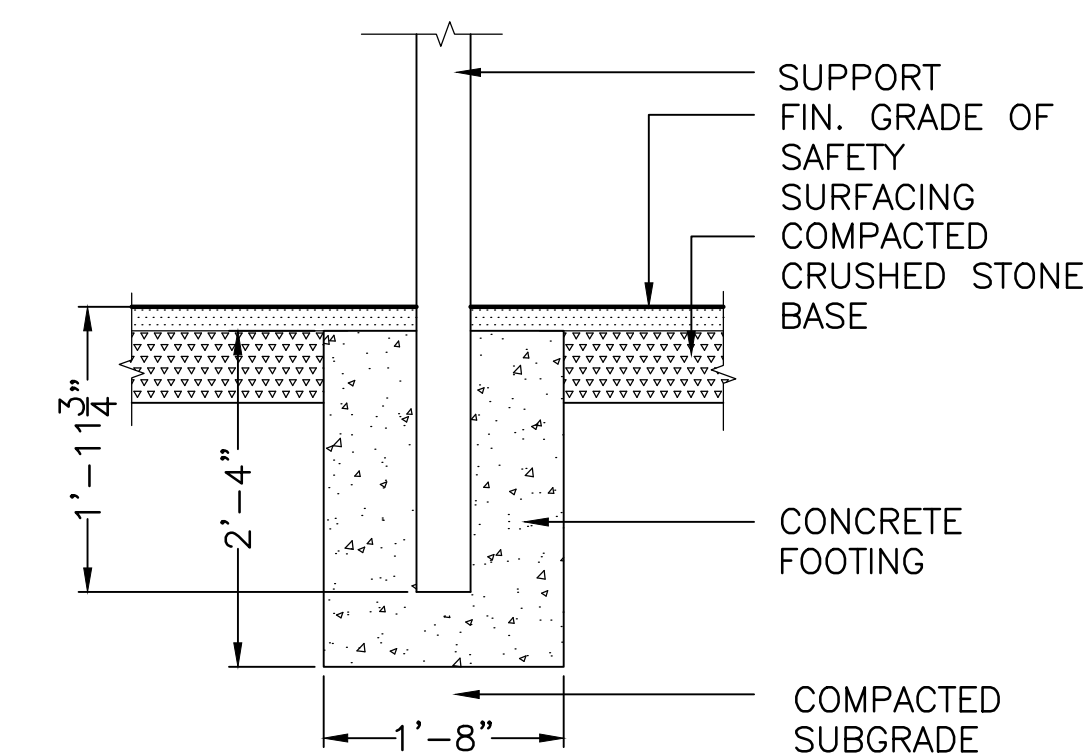


9 EXERCISE STATION - BACK EXTENSION
1/4" = 1'-0"

10 EXERCISE STATION - BACK EXTENSION FTG
1" = 1'-0"



11 EXERCISE STATION - HORIZ. LADDER
1/4" = 1'-0"



12 EXERCISE STATION - HORIZ. LADDER FOOTING
1" = 1'-0"

No.	Description	Date
1	REVISED ADDENDUM #1 - DELETE BACK EXTENSION	11/20/17

REVISIONS

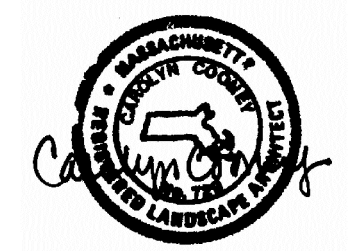
Project:
**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:
**EXERCISE EQUIPMENT
EQUIPMENT**

Scale AS NOTED Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By VH
Project No. 1710.00

DWG No. **L.613**



No.	Description	Date
1	FOOTING REVISIONS PER ADDENDUM #3	04/18/16

REVISIONS

Project:

**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:

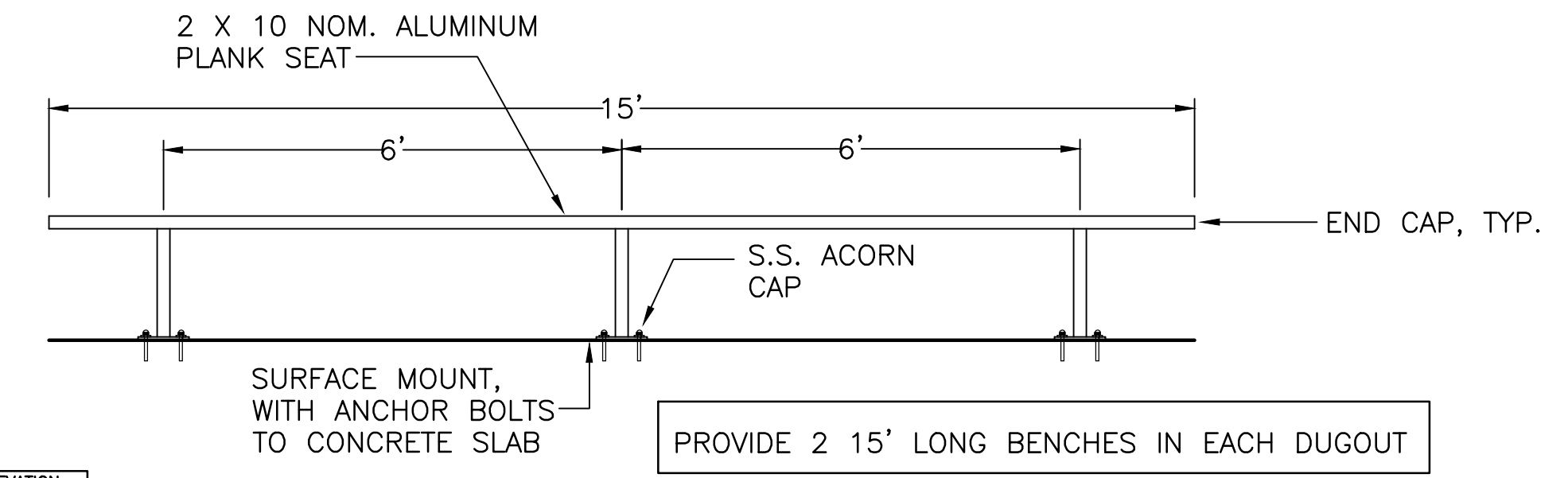
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:

**DUGOUT SHELTER
DETAILS**

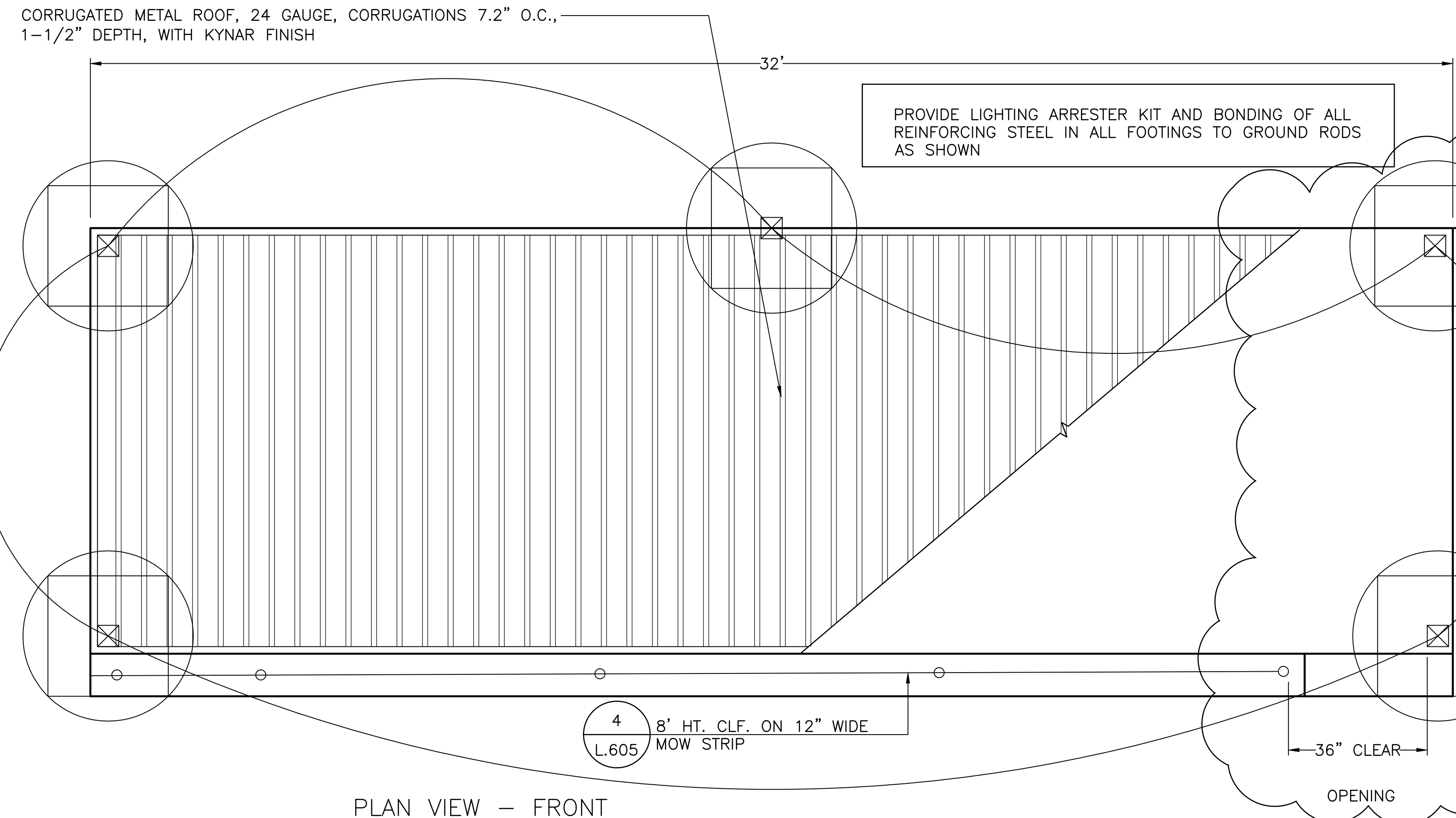
Scale AS NOTED Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By VH
Project No. 1710.00

DWG No. **L.614**

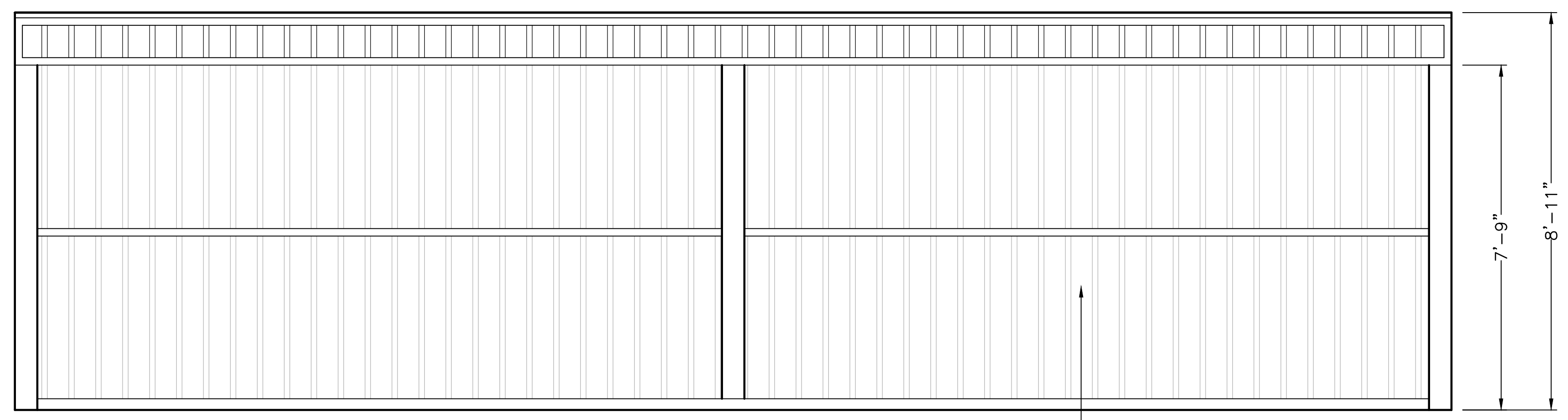


ELEVATION

1 PLAYERS BENCHES
SCALE 1/2"=1'-0"



PLAN VIEW - FRONT

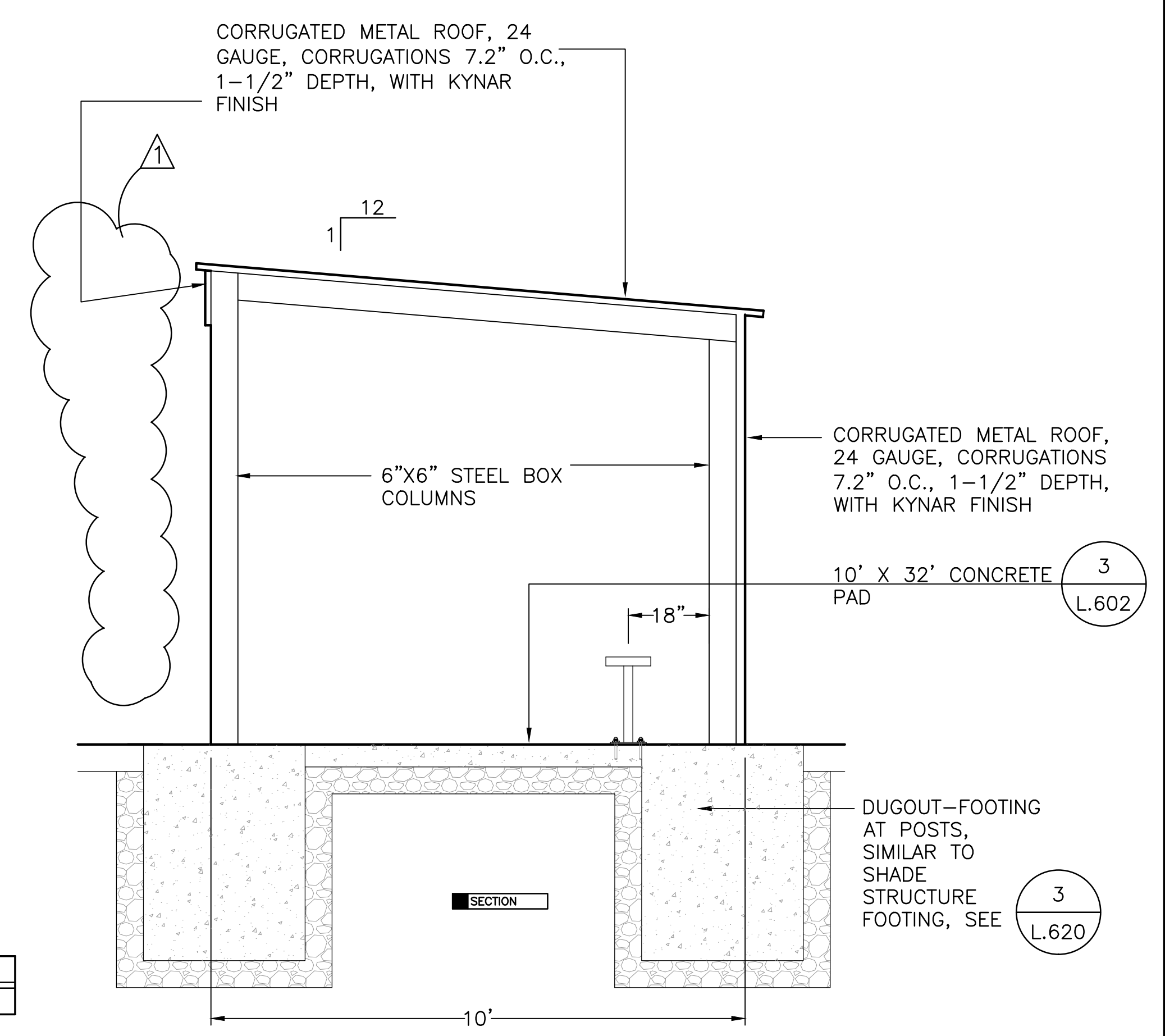


ELEVATION - FRONT

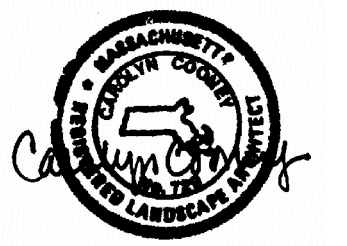
CORRUGATED METAL ROOFING TO FORM DUGOUT BACK WALL, 24 GAUGE, CORRUGATIONS 7.2" O.C., 1-1/2" DEPTH, WITH KYNAR FINISH

PLAN

2 DUGOUT
SCALE 1/2"=1'-0"



SECTION



NEW DWG ADDENDUM #1	11/20/17	
No.	Description	Date

REVISIONS

Project:

**CITY OF WALTHAM
ELSE TURNER FIELD
421 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:

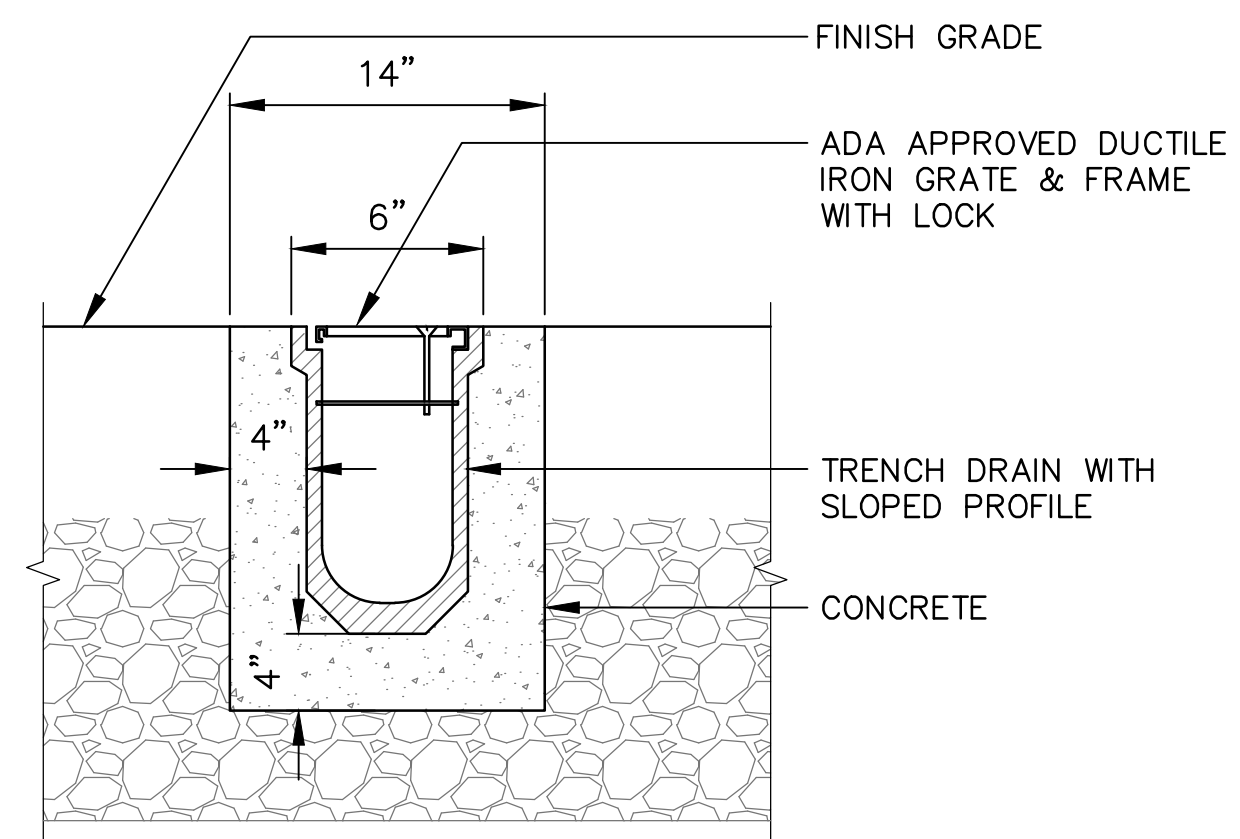
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:

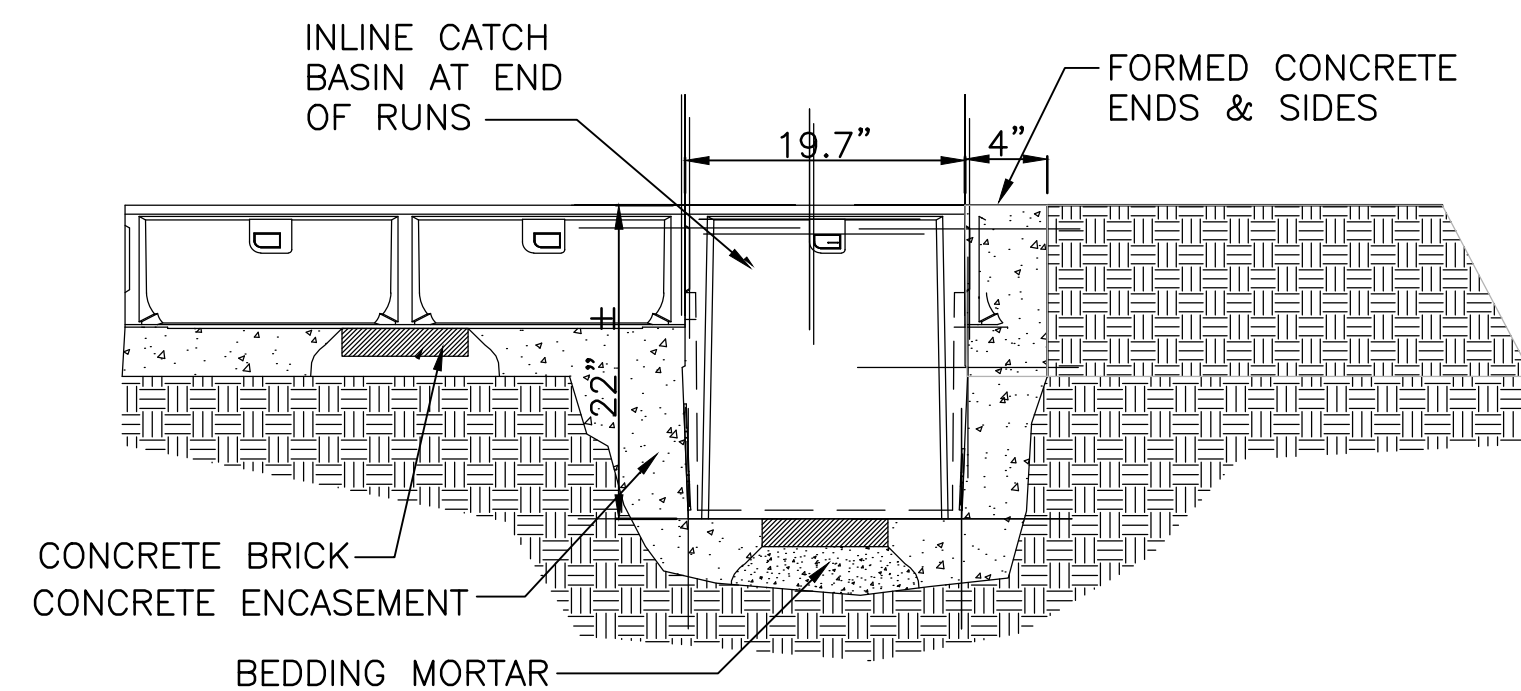
**TRENCH DRAIN/
LEACHING BASIN DETAILS**

Scale AS NOTED Date OCT. 31, 2017
Drawn By CCC
Checked By DRB
Approved By VH
Project No. 1710.00

DWG No. **L.624**

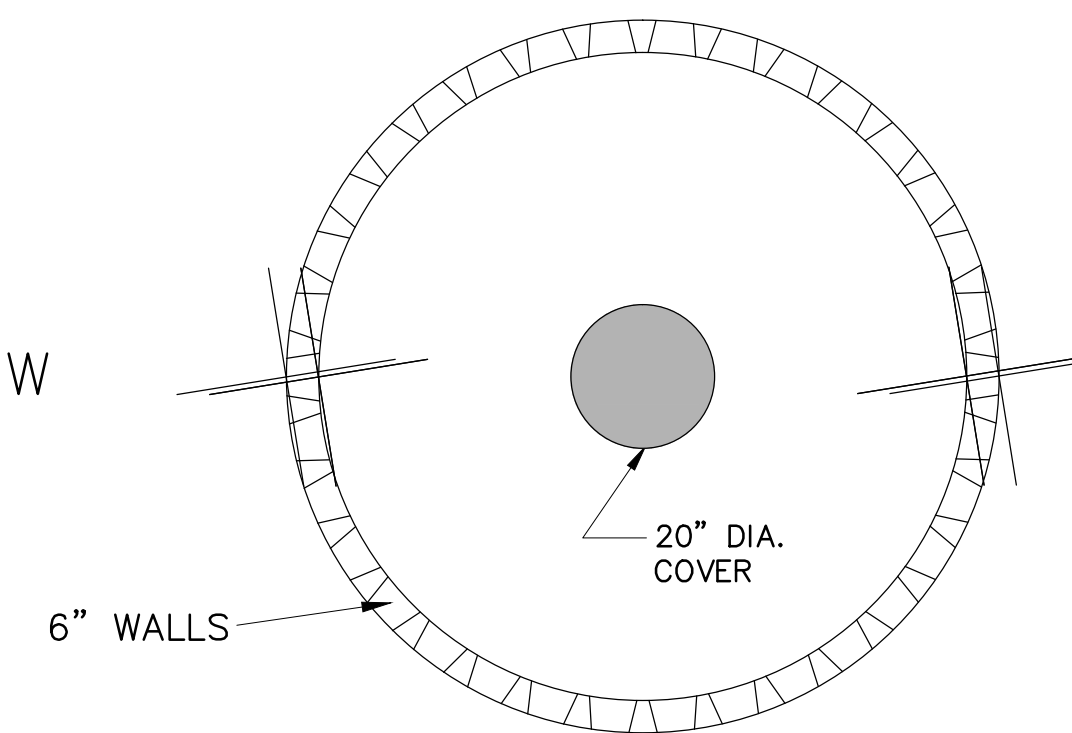


1 TRENCH DRAIN DETAIL
N.T.S.

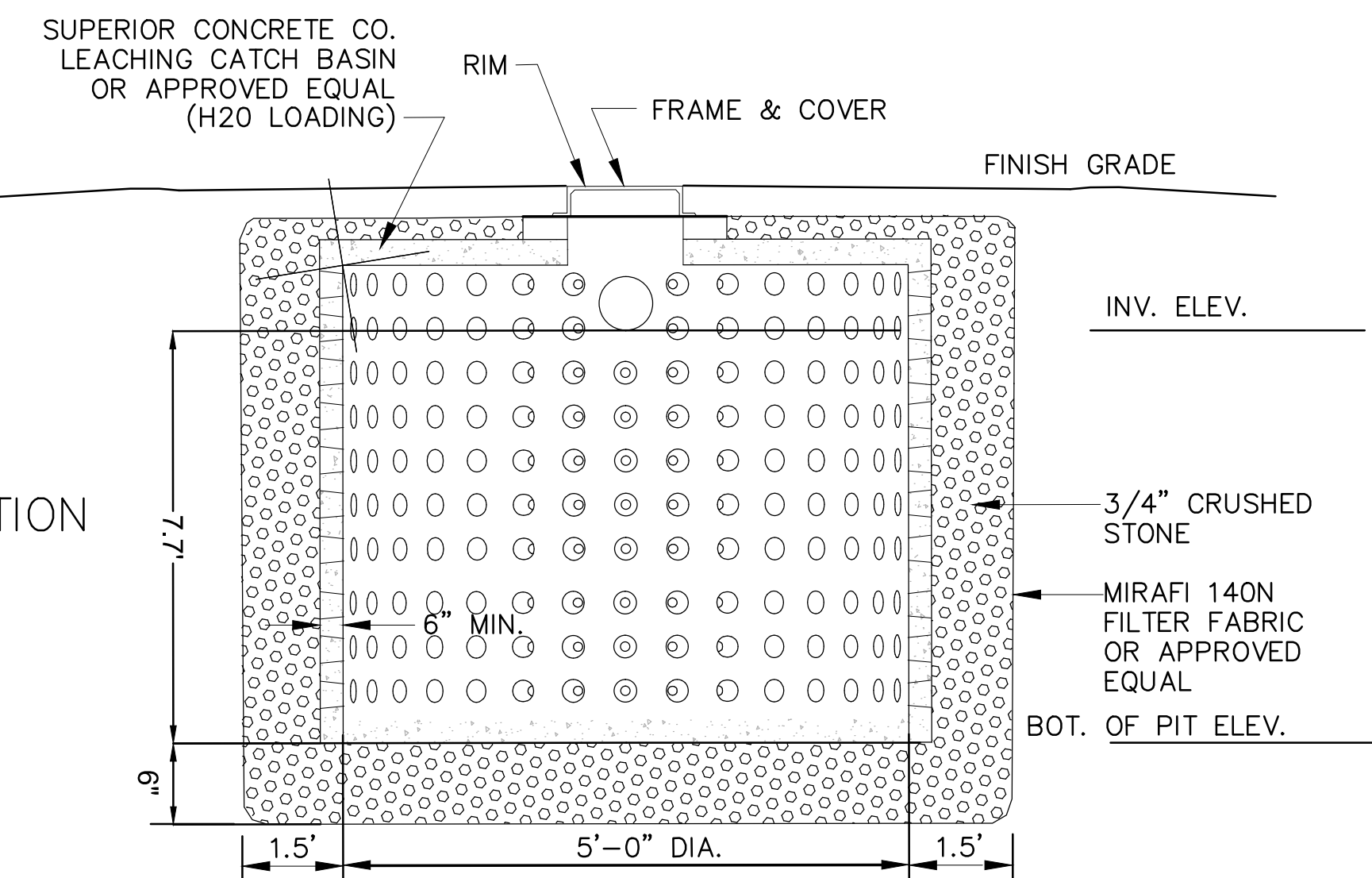


3 INLINE CATCH BASIN DETAIL
N.T.S.

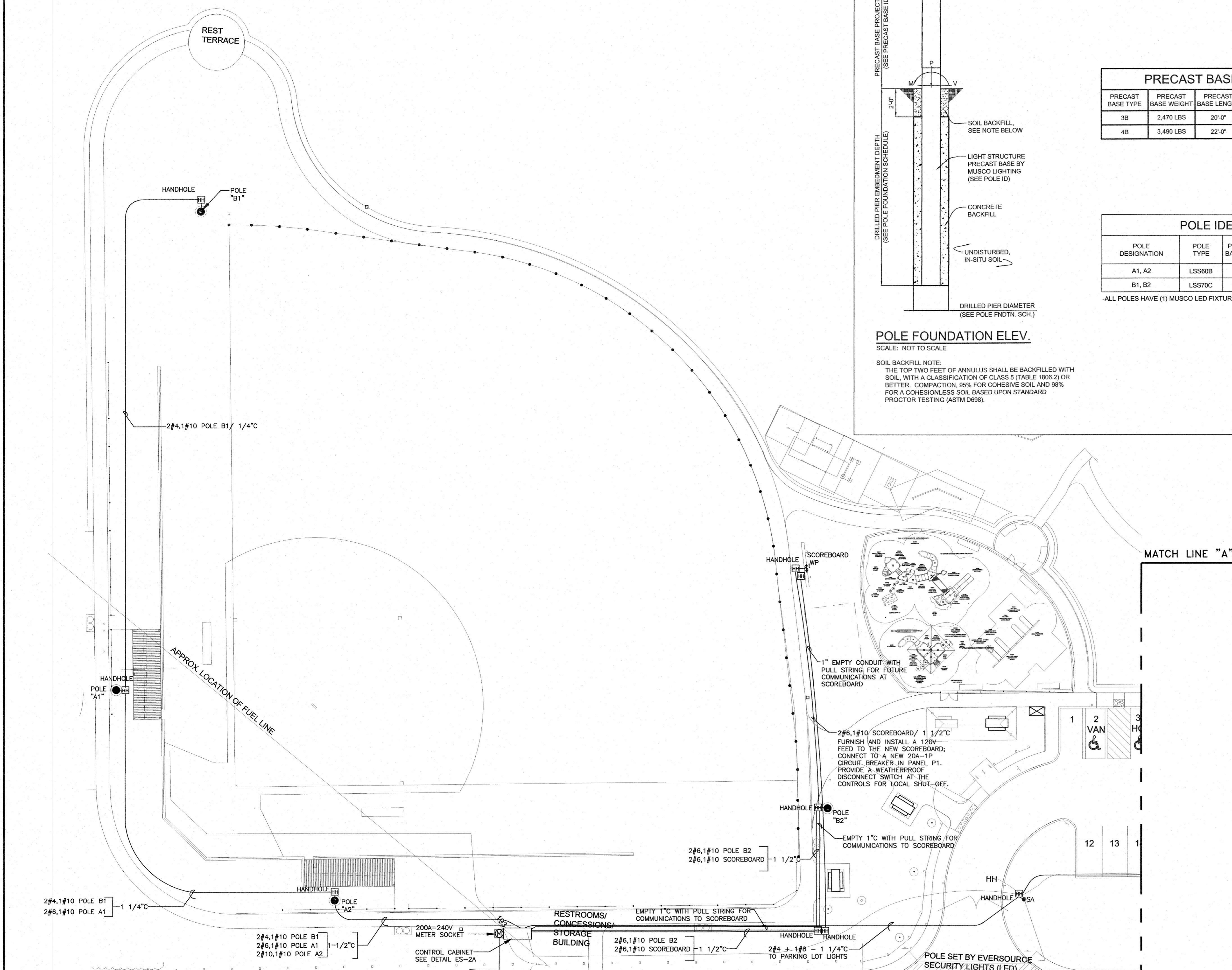
PLAN VIEW



SECTION

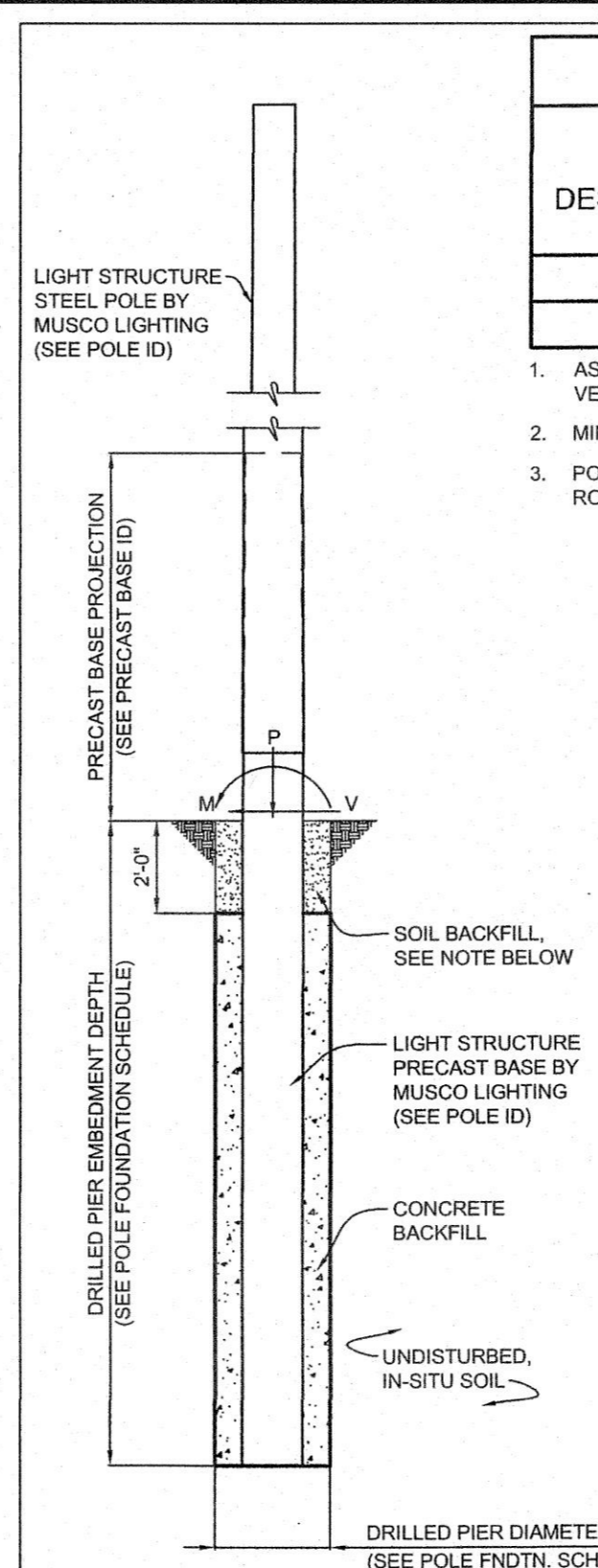


2 LEACHING BASIN DETAIL
N.T.S.



NOTE: TRENCHING REQUIREMENTS:
 THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BACK FILL, ENCASEMENTS AND ANY PAVING. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL CONDUITS AND RELATED SPACES. ALL TRENCHES SHALL BE INSPECTED PRIOR TO BACK-FILL.

SITE PLAN (PART "A") - ELECTRICAL
 Scale: 1"=20'-0"



POLE FOUNDATION ELEV.
 SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:
 THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D698).

POLE DESIGNATION	FORCES (1.)			DRILLED PIER		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS	DIAMETER INCHES	EMBEDMENT DEPTH	CONCRETE BACKFILL YD ³ (2.)
A1, A2	49,819	1,358	1,440	48	12'-0"	4.3
B1, B2	91,875	2,047	2,221	48	14'-0"	5.0

- ASD LOAD COMBINATION D + W. VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT).
- MINIMUM CONCRETE BACKFILL VOLUME. SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.
- POTENTIAL FOR ENCOUNTERING ROCK BEFORE REACHING EMBEDMENT DEPTH. ROCK AUGERING EQUIPMENT MAY BE REQUIRED.

PRECAST BASE IDENTIFICATION					
PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
3B	2,470 LBS	20'-0"	8'-0"	12'-0"	13.38"
4B	3,490 LBS	22'-0"	8'-0"	14'-0"	15.75"

POLE IDENTIFICATION				
POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT)
A1, A2	LSS60B	3B	4 (3)	12.0
B1, B2	LSS70C	4B	7 (6)	17.9

ALL POLES HAVE (1) MUSCO LED FIXTURE AT 15'-0" AGL, INCLUDED ABOVE.

DESIGN NOTES

DESIGN PARAMETERS:
 WIND: 105 MPH (EXP. C, 1 = 1.0) PER IBC CODE, 2009 EDITION (ASCE 7-05). DESIGN WIND PARAMETERS ARE AS NOTED. ACTUAL WIND SPEED AND EXPOSURE MUST BE VERIFIED FOR THE SITE BY THE PROPER GOVERNING OFFICIAL.

GEOTECHNICAL PARAMETERS:
 REQUIRED ALLOWABLE END BEARING SOIL PRESSURE: 1,000 PSF
 ALLOWABLE LATERAL SOIL BEARING PRESSURE: 0 PSF/FT (GRADE TO 2'-0"); VALUES VARY PER BORING (BELOW 2'-0") IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE, CHAPTER 18.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT, NO. 17,080.NH, PREPARED BY MILLER ENGINEERING & TESTING, INC., MANCHESTER, NH.

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO BE AVAILABLE AT THE TIME OF THE FOUNDATION INSTALLATION TO VERIFY THE SOIL DESIGN PARAMETERS AND TO PROVIDE ASSISTANCE IF ANY PROBLEMS ARISE IN FOUNDATION INSTALLATION.

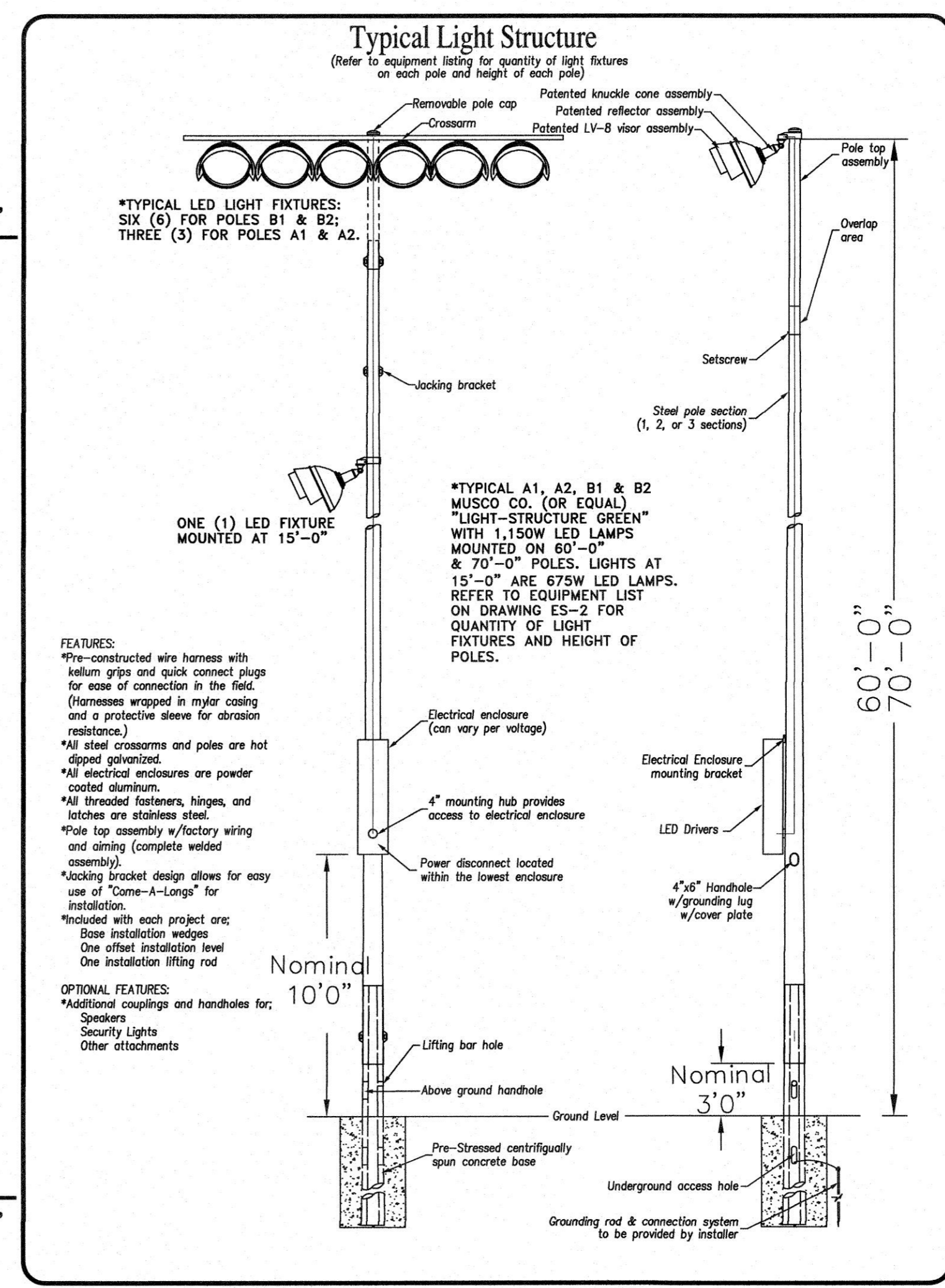
ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A REGISTERED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT. TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TREMIE WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION OR WHEN THE FREE DROP EXCEEDS 6'-0".

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS, AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BRACING DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

CONCRETE:
 CONCRETE SHALL BE AIR-ENTRAINED AND HAVE A MINIMUM COMPRESSIVE DESIGN STRENGTH AT 28 DAYS OF 3,000 PSI. 3,000 PSI CONCRETE SPECIFIED FOR EARLY POLE ERECTION. ACTUAL REQUIRED MINIMUM ALLOWABLE CONCRETE STRENGTH IS 1,000 PSI. ALL PIERS AND CONCRETE BACKFILL MUST BEAR ON AND AGAINST FIRM UNDISTURBED SOIL.

GENERAL NOTES:
 FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY RETAINING WALLS OR WITHIN / NEAR ANY SLOPES STEEPER THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.



SCALE: 1 INCH = 20 FEET

0 5 10 20 40 60
 FEET

Carolyn Cooney & Associates
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 13 Elm Street, Milford, MA 01757
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ROBERT J. FIGUEROA
 ELECTRICAL
 No. 25028
 REGISTERED PROFESSIONAL ENGINEER
 COMMONWEALTH OF MASSACHUSETTS

SHEPHERD ENGINEERING, INC.
 ELECTRICAL CONSULTANTS
 1308 GRAFTON STREET
 WORCESTER, MASSACHUSETTS 01604
 PHONE: (508) 757-7783 • FAX: (508) 753-2309
 REFERENCE NO.: 17002

No.	Description	Date
	Revision to no. of lights on each of 4 poles - Addendum #1	11-20-17

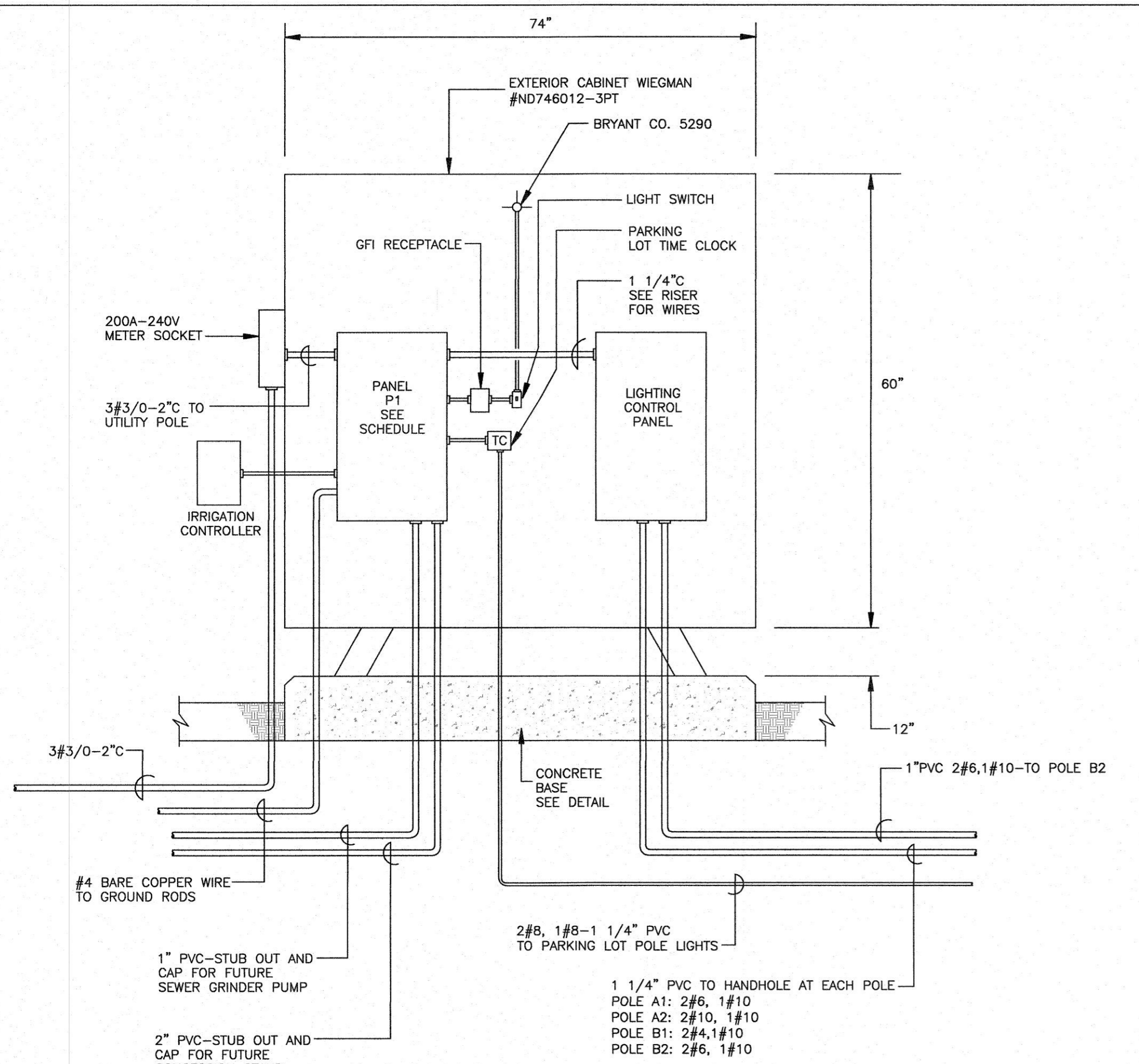
Project:
**CITY OF WALTHAM
 ELSE TURNER FIELD
 425 TRAFLEO ROAD
 WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
 DEPARTMENT OF RECREATION
 510 MOODY STREET
 WALTHAM, MA 02453**

TITLE:
**SITE PLAN
 ELECTRICAL**

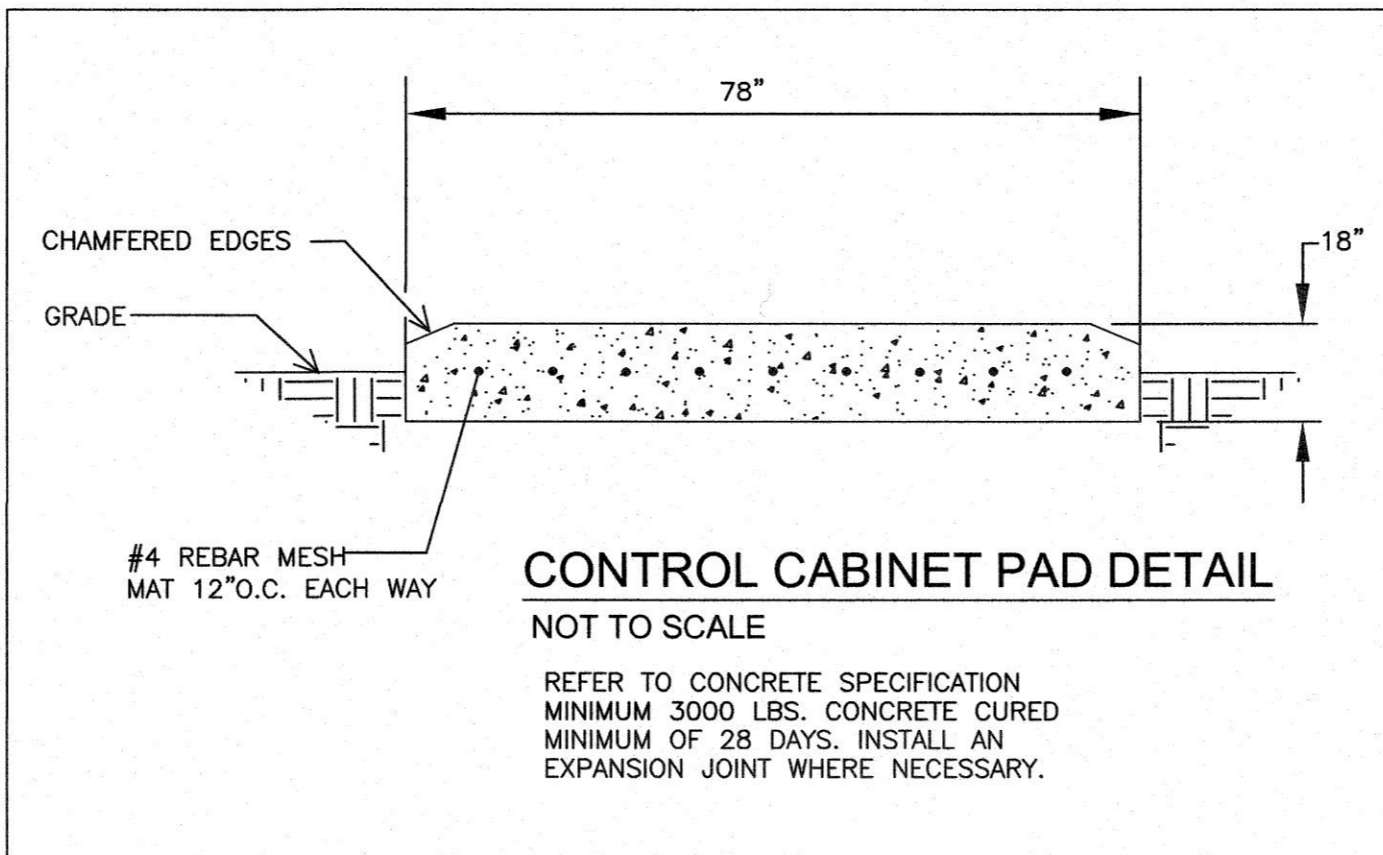
Scale 1"=20' Date SEPT 12, 2017
 Drawn By AJV
 Checked By MRF
 Approved By JDS
 Project No. 1710.00

DWG No. **ES.1A**



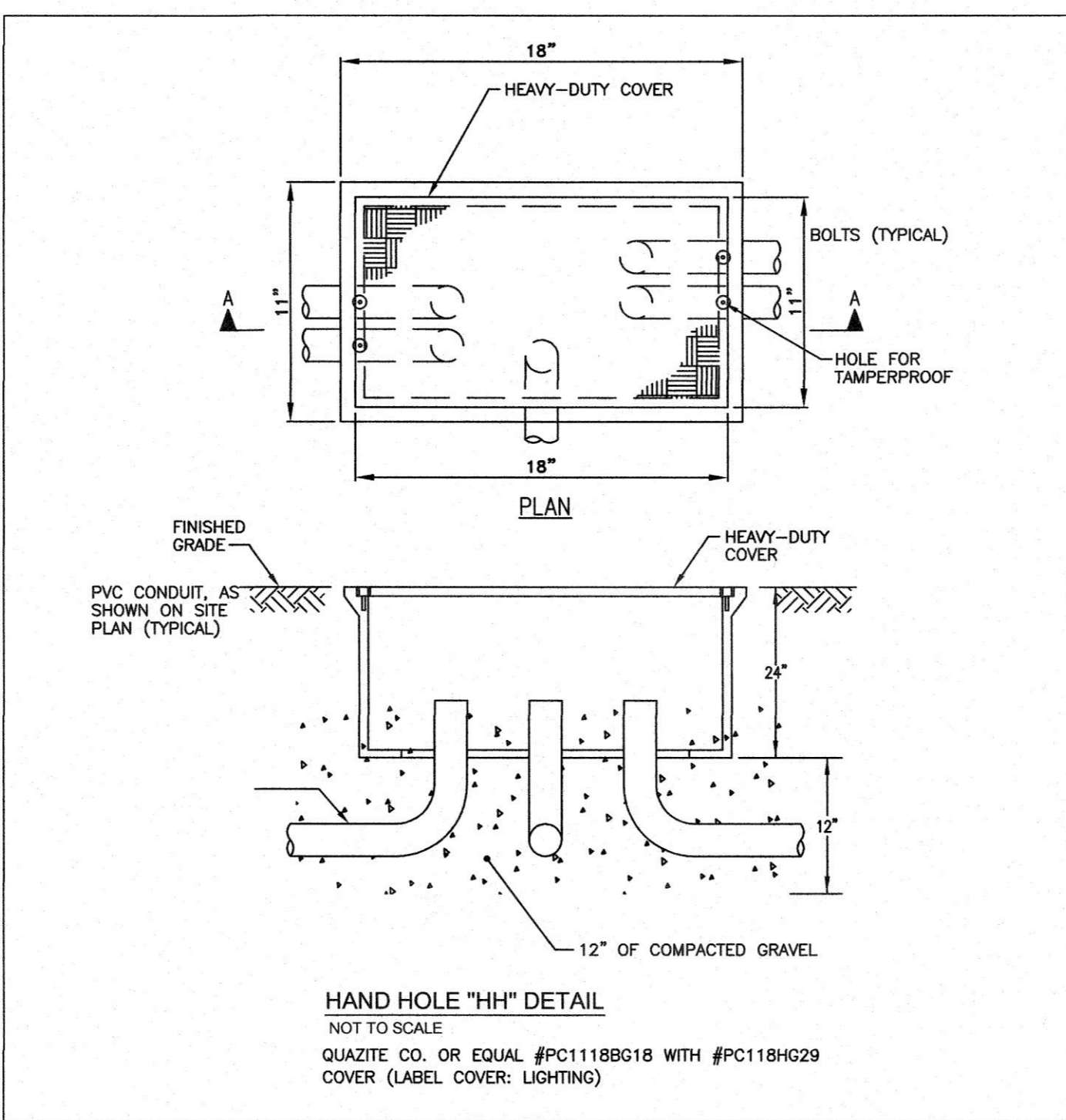
CONTROL CABINET DETAIL
NOT TO SCALE

NOTE: TRENCHING REQUIREMENTS:
THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BACK FILL, CONCRETE ENCASEMENTS AND PAVING. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL CONDUITS AND RELATED SPACES. ALL TRENCHES SHALL BE INSPECTED PRIOR TO BACK-FILL.



CONTROL CABINET PAD DETAIL
NOT TO SCALE

REFER TO CONCRETE SPECIFICATION
MINIMUM 3000 LBS. CONCRETE CURED
MINIMUM OF 28 DAYS. INSTALL AN
EXPANSION JOINT WHERE NECESSARY.



HAND HOLE "HH" DETAIL
NOT TO SCALE

QUAZITE CO. OR EQUAL #PC118BG18 WITH #PC118HG29
COVER (LABEL COVER: LIGHTING)

LIGHT FIXTURE POLE SCHEDULE

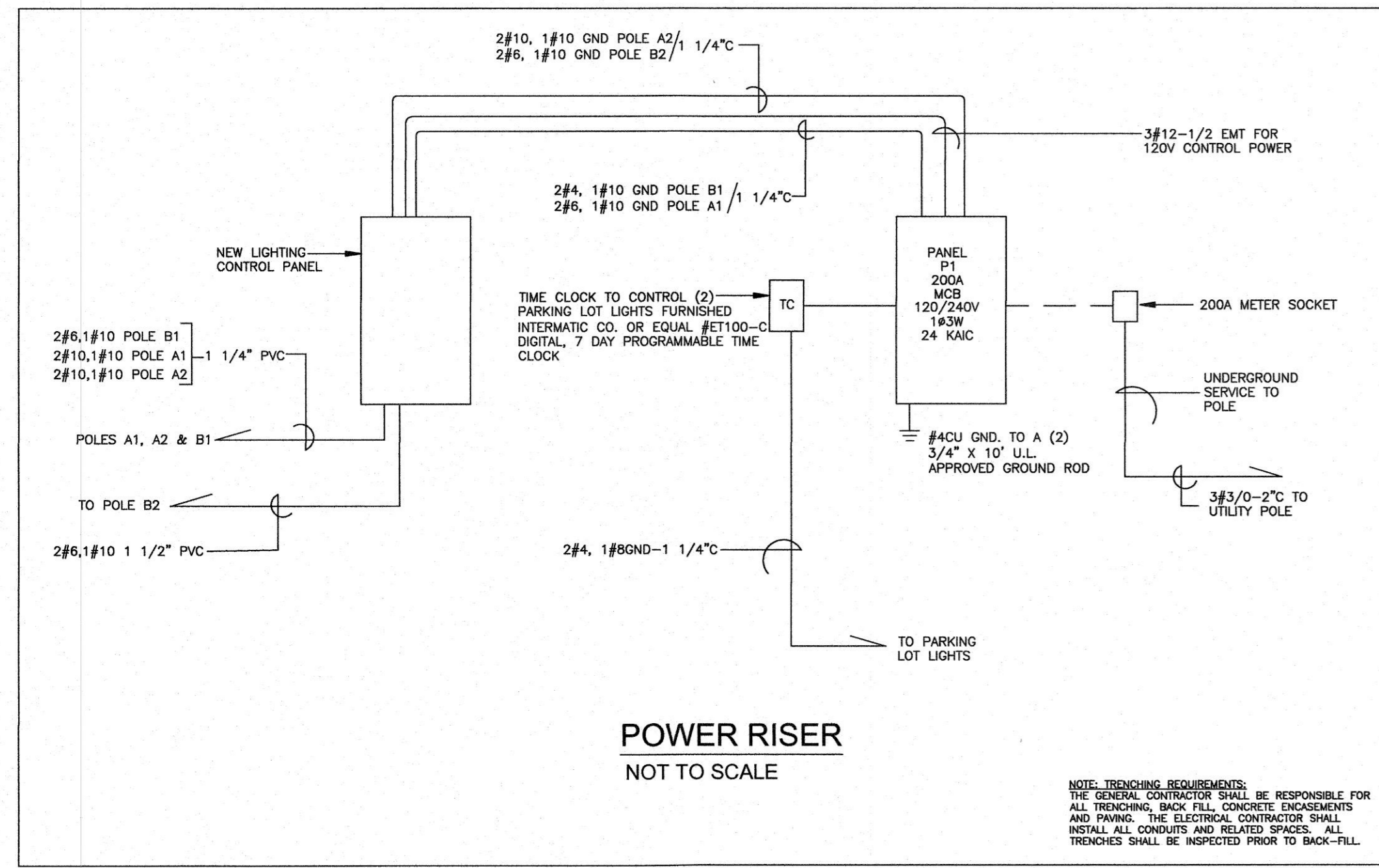
TYPE	FIXTURES	FIXTURE TYPE	CONTACTOR ID
A1	4 (3 HIGH; 1 LOW)	1,150W LED/675W LED	C1
A2	4 (3 HIGH; 1 LOW)	1,150W LED/675W LED	C2
B1	7 (6 HIGH; 1 LOW)	1,150W LED/675W LED	C3
B2	7 (6 HIGH; 1 LOW)	1,150W LED/675W LED	C4

PANEL: P1
MAIN: 200A MCB
VOLTAGE: 120/240V PHASE: 1 WIRE: 3
TYPE: SQUARE D CO. OR EQUAL
SURFACE BOLT ON

CIR	DESCRIPTION	TRIP	POLE	CIR	DESCRIPTION	TRIP	POLE
1	POLE A1	30	2	2	POLE A2	30	2
3	POLE B1	50	2	4	POLE B2	50	2
5	GFI DUPLEX RECEPT.	20	1	6	EXIST. LIGHTING CONTROL PANEL	20	1
7	IRRIGATION SYSTEM	20	1	8	SCOREBOARD	20	1
9	PARKING LOT LIGHTS	20	2	10	SPARE	20	1
11				12	SPARE	20	1
13				14		20	1
15				16		20	1

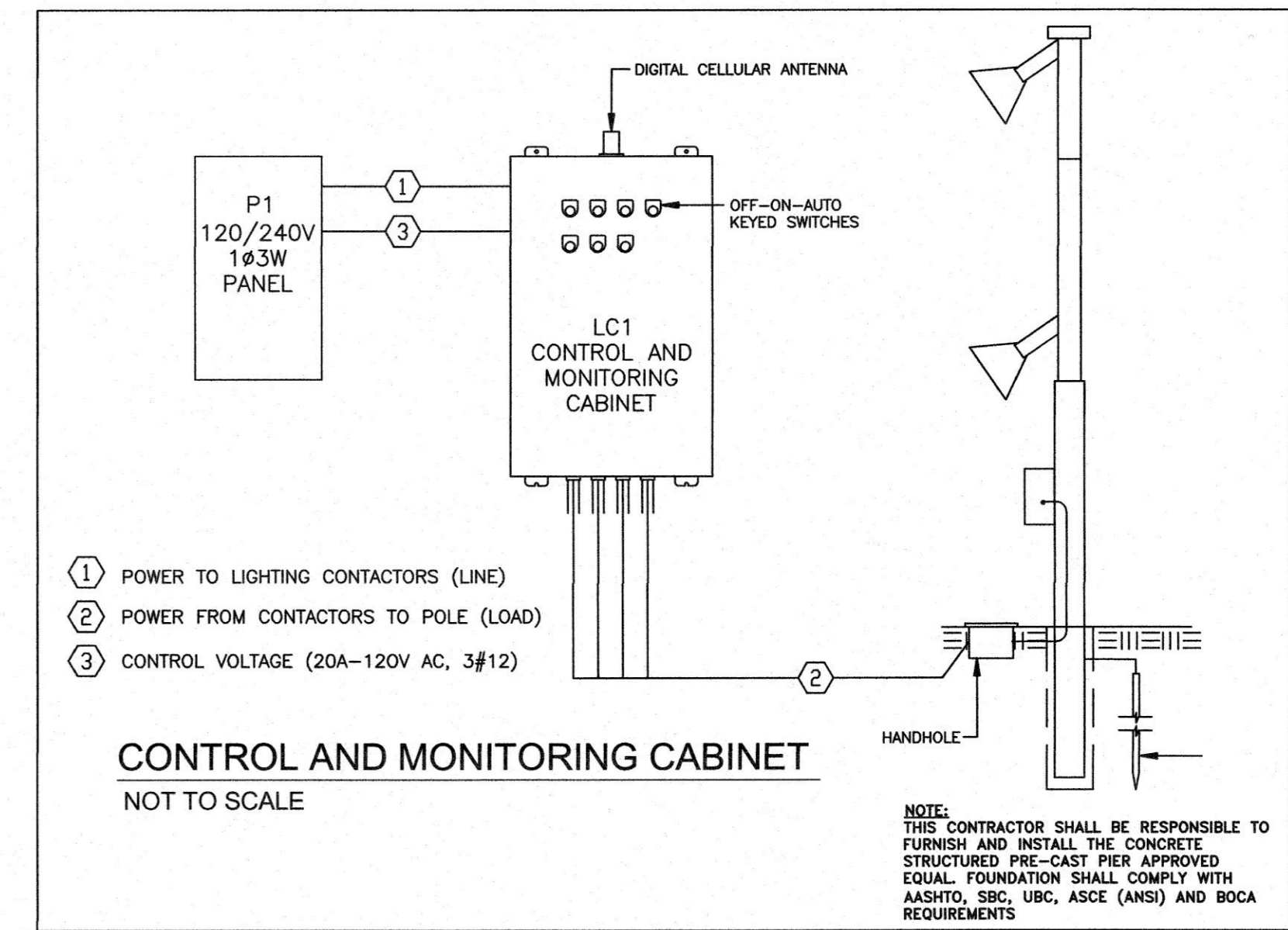
PANEL LC1 SCHEDULE SUMMARY BY ZONE

POLE	HT	CIRCUIT DESCRIPTION	# OF FIXTURES	FLA	CONTACTOR SIZE
A1	60	MULTI-PURPOSE	4	21.3A	30
A2	60	MULTI-PURPOSE	4	21.3A	30
B1	70	MULTI-PURPOSE	7	39.0A	60
B2	70	MULTI-PURPOSE	7	39.0A	60



POWER RISER
NOT TO SCALE

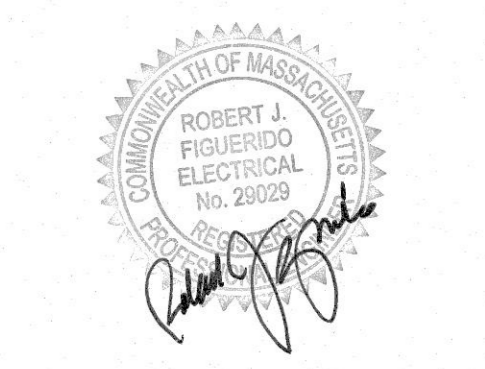
NOTE: TRENCHING REQUIREMENTS:
THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BACK FILL, CONCRETE ENCASEMENTS AND PAVING. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL CONDUITS AND RELATED SPACES. ALL TRENCHES SHALL BE INSPECTED PRIOR TO BACK-FILL.



CONTROL AND MONITORING CABINET
NOT TO SCALE

NOTE:
THIS CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH AND INSTALL THE CONCRETE STRUCTURED PRE-CAST PIER APPROVED EQUAL. FOUNDATION SHALL COMPLY WITH AASHTO, SBC, UBC, ASCE (ANSI) AND BOCA REQUIREMENTS

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REFERENCE NO.: 17002

Addendum #1 - 11/2-17

No.	Description	Date

Project:
**CITY OF WALTHAM
ELSE TURNER FIELD
425 TRAPELO ROAD
WALTHAM, MA 02452**

Prepared For:
**CITY OF WALTHAM
DEPARTMENT OF RECREATION
510 MOODY STREET
WALTHAM, MA 02453**

TITLE:
ELECTRICAL DETAILS

Scale N.T.S. Date SEPT 12, 2017
Drawn By AJV
Checked By MRF
Approved By JDS
Project No. 1710.00

DWG No. **ES.2**