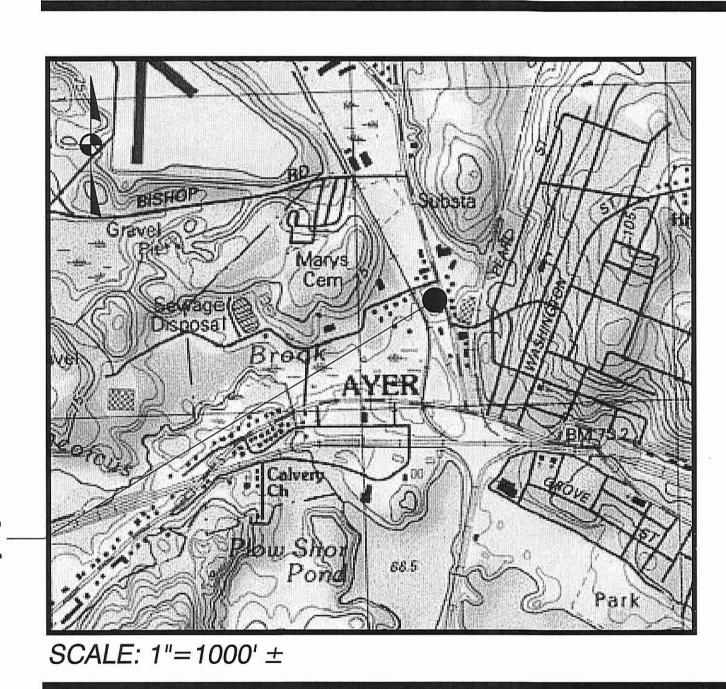
Site Plan Approval Documents

September 13, 2023 (Revised November 20, 2023)

Proposed Mixed-Use Development

42 Park Street Ayer, Massachusetts 01432



Erosion Control Plan

Applicant:
Alexandria Goldinak
50 Mountain Ave
Fitchburg, MA 01420
(978) 202-6333
Owner:
Francis Mannone
44 Park Street

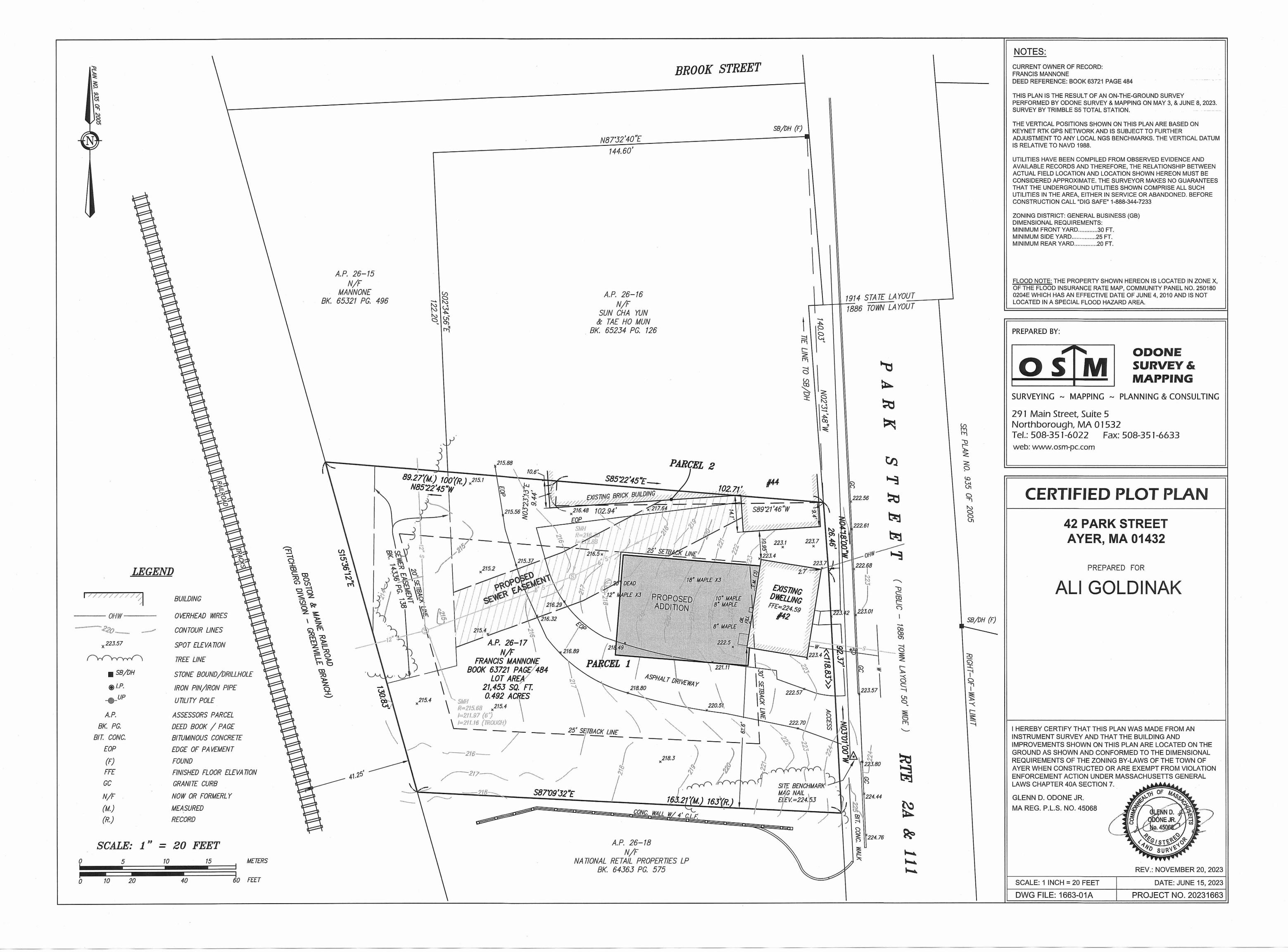
Ayer, MA 01432

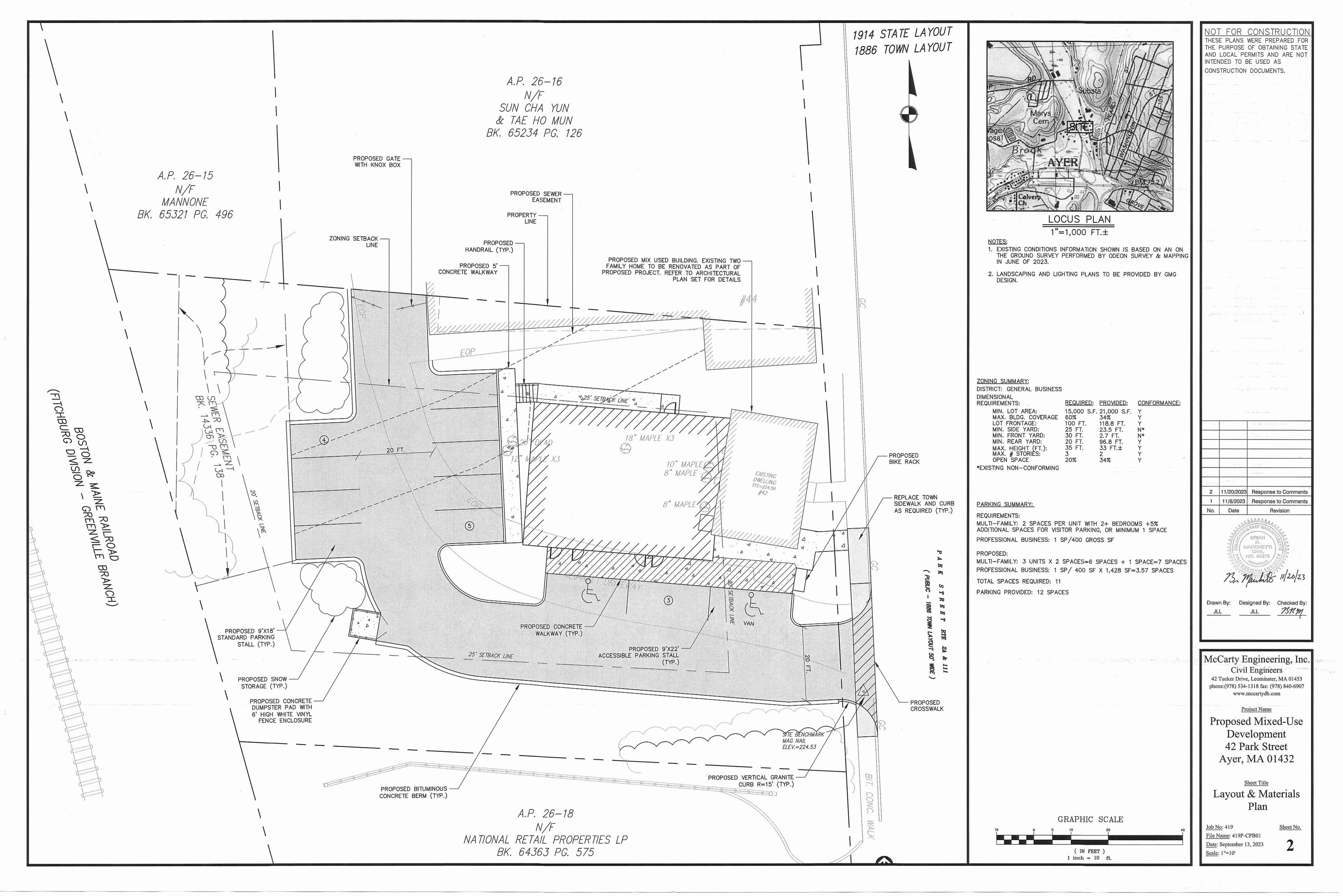
Surveyor:
Odone Survey & Mapping
291 Main Street, Suite 5
Northborough, MA 01532
(508) 351-6022
Civil Engineer:
McCarty Engineering, Inc.
42 Tucker Drive
Leominster, MA 01453
(978) 534-1318
Architect:
GMG Design
78 Blake Street
Hyde park, MA 02136
(617) 980-4938

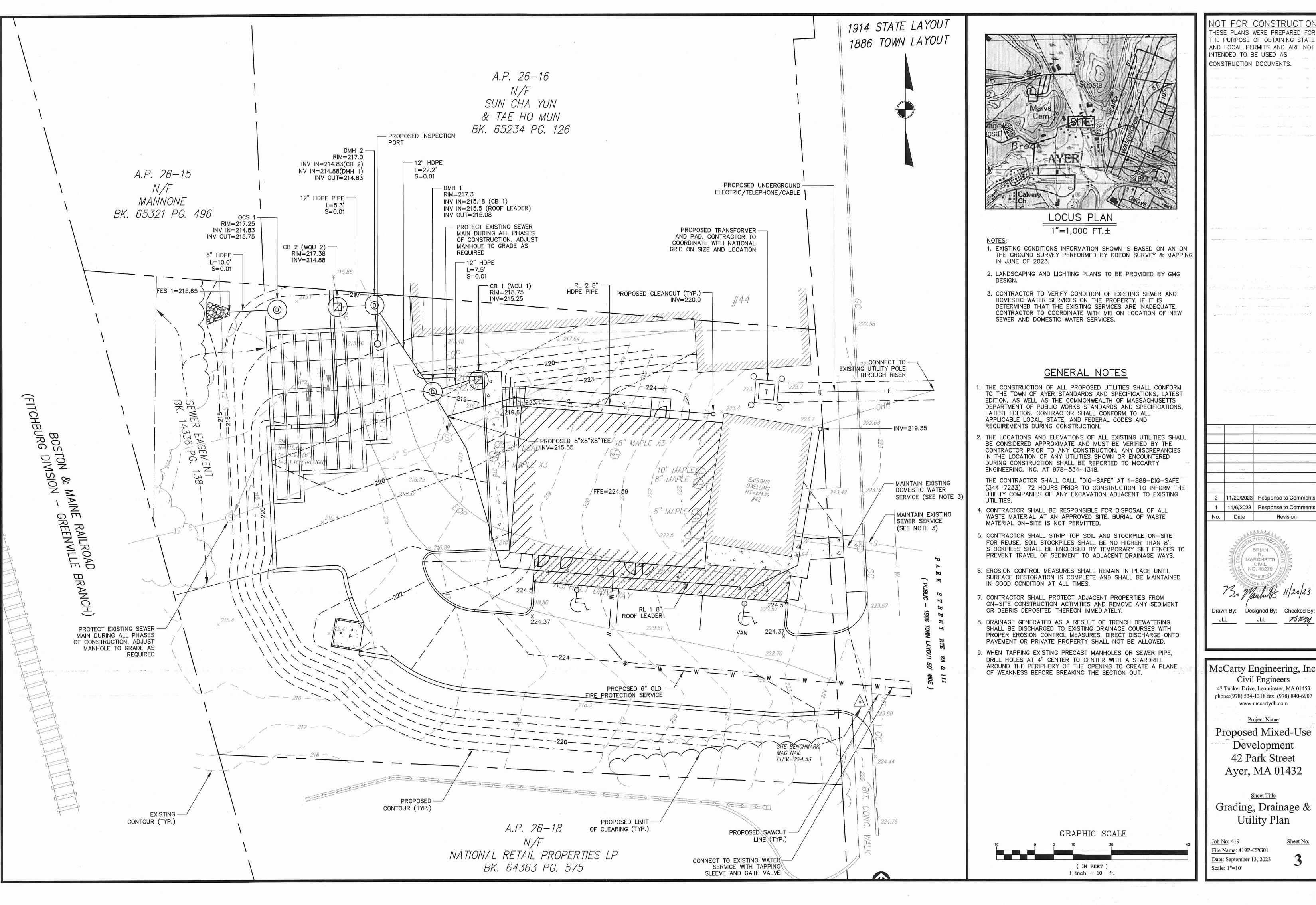
PROJECT SITE-

Sheet No.	Sheet Title	st .	
	Cover Sheet		
-	Existing Conditions Plan	5	Construction Details
2	Layout & Materials Plan	6	Construction Details
3	Grading, Drainage & Utility Plan	7	Stormtech Detail







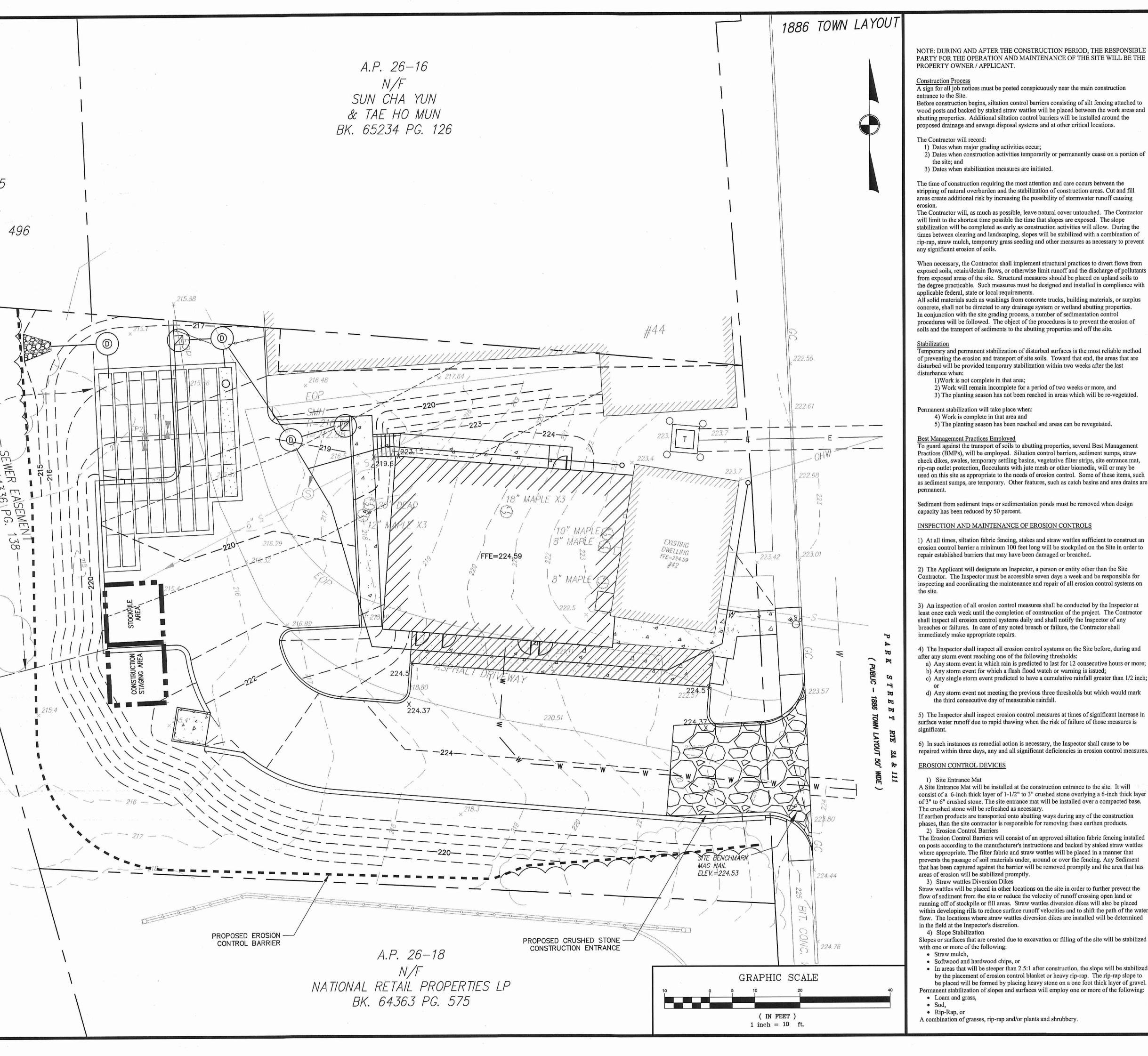


NOT FOR CONSTRUCTIO THESE PLANS WERE PREPARED FOR THE PURPOSE OF OBTAINING STATE AND LOCAL PERMITS AND ARE NOT

McCarty Engineering, Inc. Civil Engineers 42 Tucker Drive, Leominster, MA 01453 phone:(978) 534-1318 fax: (978) 840-6907

> Development 42 Park Street Ayer, MA 01432

Grading, Drainage &



NOTE: DURING AND AFTER THE CONSTRUCTION PERIOD, THE RESPONSIBLE PARTY FOR THE OPERATION AND MAINTENANCE OF THE SITE WILL BE THE PROPERTY OWNER / APPLICANT.

A sign for all job notices must be posted conspicuously near the main construction entrance to the Site.

Before construction begins, siltation control barriers consisting of silt fencing attached to wood posts and backed by staked straw wattles will be placed between the work areas and abutting properties. Additional siltation control barriers will be installed around the proposed drainage and sewage disposal systems and at other critical locations.

The Contractor will record:

1) Dates when major grading activities occur; 2) Dates when construction activities temporarily or permanently cease on a portion of

3) Dates when stabilization measures are initiated.

The time of construction requiring the most attention and care occurs between the stripping of natural overburden and the stabilization of construction areas. Cut and fill areas create additional risk by increasing the possibility of stormwater runoff causing

The Contractor will, as much as possible, leave natural cover untouched. The Contractor will limit to the shortest time possible the time that slopes are exposed. The slope stabilization will be completed as early as construction activities will allow. During the times between clearing and landscaping, slopes will be stabilized with a combination of rip-rap, straw mulch, temporary grass seeding and other measures as necessary to prevent any significant erosion of soils.

When necessary, the Contractor shall implement structural practices to divert flows from exposed soils, retain/detain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural measures should be placed on upland soils to the degree practicable. Such measures must be designed and installed in compliance with applicable federal, state or local requirements.

All solid materials such as washings from concrete trucks, building materials, or surplus concrete, shall not be directed to any drainage system or wetland abutting properties. In conjunction with the site grading process, a number of sedimentation control procedures will be followed. The object of the procedures is to prevent the erosion of soils and the transport of sediments to the abutting properties and off the site.

remporary and permanent stabilization of disturbed surfaces is the most reliable method of preventing the erosion and transport of site soils. Toward that end, the areas that are disturbed will be provided temporary stabilization within two weeks after the last disturbance when:

1) Work is not complete in that area; 2) Work will remain incomplete for a period of two weeks or more, and

3) The planting season has not been reached in areas which will be re-vegetated.

Permanent stabilization will take place when:

5) The planting season has been reached and areas can be revegetated.

Best Management Practices Employed

To guard against the transport of soils to abutting properties, several Best Management Practices (BMPs), will be employed. Siltation control barriers, sediment sumps, straw check dikes, swales, temporary settling basins, vegetative filter strips, site entrance mat, rip-rap outlet protection, flocculants with jute mesh or other biomedia, will or may be used on this site as appropriate to the needs of erosion control. Some of these items, such as sediment sumps, are temporary. Other features, such as catch basins and area drains are

Sediment from sediment traps or sedimentation ponds must be removed when design capacity has been reduced by 50 percent.

INSPECTION AND MAINTENANCE OF EROSION CONTROLS

1) At all times, siltation fabric fencing, stakes and straw wattles sufficient to construct an erosion control barrier a minimum 100 feet long will be stockpiled on the Site in order to repair established barriers that may have been damaged or breached.

2) The Applicant will designate an Inspector, a person or entity other than the Site Contractor. The Inspector must be accessible seven days a week and be responsible for inspecting and coordinating the maintenance and repair of all erosion control systems on

3) An inspection of all erosion control measures shall be conducted by the Inspector at least once each week until the completion of construction of the project. The Contractor shall inspect all erosion control systems daily and shall notify the Inspector of any breaches or failures. In case of any noted breach or failure, the Contractor shall immediately make appropriate repairs.

4) The Inspector shall inspect all erosion control systems on the Site before, during and after any storm event reaching one of the following thresholds:

a) Any storm event in which rain is predicted to last for 12 consecutive hours or more; b) Any storm event for which a flash flood watch or warning is issued; c) Any single storm event predicted to have a cumulative rainfall greater than 1/2 inch;

d) Any storm event not meeting the previous three thresholds but which would mark the third consecutive day of measurable rainfall.

surface water runoff due to rapid thawing when the risk of failure of those measures is

6) In such instances as remedial action is necessary, the Inspector shall cause to be repaired within three days, any and all significant deficiencies in erosion control measures.

EROSION CONTROL DEVICES

Site Entrance Mat A Site Entrance Mat will be installed at the construction entrance to the site. It will consist of a 6-inch thick layer of 1-1/2" to 3" crushed stone overlying a 6-inch thick layer of 3" to 6" crushed stone. The site entrance mat will be installed over a compacted base.

If earthen products are transported onto abutting ways during any of the construction phases, than the site contractor is responsible for removing these earthen products. 2) Erosion Control Barriers

The Erosion Control Barriers will consist of an approved siltation fabric fencing installed on posts according to the manufacturer's instructions and backed by staked straw wattles where appropriate. The filter fabric and straw wattles will be placed in a manner that prevents the passage of soil materials under, around or over the fencing. Any Sediment that has been captured against the barrier will be removed promptly and the area that has areas of erosion will be stabilized promptly. 3) Straw wattles Diversion Dikes

Straw wattles will be placed in other locations on the site in order to further prevent the flow of sediment from the site or reduce the velocity of runoff crossing open land or running off of stockpile or fill areas. Straw wattles diversion dikes will also be placed within developing rills to reduce surface runoff velocities and to shift the path of the water flow. The locations where straw wattles diversion dikes are installed will be determined in the field at the Inspector's discretion. 4) Slope Stabilization

Slopes or surfaces that are created due to excavation or filling of the site will be stabilized

with one or more of the following: · Straw mulch,

Softwood and hardwood chips, or

- In areas that will be steeper than 2.5:1 after construction, the slope will be stabilized by the placement of erosion control blanket or heavy rip-rap. The rip-rap slope to be placed will be formed by placing heavy stone on a one foot thick layer of gravel. Permanent stabilization of slopes and surfaces will employ one or more of the following:
- Sod,
- Rip-Rap, or

A combination of grasses, rip-rap and/or plants and shrubbery.

EROSION CONTROL DEVICES (continued.

5) Runoff Diversion Swales

Runoff Diversion Swales will be provided in order to intercept sheet and concentrated flows above areas of cut, above abutting properties and above resource areas. The swales will direct runoff to sediment sumps or temporary settling basins or to detention basins. 5) Sediment Sumps

Sediment Sumps are excavated depressions 10-foot in diameter and 2-feet deep. The sumps will collect runoff from the unfinished drive and slopes and will allow sediment to settle out before flow continues to a detention area or siltation control barrier. Sediment sumps will be cleaned whenever the accumulated sediment has reached one-half of the original depth

7) Temporary Settling Basins

A Temporary Settling Basin is a large, excavated sediment sump that has a stone face overflow leading to a swale or to a drainage inlet structure. The size varies with the area draining to it. Temporary settling basins will be cleaned whenever the accumulated sediment has reached one half of their original depth. 8) Rip-Rip Outlet Protection

Rip-rap outlet protection is a stone apron beginning at a drainage system discharge point and extending down the slope. The rip-rap will serve to reduce the velocity of the discharge, thereby preventing erosion.

All waste materials will be collected and stored securely in metal dumpsters. The dumpster will meet local and state solid waste management regulations. All trash and construction debris will be deposited in the dumpster and emptied as necessary. A licensed company in accordance with applicable Federal, State, and local regulations will transport the trash. No trash or construction debris will be buried on site. The disposal of liquid waste is not allowed. Individuals working on the site will be informed of the appropriate procedure for the disposal of construction debris.

The site contractor shall be responsible for ensuring that the project site is free of litter and

IAZARDOUS WASTE

All hazardous waste materials will be disposed of in accordance with applicable Federal, State and local regulations and in accordance with the manufacturer's recommendations. Individuals working on the site will be informed of the appropriate procedures for waste disposal. The construction supervisor will be responsible for overseeing that the proper procedures are followed.

All sanitary waste will be collected in a timely manner by a licensed contractor and disposed of in accordance with Federal, State, and local regulations.

EQUIPMENT & VEHICLE FUELING AND MAINTENANCE PRACTICES Large equipment will be fueled by an over the road fuel truck and small equipment will be fueled by fitted pickup truck fuel tanks. All equipment will be fueled at a minimum 100 fee from any wetland and/or water body. Fueling areas will be inspected for signs of leaks or

EQUIPMENT & VEHICLE WASHING

No heavy equipment and vehicle washing will be allowed on the site. All construction equipment will be parked in the designated staging area at least 100-feet from any wetland or water body.

SPILL PREVENTION AND CONTROL

All construction personnel will be instructed regarding the following measures. The site construction supervisor will be responsible for overseeing that all spill prevention procedures will be adhered to. No storage, stockpiling, or staging of equipment or construction material will occur within 100-feet of any wetland or waterbody. All materials stored onsite will be maintained in an orderly manner and in their appropriate containers. Materials will be kept in there original containers with their original labels. Substances will not be mixed with one another unless recommended by the manufacturer. The manufacturers guidelines for the proper use and disposal will be implemented. The construction supervisor will inspect the premises regularly to ensure proper use and disposal of materials.

All onsite construction machinery and vehicles will be monitored for leaks and will receive or handling of petroleum of products will occur within 100-feet of any wetland or waterbody. No petroleum products will stored onsite

Fertilizers will be applied at the minimum amount recommended by the manufacturer. The storage of fertilizer products will not be allowed onsite.

SOLVENTS & PAINTS

All containers will be sealed and stored when not used. Excess material will not be discharged to the storm and or sewer systems and will be properly disposed of according to the manufacturers specifications including all Federal, State, and local regulations. No storage will occur within 100' of a wetland or waterbody.

CONCRETE TRUCK WASHOUT

Concrete trucks will discharge into temporary basins, where the concrete will be allowed to cure. Once the concrete is cured, the concrete will be broken up and hauled off site.

All of the manufacturers recommended methods for spill cleanup will be clearly posted and site personnel will be informed of the necessary procedures and the location of the cleanup

Materials and the equipment necessary for cleanup of a spill will be kept on site in a designated area. Examples of cleaning equipment are: shovels, rakes, wheel barrows, brooms, dust pans, mops ,rags, safety gloves and eye wear, absorbent foams, sand, sawdust, and plastic or metal bins designated specifically for spill cleanup. After discovery, all spills will be removed as soon as possible.

CONSTRUCTION SEQUENCING:

CONSTRUCTION SCHEDULE

The following is a general construction sequence for the construction of the Site. The actual schedule may vary somewhat from that stated if site or weather conditions require a different schedule and if such change does not negatively affect the prevention of pollution. An example of a logical change to the schedule would be deviating from the sequence below to allow the laying of driveway berm prior to a winter freeze in order to better control the site drainage.

- The Applicant will hold a pre-construction meeting with representatives of the Town, the Engineer, Contractor's employees and the Inspector in order to review permits, procedures and construction methods.
- Establish the Site Entrance Mat at the construction entrance to the
- Establish a construction staging and equipment storage area
- protected against erosion by lines of staked straw wattles and siltation fencing.
- Install the siltation control barriers between the work areas and in other locations as shown within the plan set.
- Strip and Stockpile Topsoil
- Place the straw wattles or fencing at least five feet from the base of
- the loam pile, if applicable
- Excavate for foundation
- Excavate for underground utilities
- Install additional septic tank • Form and pour concrete footings and foundation walls. After
- concrete cures, backfill footing and foundation to proposed grades shown.
- Construct addition • Upon completion of exterior improvements, complete drainage
- Construct parking fields. · Place asphalt to limits shown on plan.

Loam and seed all disturbed areas.

AND LOCAL PERMITS AND ARE NOT INTENDED TO BE USED AS CONSTRUCTION DOCUMENTS.

NOT FOR CONSTRUC

THESE PLANS WERE PREPARED FOR THE PURPOSE OF OBTAINING STATE

2 11/20/2023 Response to Comments 1 11/6/2023 Response to Comments Date Revision BRIAN MARCHETTI NO. 46279

> McCarty Engineering, Inc. Civil Engineers 42 Tucker Drive, Leominster, MA 01453 phone:(978) 534-1318 fax: (978) 840-6907

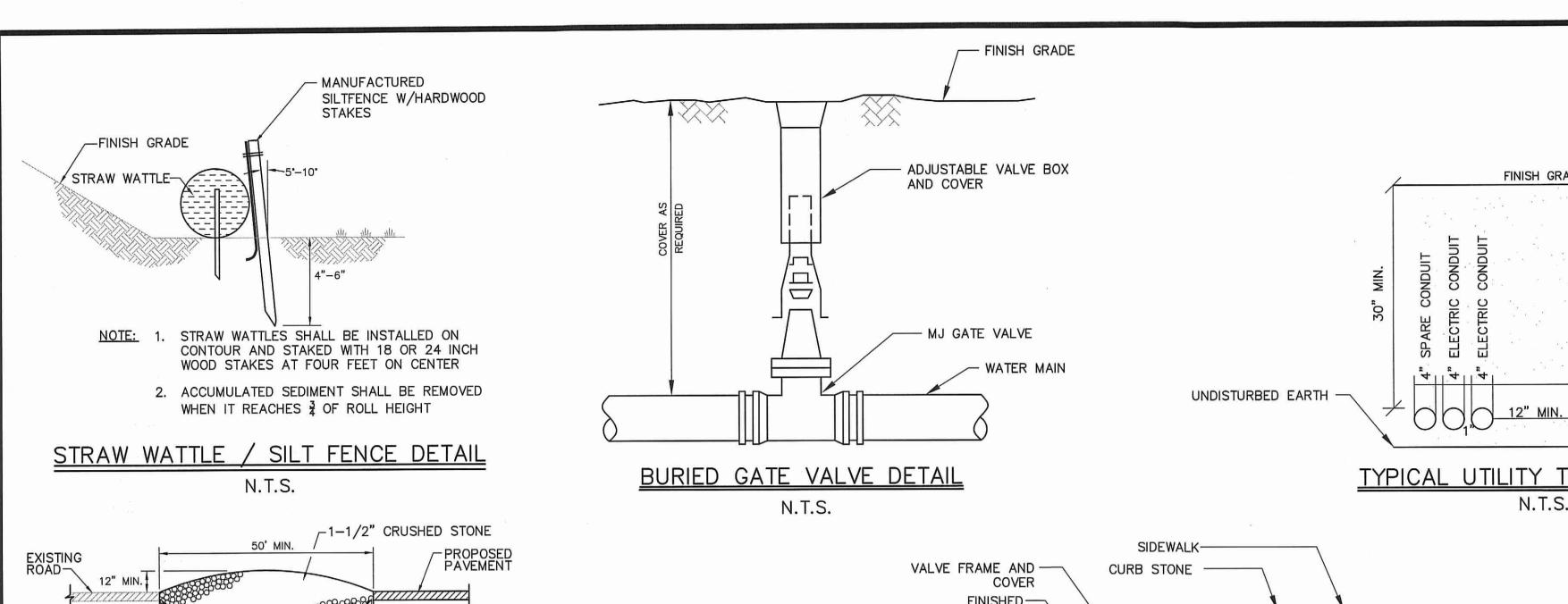
Drawn By: Designed By: Checked By:

www.mccartydb.com Project Name

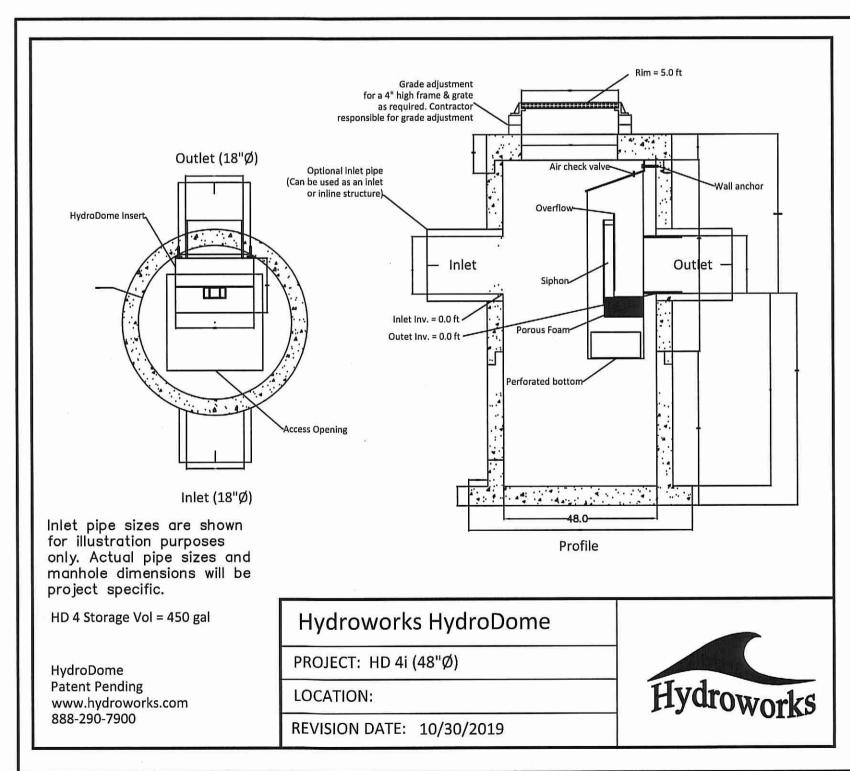
Proposed Mixed-Use Development 42 Park Street Ayer, MA 01432

> Sheet Title **Erosion Control** Plan

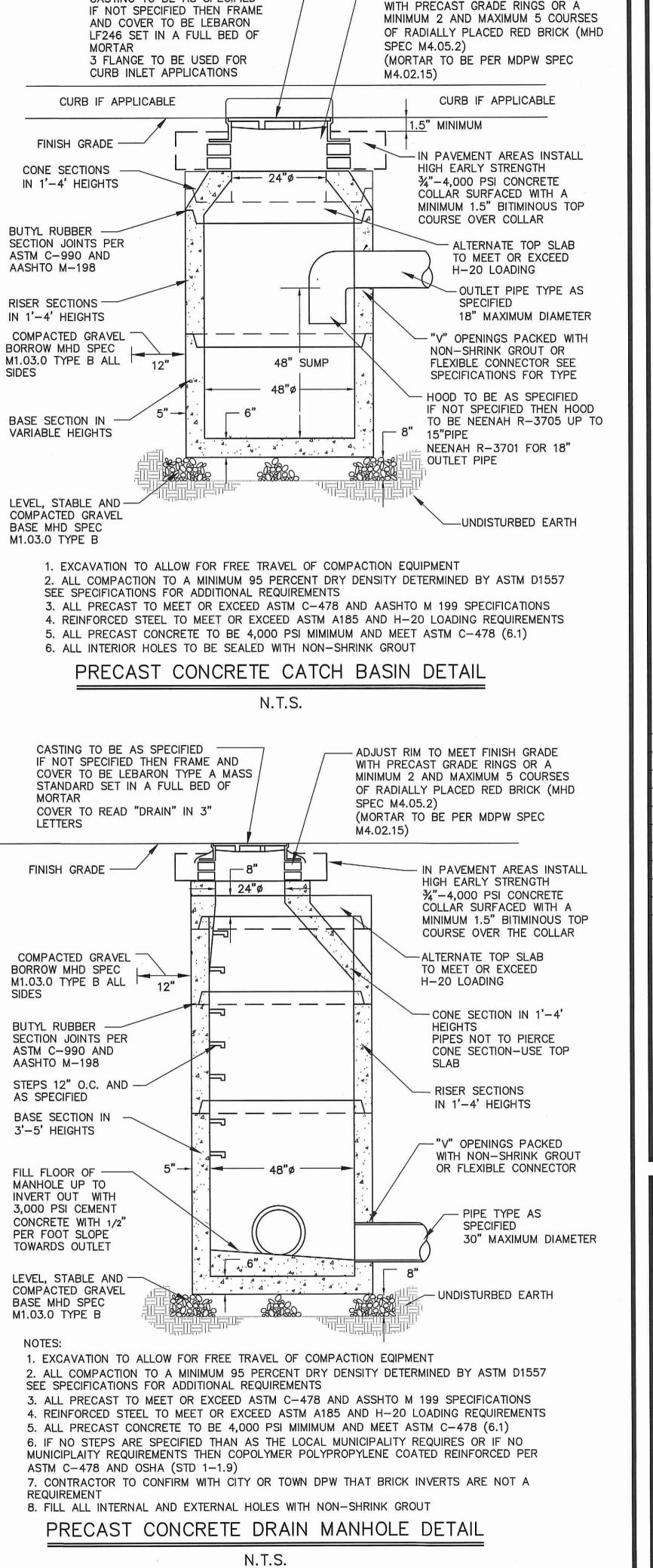
File Name: 419P-CER01 Date: September 13, 2023 Scale: 1"=10'



FINISHED — STREET GRADE SET CAST IRON FRAME IN CONCRETE FOUNDATION STANDARD ROADWAY TELESCOPING ACCESS BOX (SEE W-2.4.0) MECHANICAL JOINT TAPPING GATE VALVE 3"-12" DUCTILE IRON-TAPPING SLEEVE AND VALVE DETAIL CONCRETE — TAPPING SLEEVE -ASSEMBLY BLOCKING N.T.S. EXISTING WATER MAIN



HYDROWORKS HYDRODOME HD4i DETAIL N.T.S.



- ADJUST RIM TO MEET FINISH GRADE

CASTING TO BE AS SPECIFIED -

2 11/20/2023 Response to Comments 1 11/6/2023 Response to Comments Date Revision BRIAN MARCHETTI CIVIL NO. 46279 / Drawn By: Designed By: Checked By

McCarty Engineering, Inc Civil Engineers 42 Tucker Drive, Leominster, MA 01453 phone:(978) 534-1318 fax: (978) 840-6907 www.mccartydb.com

Project Name

Proposed Mixed-Use Development 42 Park Street Ayer, MA 01432

> Sheet Title Construction Details

File Name: 419P-DET01 Date: September 13, 2023

Scale: N.T.S.

LEDGE ENGINEER.

BACKFILL MATERIAL SHALL CONSIST OF EXCAVATED MATERIAL AND/OR GRAVEL BORROW AS DIRECTED BY THE

PROVIDE LEVEL AREA OF CRUSHED STONE 50 FEET IN FROM EDGE OF EXISTING ROAD.

1. TRENCH EXCAVATION WIDTH TO ALLOW FOR FREE TRAVEL OF

2. ALL COMPACTION TO A MINIMUM 95 PERCENT DRY DENSITY

-ROADWAY

PAVEMENT AS

REQUIRED OR

- BACKFILL

NOTE:

EARTH

5'-0" MIN.

COVER (TYP.)

COMPACTED IN 1FT.

3. SEE MANUFACTURERS SPECIFICATIONS FOR ADDITIONAL

4. AVOID HEAVY EQUIPMENT LOADS OVER PIPE DURING

DRAIN PIPE TRENCH DETAIL

N.T.S.

SURFACE TREATMENT

-UNDISTURBED EARTH

COMPACT IN 1 FT. LIFTS

REINFORCED CONCRETE PIPE,

HDPE PIPE OR SDR 35

PLASTIC PIPE

ORDINARY BORROW

AS REQUIRED

TEMPORARY ENTRANCE BERM

N.T.S..

TRENCH WIDTH AT CROWN

SCREENED GRAVELT

3/4" CRUSHED

STONE BEDDING

UNDISTURBED EARTH

COMPACTION EQUIPMENT

CONSTRUCTION

COUNTRY

FINISH GRADE AS

REQUIRED OR DIRECTED

BACKFILL-

EXISTING GROUND

COMPACTED IN 1FT.

6" MIN. 3/4"

CRUSHED STONE

DETERMINED BY ASTM D1557.

INSTALLATION REQUIREMENTS

FOR PVC & HDPE

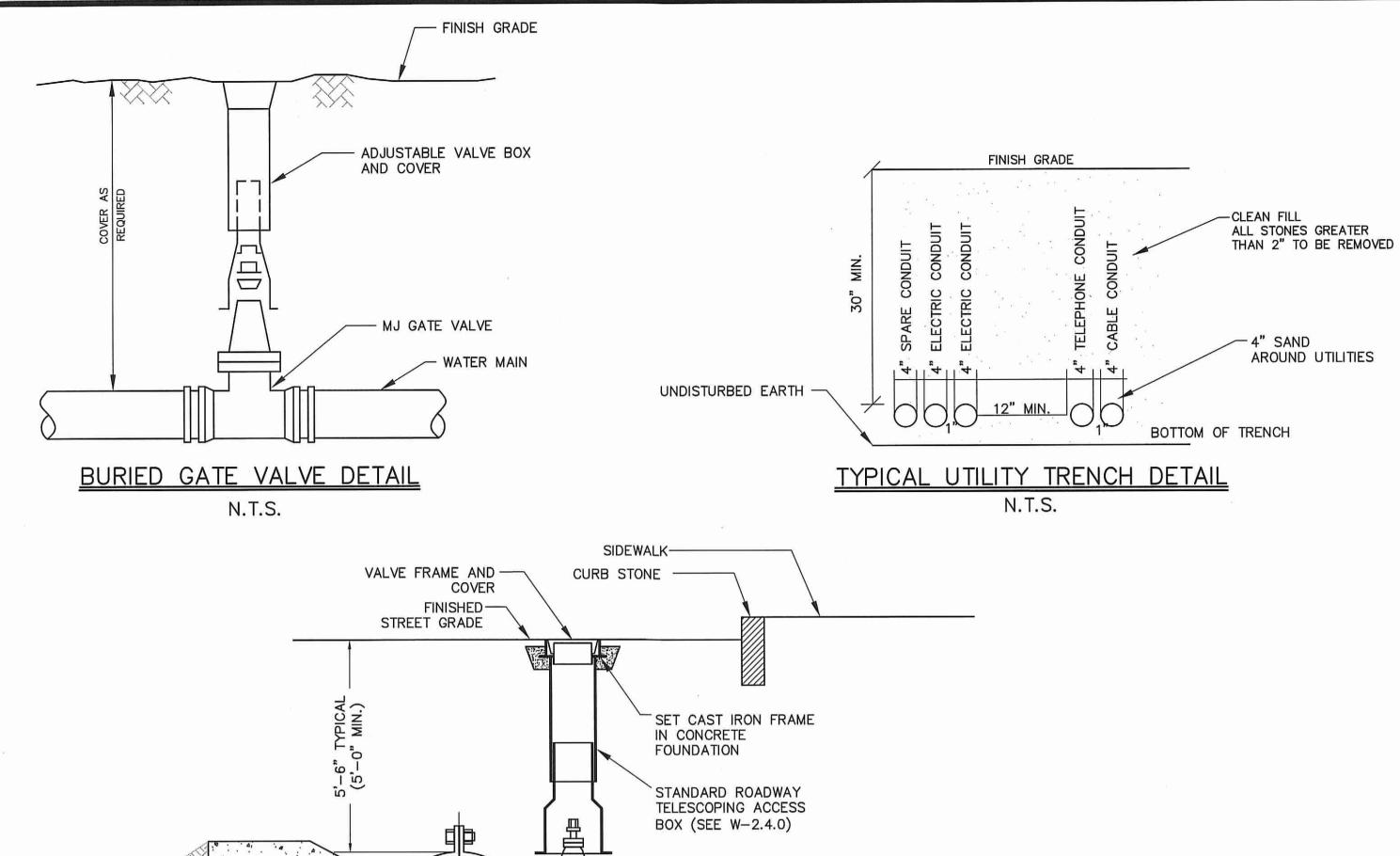
BEDDING FOR

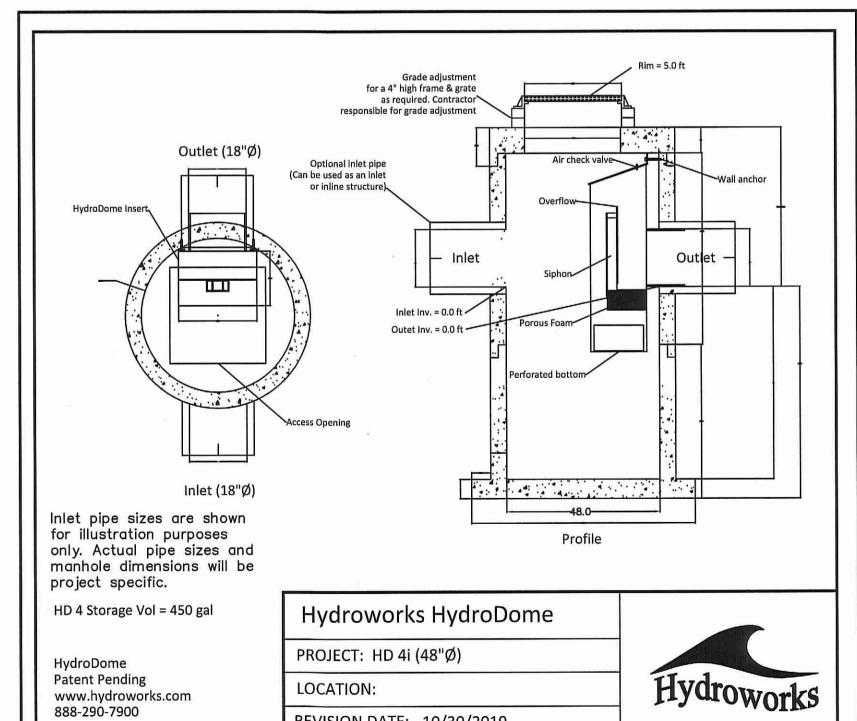
RCP PIPE

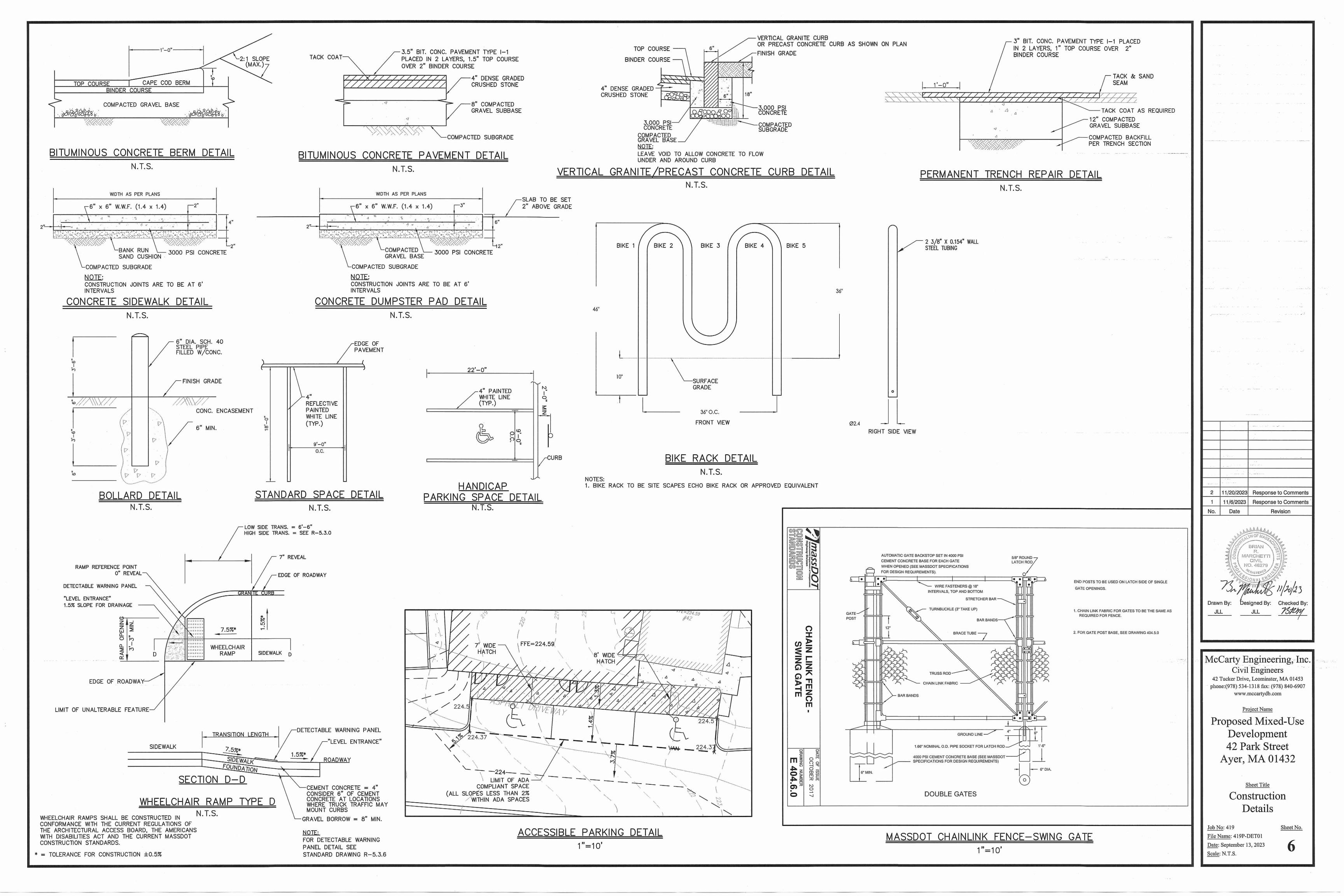
 $= 2.5 \times PIPE DIAMETER (MAX.)$

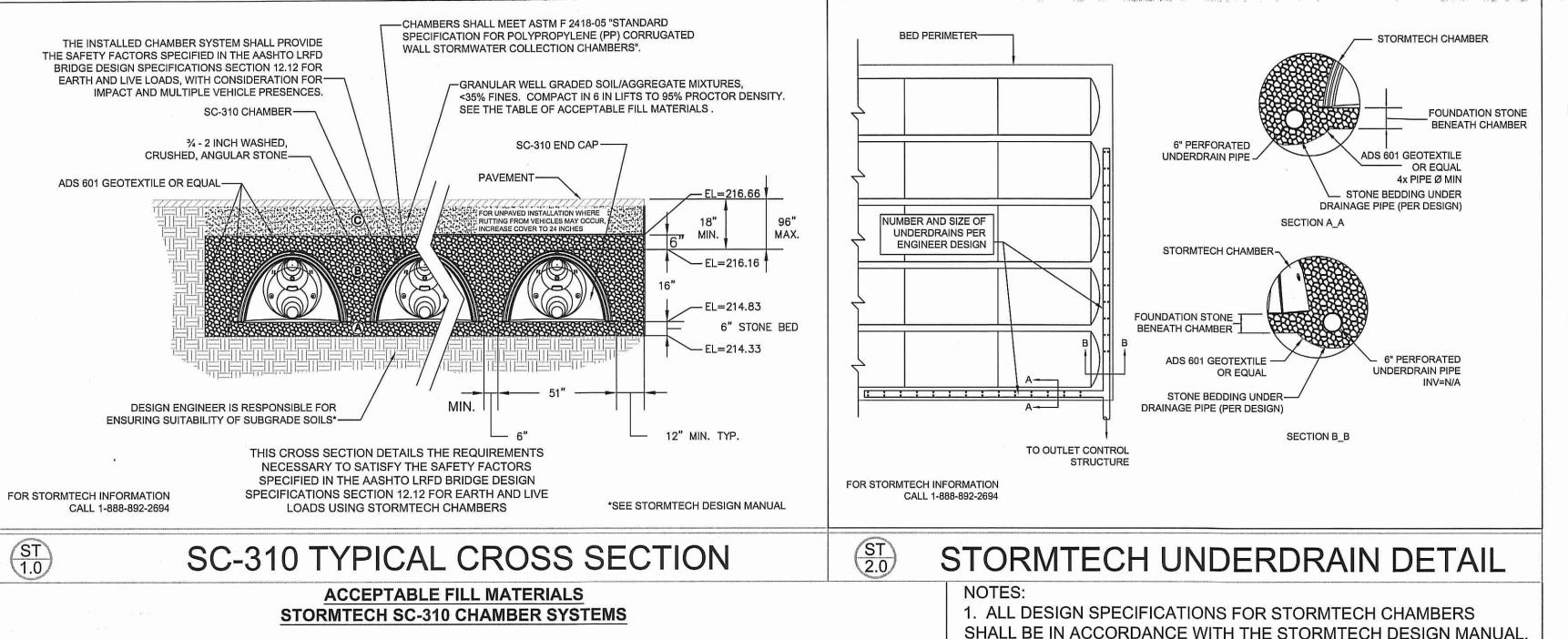
TYPICAL WATER MAIN TRENCH DETAIL

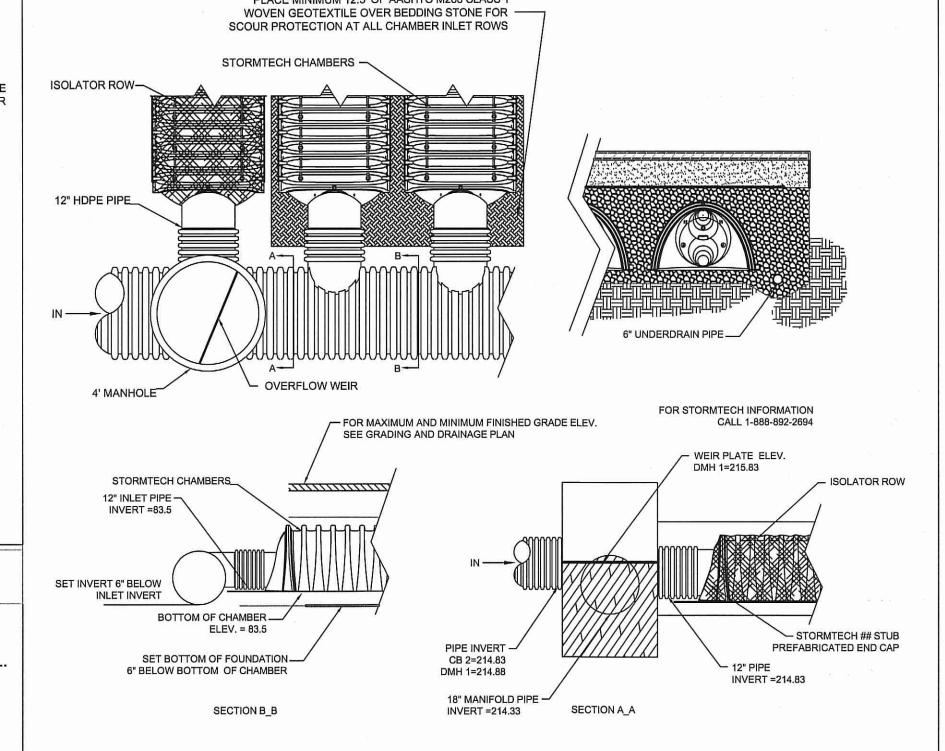
N.T.S.

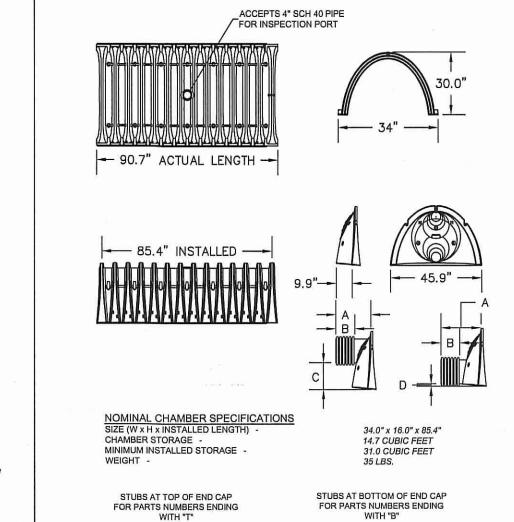












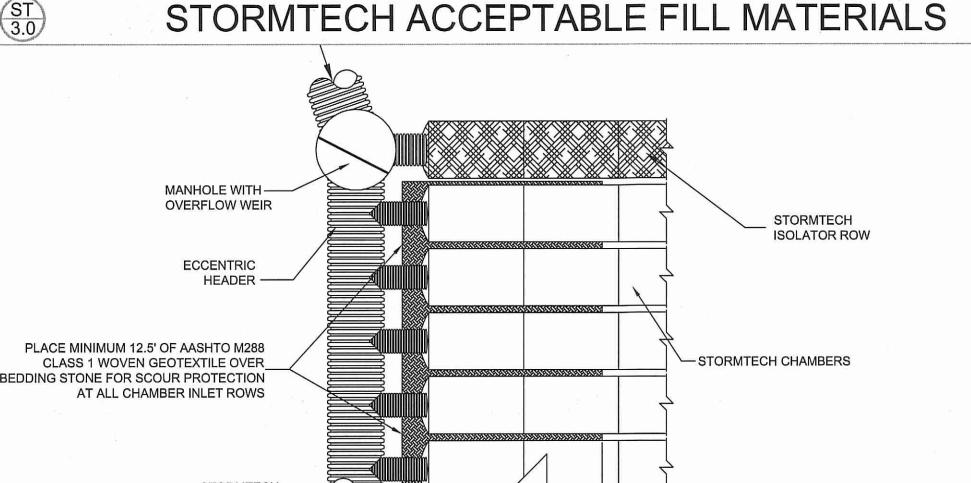
NOTE: ALL DIMENSIONS ARE NOMINA ALL STUBS, EXCEPT FOR THE ALL STUBS, EXCEPT FOR THE SCALE PROBLEM AND THE STUB IS FOR EXCEPT AND THE STUB IS FLUSH WITH THE BOTTOM OF THE EN CAP. FOR ADDITIONAL INFORMATIO CONTACT STORMTECH AT

* FOR THE SC310EPE12B THE 12" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25". BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SETS LEVEL

STORMTECH ELEVATIONS

TECHNICAL DETAILS

PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE WASHED CRUSHED ANGULAR. FOR EXAMPLE, THE



AASHTO M43

DESIGNATION

3, 357, 4, 467,

3, 357, 4, 467, 5, N/A

5, 56, 57, 6,

67, 68, 7, 78,

8, 89, 9, 10

3, 357, 4, 467,

MATERIAL LOCATION

FILL MATERIAL FROM 18"

C FILL MATERIAL FOR 6" TO 18"

A FOUNDATION STONE BELOW

CHAMBERS

TO GRADE ABOVE CHAMBERS

ELEVATION ABOVE CHAMBERS

AND TO A 6" ELEVATION ABOVE

(24" FOR UNPAVED INSTALLATIONS)

DESCRIPTION

<35% FINES.

B) EMBEDMENT STONE SURROUNDING | WASHED ANGULAR STONE WITH THE

STONE MUST BE SPECIFIED AS WASHED, CRUSHED, ANGULAR NO. 4 STONE.

ANY SOIL/ROCK MATERIALS, NATIVE

MAJORITY OF PARTICLES BETWEEN

WASHED ANGULAR STONE WITH THE

MAJORITY OF PARTICLES BETWEEN

SOILS OR PER ENGINEER'S PLANS.

CHECK PLANS FOR PAVEMENT

GRANULAR WELL-GRADED

SOIL/AGGREGATE MIXTURES,

AASHTO M145

DESIGNATION

COMPACTION/DENSITY

PREPARE PER ENGINEER'S PLANS. PAVED

COMPACT IN 6" LIFTS TO A MINIMUM 95%

PLATE COMPACT OR ROLL TO ACHIEVE A

95% STANDARD PROCTOR DENSITY

STANDARD PROCTOR DENSITY, ROLLER GROSS

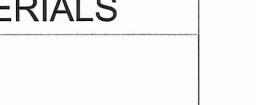
VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS.

DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.

AND PREPARATION REQUIREMENTS

NO COMPACTION REQUIRED

INSTALLATIONS MAY HAVE STRINGENT MATERIAL



PAVEMENT - CLASS "C" CONCRETE AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE INSPECTION PORT TO BE ATTACHED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE FOR STORMTECH INFORMATION CALL 1-888-892-2694

FLOOR BOX FRAME AND LID W/S.S.

INSPECTION PORT WITH SCREW-IN CAP

CAP SCREW LID CLOSURE

2. THE INSTALLATION OF STORMTECH CHAMBERS SHALL BE IN

ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION

WWW.STORMTECH.COM TO RECEIVE A COPY OF THE LATEST

4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND

SAFETY FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST

EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

INSTALLATION. CALL 1-888-892-2694 OR VISIT

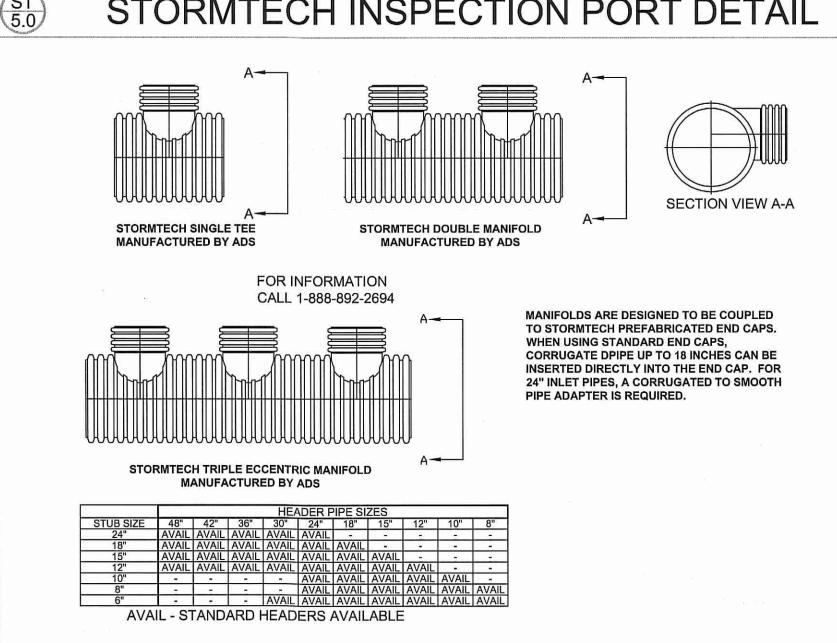
STORMTECH INSTALLATION INSTRUCTIONS.

3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND

THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM

INSTRUCTIONS.

STORMTECH INSPECTION PORT DETAIL

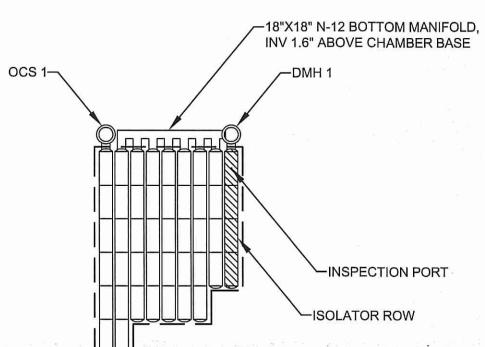


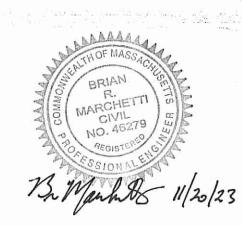
PROPOSED LAYOUT

(45) STORMTECH SC-310 CHAMBERS INSTALLED WITH 6" COVER STONE, 6" BASE STONE, 40% STONE VOID **INSTALLED SYSTEM VOLUME: 1,538.8 CF** AREA OF SYSTEM: 1,222.2 FT2 PERIMETER OF SYSTEM: 140.6 FT

PROPOSED ELEVATION

TOP OF STONE: 216.66 **BOTTOM OF STONE: 214.33** TOP OF CHAMBER: 216.16 **BOTTOM OF CHAMBER: 214.83**





UNDERGROUND INFILTRATION BASIN (SC-310 - 45 CHAMBERS) SCALE: 1"=20'

CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND SAFETY FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS LOADS SHALL BE CALCULATED IN ACCORDANCE WITH SECTION 3 AND SHALL INCLUDE H20 DESIGN TRUCK, IMPACT FACTOR, MULTIPLE PRESENCE, AND LANE LOAD.

DRAWING TITLE Stormtech

O

Mixe

eq

0

This drawing was prepared to support the

conversion. It is the ultimate responsibility

assure that the stormwater system's desi

to ensure that the StormTech products are

StormTech LLC does not approve plans,

sizing, or system designs. The design

esign engineer for the proposed

design engineer's responsibility

designed in accordance with StormTech minimum requirements

engineer is responsible for all

REVISIONS

No Change

design decisions.

of the design engineer to

Infiltration Basin Details

VETHERSFIELD, CT 06109

WWW.STORMTECH.COM

STORMTECH SC-310 CHAMBER DETAIL SHEET DRAWN BY CHECKED BY BRM DRAWING NO.

ADS MANIFOLD DETAILS

ST 7.0

STORMTECH SC-310 CHAMBER LAYOUT

STORMTECH FOR STORMTECH INFORMATION CALL 1-888-892-2694 END CAPS STORMTECH ISOLATOR™ ROW MANIFOLD DETAIL COVER ENTIRE ROW WITH **ADS GEOSYNTHETICS 601T** NON-WOVEN GEOTEXTILE OR EQUAL SC-740--8' WIDE STRIP BY DESIGN ENGINEER SC-310--5' WIDE STRIP STORMTECH ENDCAP **MANHOLE** BY DESIGN **ENGINEER** AASHTO M288 CLASS 1 WOVEN GEOTEXTILE OR EQUAL FOR STORMTECH INFORMATION BETWEEN FOUNDATION STONE AND CHAMBERS SC-740--5'-6' WIDE STRIP SC-310--4' WIDE STRIP

STORMTECH ISOLATOR™ ROW DETAIL