

# GREAT ISLAND ENTRY DRIVEWAY IMPROVEMENTS

DARIEN, CONNECTICUT

JULY 2, 2024

PREPARED FOR

TOWN OF DARIEN  
2 RENSRAW ROAD  
DARIEN, CT 06820  
(203) 656-7300

PREPARED BY

REDNISS & MEAD, INC.  
22 FIRST STREET  
STAMFORD, CT 06905  
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LOCATION MAP

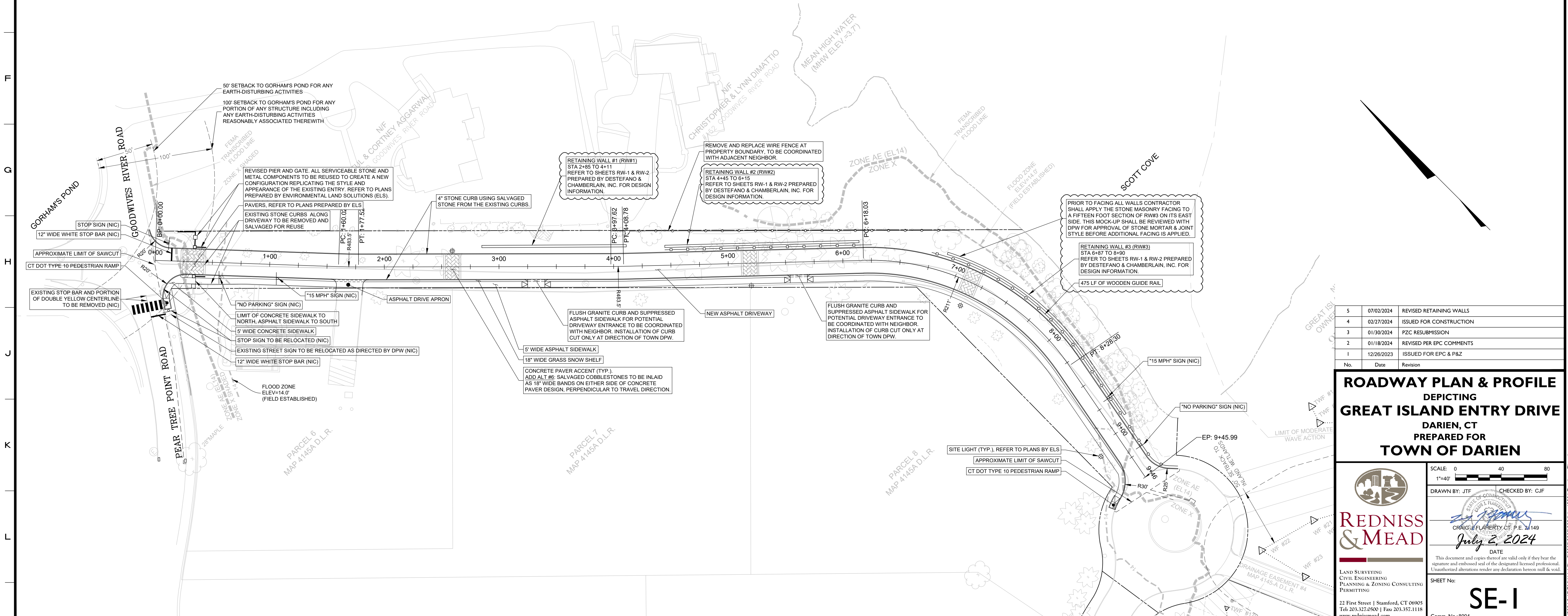
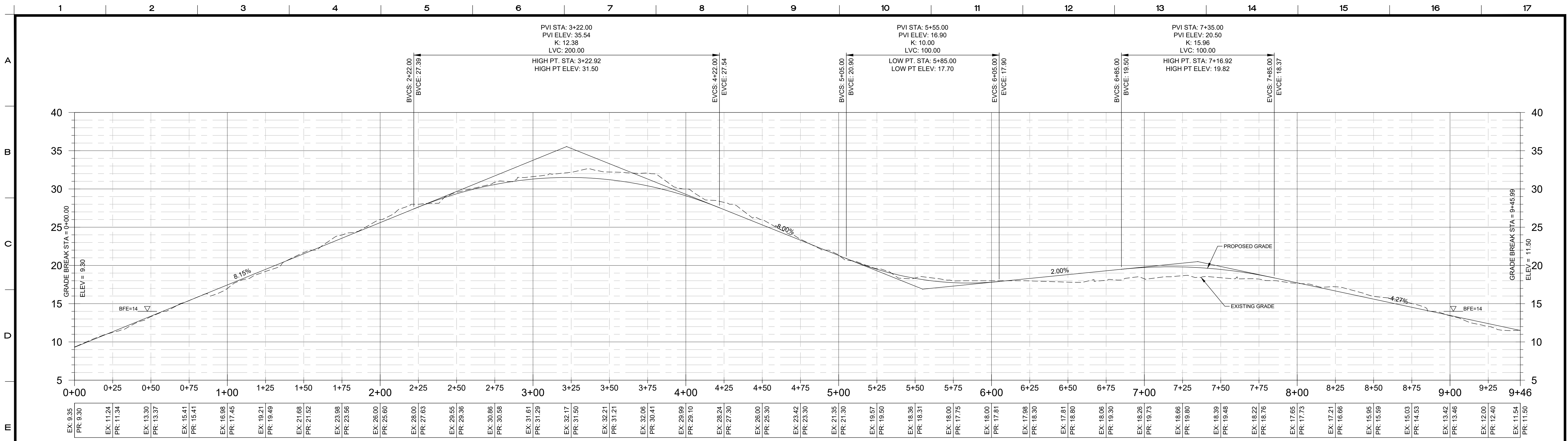
SCALE: 1"=400'

JON ZAGRODZKY, FIRST SELECTMAN

EDWARD L. GENTILE JR., P.E., DIRECTOR OF PUBLIC WORKS

SHEET No.  
**CV-1**  
Comm. No.: 8004B-3





No.	Date	Revision
5	07/02/2024	REVISED RETAINING WALLS
4	02/27/2024	ISSUED FOR CONSTRUCTION
3	01/30/2024	PZC RESUBMISSION
2	01/18/2024	REVISED PER EPC COMMENTS
1	12/26/2023	ISSUED FOR EPC & P&Z

**ROADWAY PLAN & PROFILE**  
 DEPICTING  
**GREAT ISLAND ENTRY DRIVE**  
 DARIEN, CT  
 PREPARED FOR  
**TOWN OF DARIEN**

SCALE 0 40 80  
 1"=40'

DRAWN BY: JTF CHECKED BY: CJF

**REDNISS & MEAD**  
 CIVIL ENGINEERING  
 PLANNING & ZONING CONSULTING  
 PERMITTING

CRAIG FLAHERTY, P.E. #149  
 July 2, 2024  
 DATE

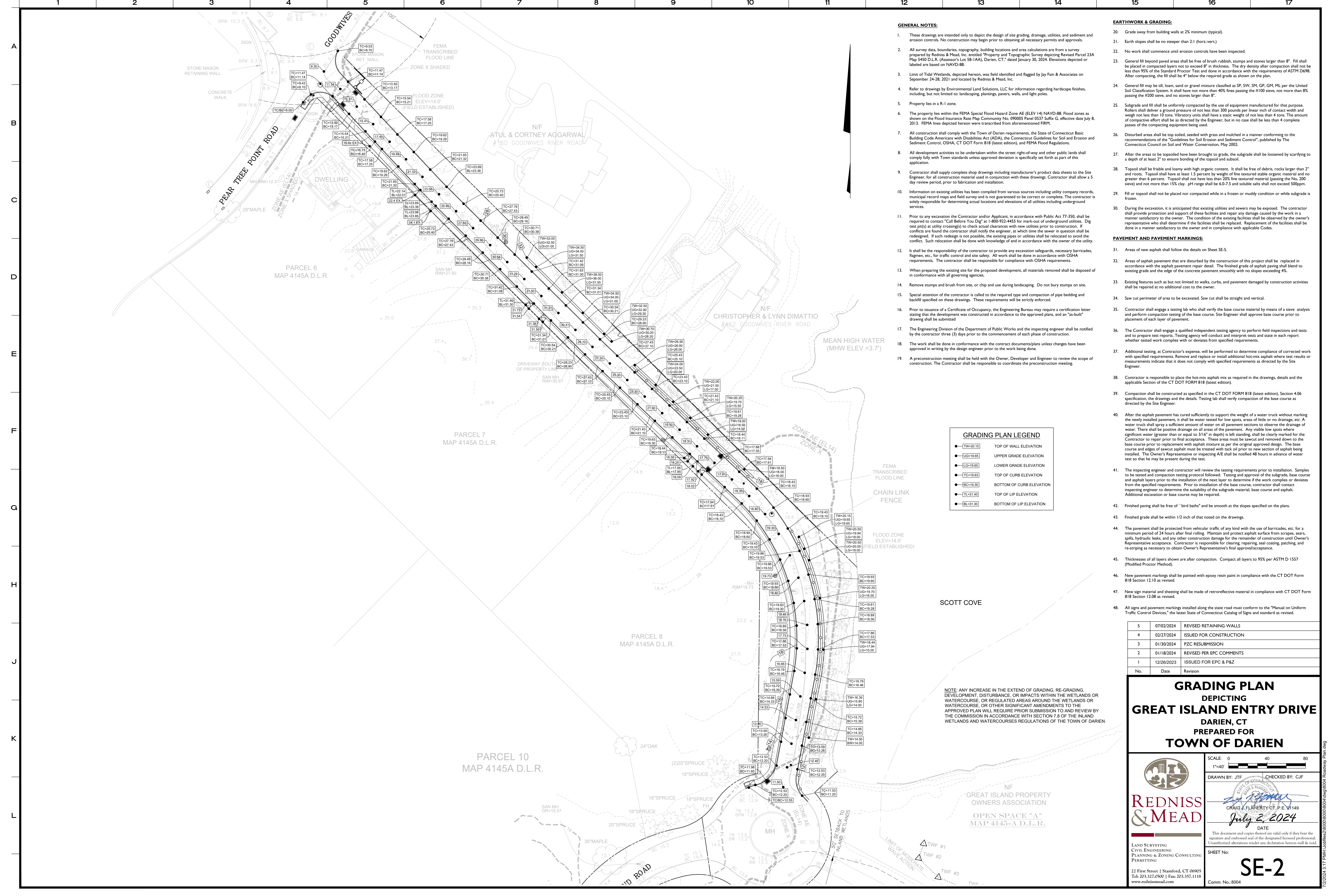
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SHEET No: **SE-1**

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Comm. No.: 8004





- GENERAL NOTES:**
- These drawings are intended only to depict the design of site grading, drainage, utilities, and sediment and erosion controls. No construction may begin prior to obtaining all necessary permits and approvals.
  - All survey data, boundaries, topography, building locations and area calculations are from a survey prepared by Redniss & Mead, Inc. entitled "Property and Topographic Survey of Parcel 23A Map 5450 D.L.R. (Assessor's Lot 58-1AA), Darien, CT," dated January 30, 2024. Elevations depicted or labeled are based on NAVD88.
  - Limit of Tidal Wetlands, depicted hereon, was field identified and flagged by Jay Fain & Associates on September 24-28, 2021 and located by Redniss & Mead, Inc.
  - Refer to drawings by Environmental Land Solutions, LLC for information regarding landscape finishes, including, but not limited to landscaping, plantings, pavers, walls, and light poles.
  - Property lies in a R-1 zone.
  - The property lies within the FEMA Special Flood Hazard Zone AE (ELEV 14) NAVD-88. Flood zones as shown on the Flood Insurance Rate Map Community No. 090005 Panel 0337 Suffix G, effective date July 8, 2013. FEMA lines depicted hereon were transcribed from aforementioned FIRM.
  - All construction shall comply with the Town of Darien requirements, the State of Connecticut Basic Building Code Americans with Disabilities Act (ADA), the Connecticut Guidelines for Soil and Erosion and Sediment Control, OSHA, CT DOT Form 818 (latest edition), and FEMA Flood Regulations.
  - All development activities to be undertaken within the street right-of-way and other public lands shall comply fully with Town standards unless approved deviation is specifically set forth as part of this application.
  - Contractor shall supply complete shop drawings including manufacturer's product data sheets to the Site Engineer, for all construction material used in conjunction with these drawings. Contractor shall allow a 5 day review period, prior to fabrication and installation.
  - Information on existing utilities has been compiled from various sources including utility company records, municipal record maps and field survey and is not guaranteed to be correct or complete. The contractor is solely responsible for determining actual locations and elevations of all utilities including underground services.
  - Prior to any excavation the Contractor and/or Applicant, in accordance with Public Act 77-350, shall be required to contact "Call Before You Dig" at 1-800-922-4455 for mark-out of underground utilities. Dig test pits (at utility crossings) to check actual clearances with new utilities prior to construction. If conflicts are found the contractor shall notify the engineer, at which time the sewer in question shall be redesigned. If such redesign is not possible, the existing pipes or utilities shall be relocated to avoid the conflict. Such relocation shall be done with knowledge of and in accordance with the owner of the utility.
  - It shall be the responsibility of the contractor to provide any excavation safeguards, necessary barricades, flagmen, etc., for traffic control and site safety. All work shall be done in accordance with OSHA requirements. The contractor shall be responsible for compliance with OSHA requirements.
  - When preparing the existing site for the proposed development, all materials removed shall be disposed of in conformance with all governing agencies.
  - Remove stumps and brush from site, or chip and use during landscaping. Do not bury stumps on site.
  - Special attention of the contractor is called to the required type and compaction of pipe bedding and backfill specified on these drawings. These requirements will be strictly enforced.
  - Prior to issuance of a Certificate of Occupancy, the Engineering Bureau may require a certification letter stating that the development was constructed in accordance to the approved plans, and an "as-built" drawing shall be submitted.
  - The Engineering Division of the Department of Public Works and the inspecting engineer shall be notified by the contractor three (3) days prior to the commencement of each phase of construction.
  - The work shall be done in conformance with the contract documents/plans unless changes have been approved in writing by the design engineer prior to the work being done.
  - A preconstruction meeting shall be held with the Owner, Developer and Engineer to review the scope of construction. The Contractor shall be responsible to coordinate the preconstruction meeting.

- EARTHWORK & GRADING:**
- Grade away from building walls at 2% minimum (typical).
  - Earth slopes shall be no steeper than 2:1 (horz:vert).
  - No work shall commence until erosion controls have been inspected.
  - General fill beyond paved areas shall be free of brush rubbish, stumps and stones larger than 8". Fill shall be placed in compacted layers not to exceed 8" in thickness. The dry density after compaction shall not be less than 95% of the Standard Proctor Test and done in accordance with the requirements of ASTM D698. After compacting, the fill shall be 4" below the required grade as shown on the plan.
  - General fill may be fill, loam, sand or gravel mixture classified as SP, SW, SM, GP, GM, ML per the United Soil Classification System. It shall have not more than 40% fines passing the #100 sieve, not more than 8% passing the #200 sieve, and no stones larger than 8".
  - Subgrade and fill shall be uniformly compacted by the use of equipment manufactured for that purpose. Rollers shall deliver a ground pressure of not less than 300 pounds per linear inch of contact width and weigh not less than 10 tons. Vibratory units shall have a static weight of not less than 4 tons. The amount of compactive effort shall be as directed by the Engineer, but in no case shall be less than 4 complete passes of the compacting equipment being used.
  - Disturbed areas shall be topsoiled, seeded with grass and mulched in a manner conforming to the recommendations of the "Guidelines for Soil Erosion and Sediment Control", published by The Connecticut Council on Soil and Water Conservation, May 2002.
  - After the areas to be topsoiled have been brought to grade, the subgrade shall be loosened by scarifying to a depth of at least 2" to ensure bonding of the topsoil and subsoil.
  - Topsoil shall have at least 1.5 percent by weight of fine textured stable organic material and no greater than 6 percent. Topsoil shall not have less than 20% fine textured material (passing the No. 200 sieve) and not more than 15% clay, pH range shall be 6.0-7.5 and soluble salts shall not exceed 500ppm.
  - Fill or topsoil shall not be placed nor compacted while in a frozen or muddy condition or while subgrade is frozen.
  - During the excavation, it is anticipated that existing utilities and sewers may be exposed. The contractor shall provide protection and support of these facilities and repair any damage caused by the work in a manner satisfactory to the owner. The condition of the existing facilities shall be observed by the owner's representative who shall determine if the facilities shall be replaced. Replacement of the facilities shall be done in a manner satisfactory to the owner and in compliance with applicable Codes.

- PAVEMENT AND PAVEMENT MARKINGS:**
- Areas of new asphalt shall follow the details on Sheet SE-5.
  - Areas of asphalt pavement that are disturbed by the construction of this project shall be replaced in accordance with the asphalt pavement repair detail. The finished grade of asphalt paving shall blend to existing grade and the edge of the concrete pavement smoothly with no slopes exceeding 4%.
  - Existing features such as but not limited to walks, curbs, and pavement damaged by construction activities shall be repaired at no additional cost to the owner.
  - Saw cut perimeter of area to be excavated. Saw cut shall be straight and vertical.
  - Contractor shall engage a testing lab who shall verify the base course material by means of a sieve analysis and perform compaction testing of the base course. Site Engineer shall approve base course prior to placement of each layer of pavement.
  - The Contractor shall engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports. Testing agency will conduct and interpret tests and state in each report whether tested work complies with or deviates from specified requirements.
  - Additional testing, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements as directed by the Site Engineer.
  - Contractor is responsible to place the hot-mix asphalt mix as required in the drawings, details and the applicable Section of the CT DOT FORM 818 (latest edition).
  - Compaction shall be constructed as specified in the CT DOT FORM 818 (latest edition), Section 4.06 specification, the drawings and the details. Testing lab shall verify compaction of the base course as directed by the Site Engineer.
  - After the asphalt pavement has cured sufficiently to support the weight of a water truck without marking the newly installed pavement, it shall be water tested for low spots, areas of little or no drainage, etc. A water truck shall spray a sufficient amount of water on all pavement sections to observe the drainage of water. There shall be positive drainage on all areas of the pavement. Any visible low spots where significant water (greater than or equal to 3/16" in depth) is left standing, shall be clearly marked for the Contractor to repair prior to final acceptance. These areas must be sawcut and removed down to the base course prior to replacement with asphalt mixture as per the original approved design. The base course and edges of sawcut asphalt must be treated with tack oil prior to new section of asphalt being installed. The Owner's Representative or inspecting AE shall be notified 48 hours in advance of water test so that he may be present during the test.
  - The inspecting engineer and contractor will review the testing requirements prior to installation. Samples to be tested and compaction testing protocol followed. Testing and approval of the subgrade, base course and asphalt layers prior to the installation of the next layer to determine if the work complies or deviates from the specified requirements. Prior to installation of the base course, contractor shall contact inspecting engineer to determine the suitability of the subgrade material, base course and asphalt. Additional excavation or base course may be required.
  - Finished paving shall be free of "bird baths" and be smooth at the slopes specified on the plans.
  - Finished grade shall be within 1/2 inch of that noted on the drawings.
  - The pavement shall be protected from vehicular traffic of any kind with the use of barricades, etc. for a minimum period of 24 hours after final rolling. Maintain and protect asphalt surface from scrapes, scars, spills, hydraulic leaks, and any other construction damage for the remainder of construction until Owner's Representative acceptance. Contractor is responsible for clearing, repairing, seal coating, patching, and re-striping as necessary to obtain Owner's Representative's final approval/acceptance.
  - Thicknesses of all layers shown are after compaction. Compact all layers to 95% per ASTM D 1557 (Modified Proctor Method).
  - New pavement markings shall be painted with epoxy resin paint in compliance with the CT DOT Form 818 Section 12.10 as revised.
  - New sign material and sheeting shall be made of retroreflective material in compliance with CT DOT Form 818 Section 12.08 as revised.
  - All signs and pavement markings installed along the state road must conform to the "Manual on Uniform Traffic Control Devices," the latest State of Connecticut Catalog of Signs and standard as revised.

**GRADING PLAN LEGEND**

- TW=20.15 TOP OF WALL ELEVATION
- LG=19.65 UPPER GRADE ELEVATION
- LG=19.65 LOWER GRADE ELEVATION
- TC=19.63 TOP OF CURB ELEVATION
- BC=19.30 BOTTOM OF CURB ELEVATION
- TL=31.40 TOP OF LIP ELEVATION
- BL=31.30 BOTTOM OF LIP ELEVATION

NOTE: ANY INCREASE IN THE EXTEND OF GRADING, RE-GRADING, DEVELOPMENT, DISTURBANCE, OR IMPACTS WITHIN THE WETLANDS OR WATERCOURSE, OR REGULATED AREAS AROUND THE WETLANDS OR WATERCOURSE, OR OTHER SIGNIFICANT AMENDMENTS TO THE APPROVED PLAN WILL REQUIRE PRIOR SUBMISSION TO AND REVIEW BY THE COMMISSION IN ACCORDANCE WITH SECTION 7.8 OF THE INLAND WETLANDS AND WATERCOURSES REGULATIONS OF THE TOWN OF DARIEN.

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**GRADING PLAN**  
**DEPICTING**  
**GREAT ISLAND ENTRY DRIVE**  
**DARIEN, CT**  
**PREPARED FOR**  
**TOWN OF DARIEN**

SCALE 0 40 80  
 1"=40'

DRAWN BY: JTF CHECKED BY: CJF

**REDNISS & MEAD**  
 CIVIL ENGINEERING  
 PLANNING & ZONING CONSULTING  
 PERMITTING

CRAIG J. FLAHERTY, P.E. #1149  
 July 2, 2024  
 DATE

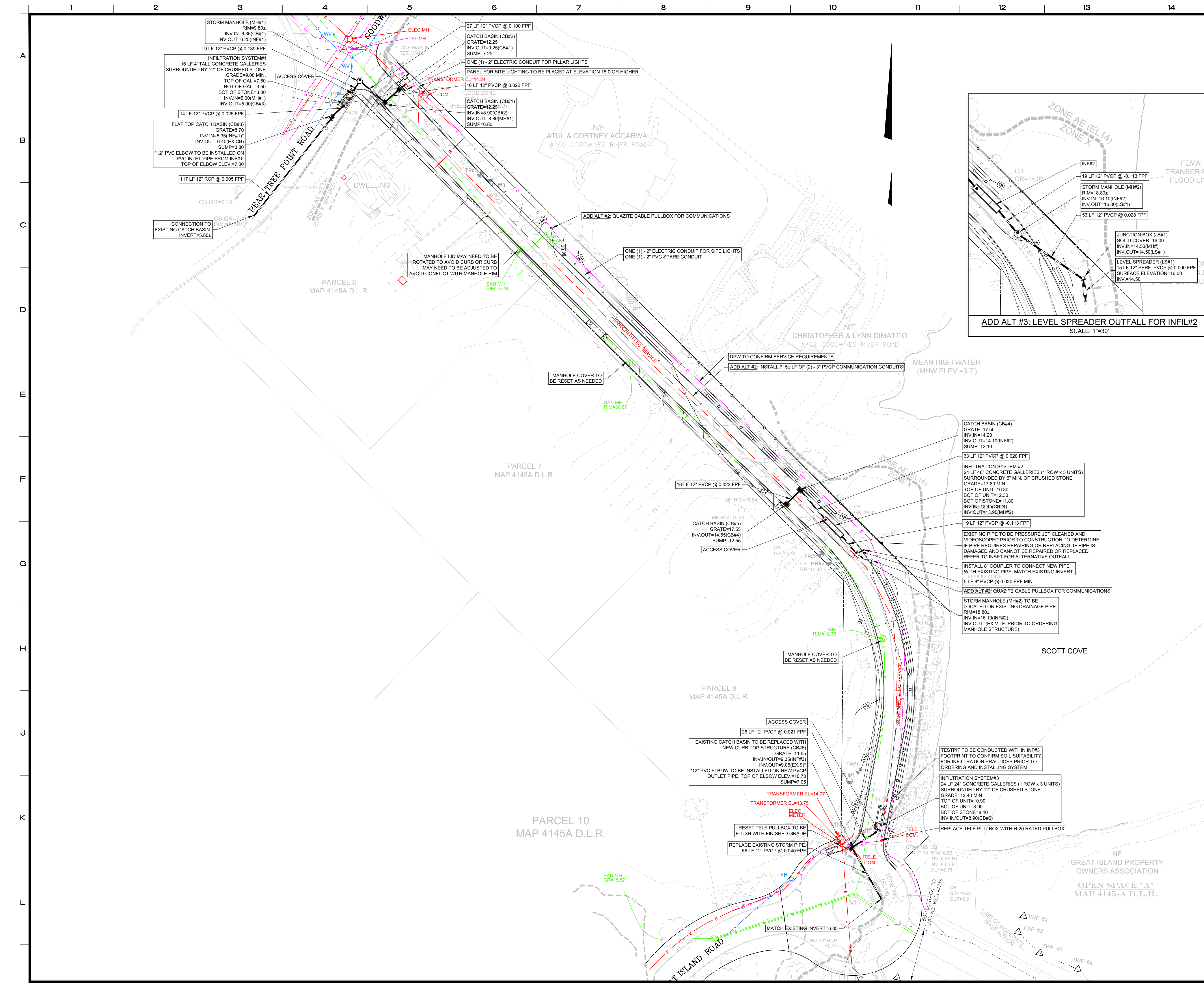
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SHEET No: **SE-2**

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Comm. No.: 8004





**STORM AND SANITARY SEWER SYSTEMS:**

- All pipe shall be installed straight and at the vertical and horizontal alignment shown. Pipes shall have a uniform slope as specified.
- Minimum cover on all pipes shall be two feet (2') unless otherwise noted.
- All storm pipe specified as Poly Vinyl Chloride Pipe (PVC) shall be SDR 35 with rubber gasketed joints and meet the requirements of ASTM D3034 and D3212.
- All RCP to be Class V, Wall B in accordance with ASTM C-76. Joints shall be push-on rubber gasket type.
- Dig test pits at utility and sewer crossings to check actual clearances with these facilities prior to construction. Dig test pits at the connection points to existing sanitary sewer pipes to confirm that the elevation of the proposed gravity sewer is appropriate. If conflicts are found the contractor shall notify the engineer at which time the sewer in question shall be redesigned. If such redesign is not possible, the existing pipes or utilities shall be relocated to avoid conflict.
- All catch basins and area drains shall have a two foot (2') sump with bell caps or 90° PVC elbows.
- Manhole diameters listed are minimum sizes and are assumed to be 4" inside diameter. If precast manholes are used, larger manholes must be used if recommended by the manufacturer.
- All existing and proposed catch basins, manhole rims and utility facilities shall be raised or lowered to be flush with finished grade.
- Flow in existing sewer system must not be interrupted.
- All crushed stone shall be Gradation No. 4 as per CT DOT Form 818, Article M01.02. Stone shall consist of sound, tough, durable particles free from soft, thin, elongated, laminated, friable, micaceous, or disintegrated pieces of mud, dirt or other deleterious material.
- At the end of construction, after the site has been fully stabilized, all new and previously existing storm sewer facilities including, but not limited to, catch basins, area drains, manholes, junction boxes, flow control structures, pipes, oil grit separators, permeable pavers and porous pavement shall be fully cleaned with equipment designed for that purpose to the satisfaction of the inspecting engineer.

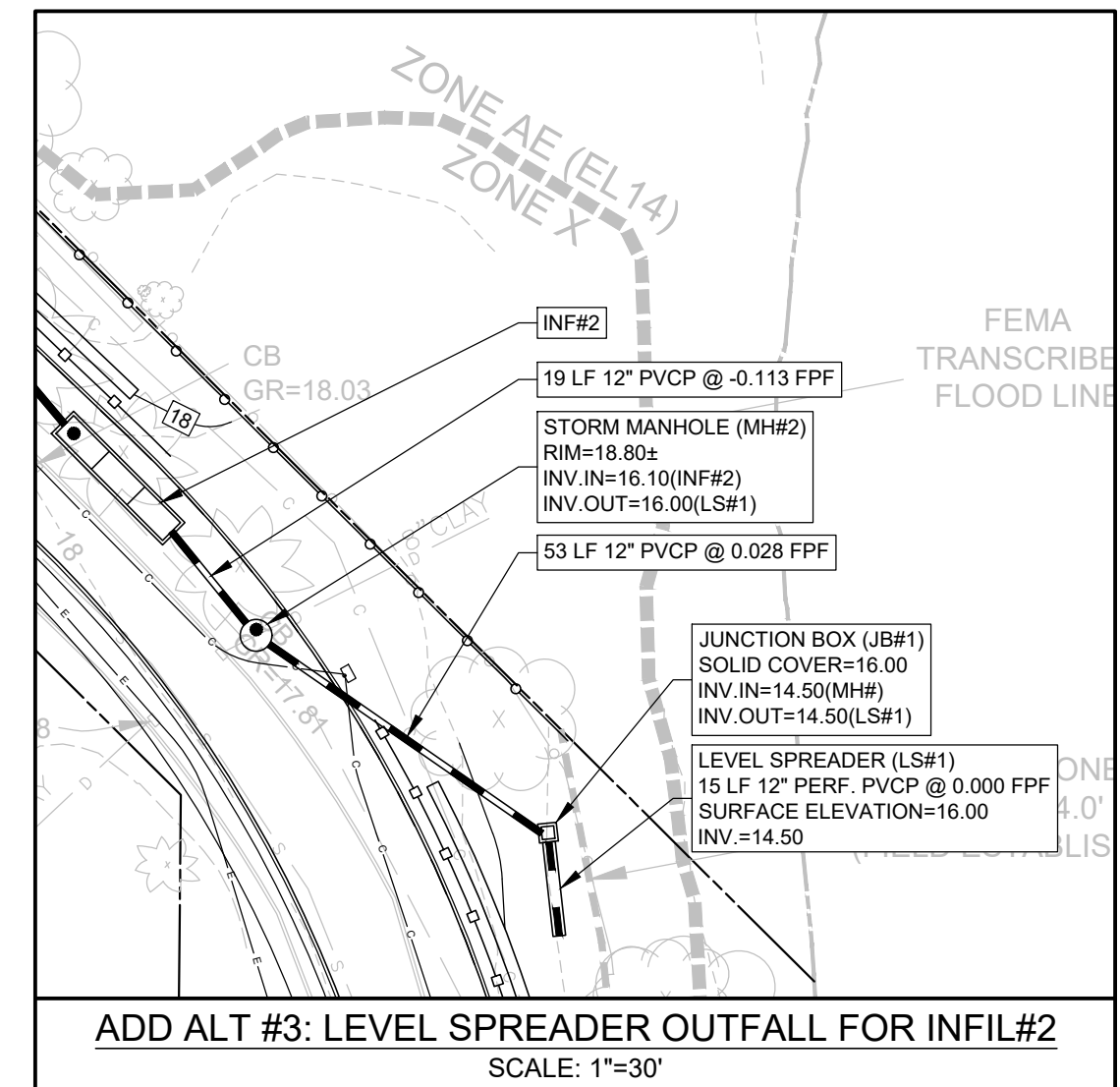
**UTILITIES:**

- Utilities shown on these plans are "not guaranteed" to be complete or correct. Prior to any site activities, the contractor shall be responsible for verification of clearances of proposed utilities from existing utilities. This verification shall include physical observation by means of test pits at the locations of affected utilities. The contractor shall notify the site engineer immediately of any conflict.
- Easements may be required in favor of the various utility companies.
- Electric services shall be installed in conformance to the requirements of the governing utility companies.
- It is the contractor's responsibility to install utilities as shown on Sheet SE-3. The contractor shall work with the utility companies and site engineer to insure the installation is in conformance to the requirements of the governing utility company. All conduits shall be concrete encased as may be required by the governing utility company. Proposed electric and water services are shown for schematic purposes only and are subject to change pending utility company review. These utilities shall be designed by others and installed in conformance to the requirements of the governing utility companies.
- All proposed utility facilities shall be raised or lowered to be flush with finished grade.
- The contractor must supply and install drag lines with all conduits.
- In general, each utility shall have a minimum clearance of one foot to any other underground utility.
- Any and all utilities abandoned shall be capped or removed in accordance with utility companies' requirements.
- Electric services shall be compliant with the Town of Darien Zoning Regulations Flood Damage Prevention Regulations Section 820 and shall be installed in conformance to the requirements of the governing utility companies.
- Detectable Tape shall be used to mark piping listed below. The identification tape shall be buried at least 6-inches to 10-inches below final grade but no closer than 12-inches to the buried utility piping or service.

Electric	Red	Caution Electric Line Buried Below
IS & S Communication Conduit	Orange	Conc. N/A

**FLOOD PROTECTION:**

- The property lies within Special Flood Hazard Area Zone AE, Base Flood Elevation (BFE) (100 year storm) is 14 NAVD-88 as depicted on FEMA Flood Insurance Rate Map, Panel 537 of 626, dated July 8, 2013.
- The construction of this development must follow the requirements set forth in the Federal Emergency Management Administration (FEMA) regulations for flood protection.
- All utilities shall be installed per FEMA regulations for flood protection. All utilities (i.e., meters, etc.) must be set above the BFE or waterproofed.



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**UTILITY PLAN  
DEPICTING  
GREAT ISLAND ENTRY DRIVE  
DARIEN, CT  
PREPARED FOR  
TOWN OF DARIEN**

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LAND SURVEYING  
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SCALE: 0 40 80  
1"=40'

DRAWN BY: JTE CHECKED BY: CJF

*Chris J. Flaherty*  
CHRIS J. FLAHERTY, P.E. #21149  
July 2, 2024  
DATE

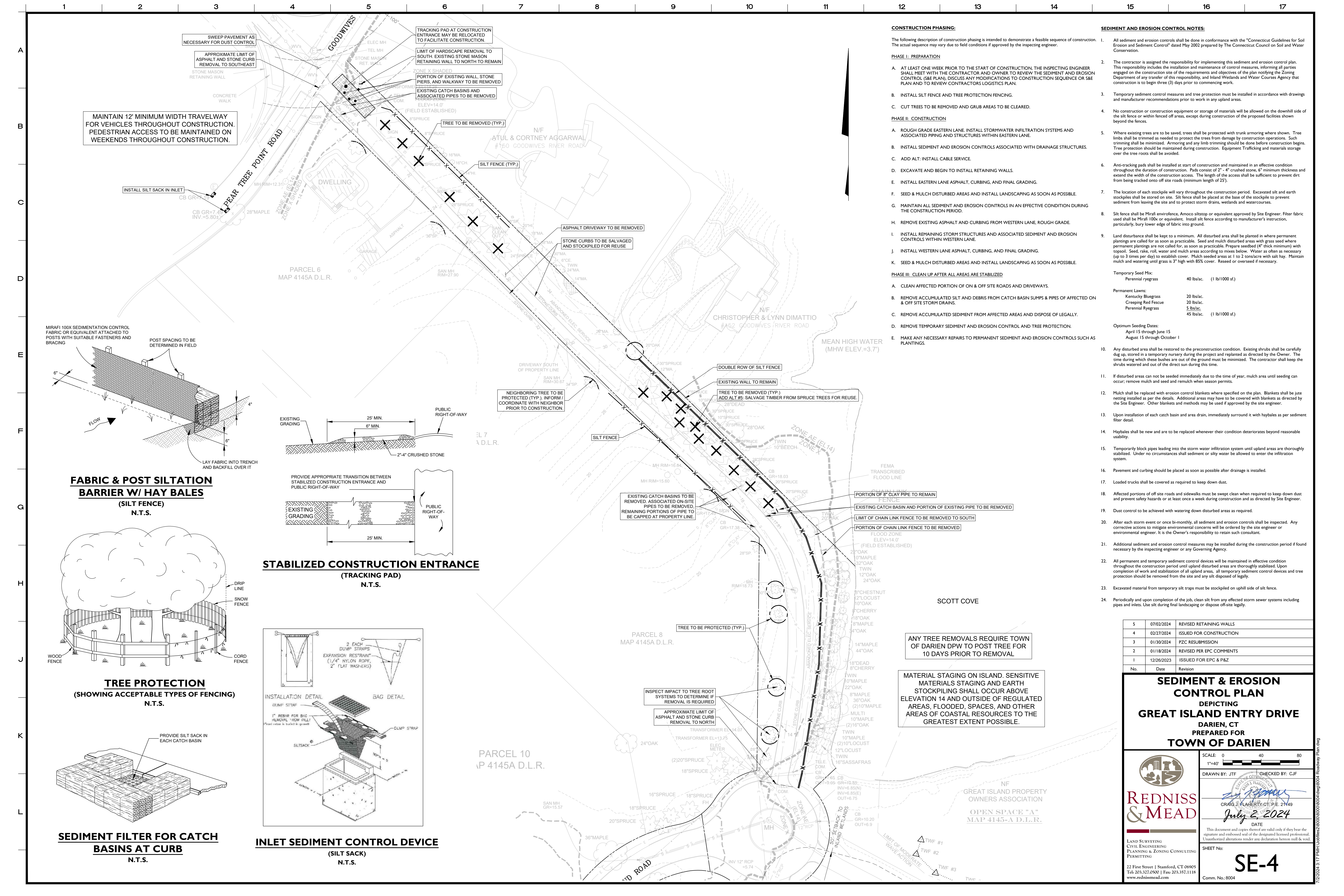
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SHEET No: **SE-3**

Comm. No.: 8004

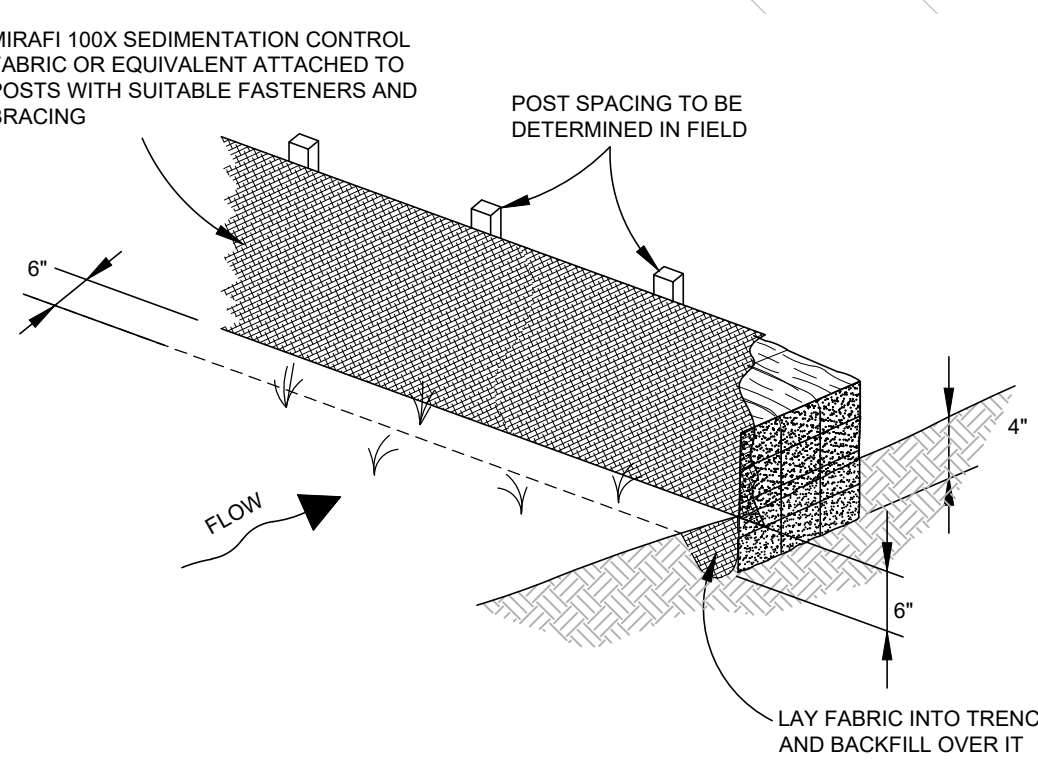
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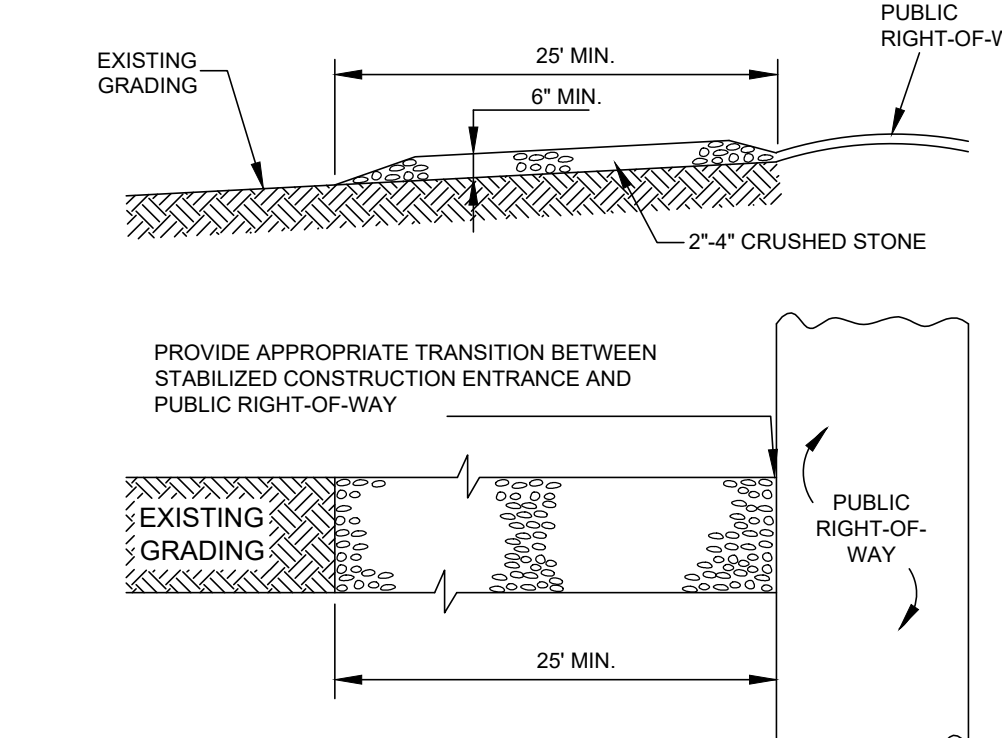


MAINTAIN 12' MINIMUM WIDTH TRAVELWAY FOR VEHICLES THROUGHOUT CONSTRUCTION. PEDESTRIAN ACCESS TO BE MAINTAINED ON WEEKENDS THROUGHOUT CONSTRUCTION.

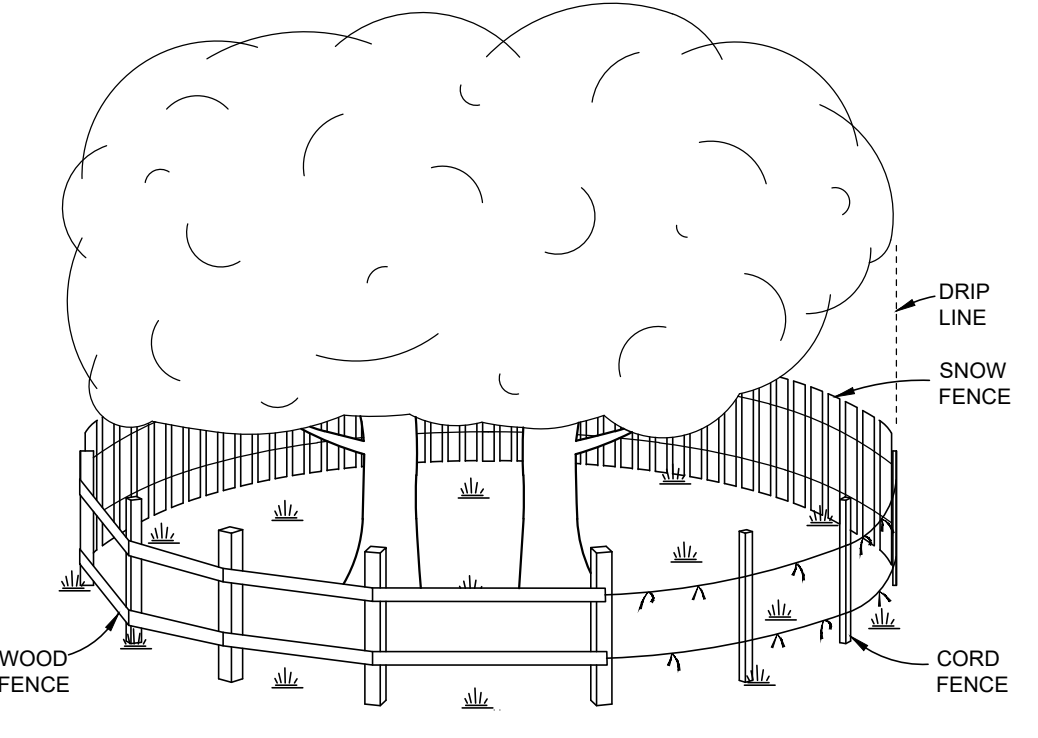
**FABRIC & POST SILTATION BARRIER W/ HAY BALES (SILT FENCE) N.T.S.**



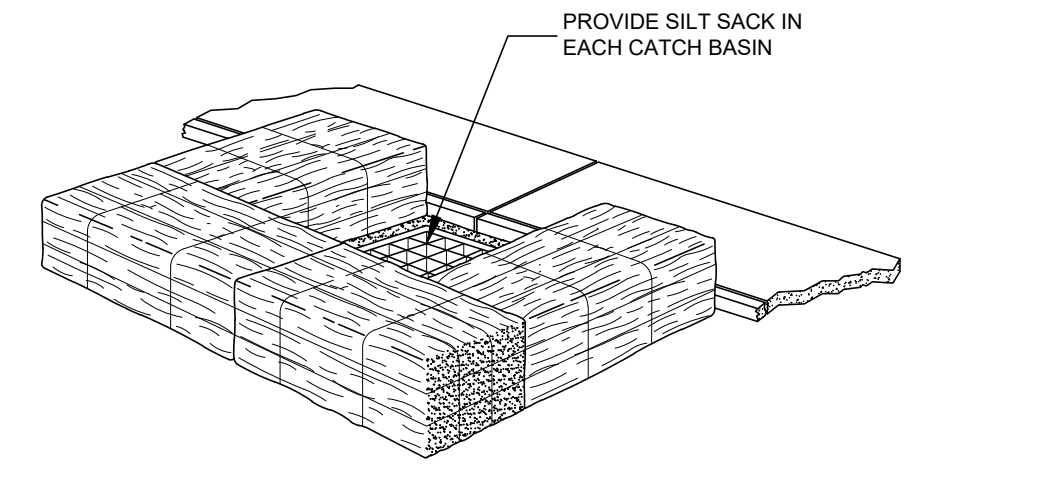
**STABILIZED CONSTRUCTION ENTRANCE (TRACKING PAD) N.T.S.**



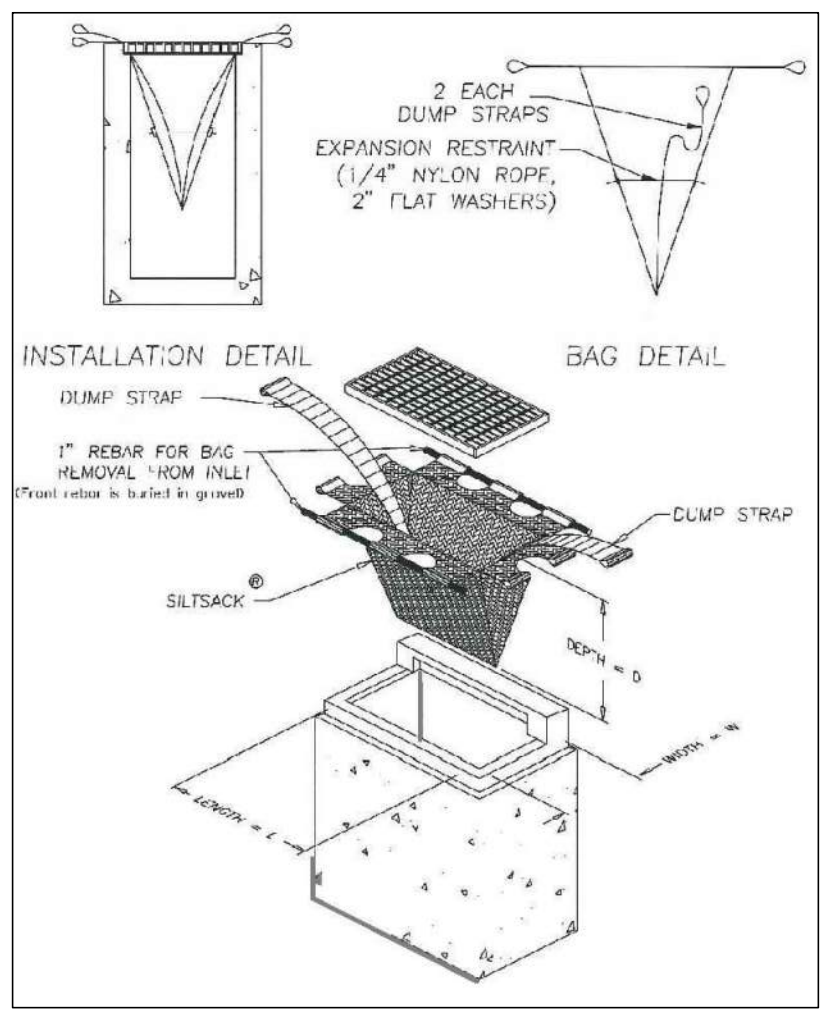
**TREE PROTECTION (SHOWING ACCEPTABLE TYPES OF FENCING) N.T.S.**



**SEDIMENT FILTER FOR CATCH BASINS AT CURB N.T.S.**



**INLET SEDIMENT CONTROL DEVICE (SILT SACK) N.T.S.**



**CONSTRUCTION PHASING:**

The following description of construction phasing is intended to demonstrate a feasible sequence of construction. The actual sequence may vary due to field conditions if approved by the inspecting engineer.

**PHASE I: PREPARATION**

- A. AT LEAST ONE WEEK PRIOR TO THE START OF CONSTRUCTION, THE INSPECTING ENGINEER SHALL MEET WITH THE CONTRACTOR AND OWNER TO REVIEW THE SEDIMENT AND EROSION CONTROL (S&E PLAN), DISCUSS ANY MODIFICATIONS TO CONSTRUCTION SEQUENCE OR S&E PLAN AND TO REVIEW CONTRACTORS LOGISTICS PLAN.
- B. INSTALL SILT FENCE AND TREE PROTECTION FENCING.
- C. CUT TREES TO BE REMOVED AND GRUB AREAS TO BE CLEARED.

**PHASE II: CONSTRUCTION**

- A. ROUGH GRADE EASTERN LANE. INSTALL STORMWATER INFILTRATION SYSTEMS AND ASSOCIATED PIPING AND STRUCTURES WITHIN EASTERN LANE.
- B. INSTALL SEDIMENT AND EROSION CONTROLS ASSOCIATED WITH DRAINAGE STRUCTURES.
- C. ADD ALT: INSTALL CABLE SERVICE.
- D. EXCAVATE AND BEGIN TO INSTALL RETAINING WALLS.
- E. INSTALL EASTERN LANE ASPHALT, CURBING, AND FINAL GRADING.
- F. SEED & MULCH DISTURBED AREAS AND INSTALL LANDSCAPING AS SOON AS POSSIBLE.
- G. MAINTAIN ALL SEDIMENT AND EROSION CONTROLS IN AN EFFECTIVE CONDITION DURING THE CONSTRUCTION PERIOD.
- H. REMOVE EXISTING ASPHALT AND CURBING FROM WESTERN LANE, ROUGH GRADE.
- I. INSTALL REMAINING STORM STRUCTURES AND ASSOCIATED SEDIMENT AND EROSION CONTROLS WITHIN WESTERN LANE.
- J. INSTALL WESTERN LANE ASPHALT, CURBING, AND FINAL GRADING.
- K. SEED & MULCH DISTURBED AREAS AND INSTALL LANDSCAPING AS SOON AS POSSIBLE.

**PHASE III: CLEAN UP AFTER ALL AREAS ARE STABILIZED**

- A. CLEAN AFFECTED PORTION OF ON & OFF SITE ROADS AND DRIVEWAYS.
- B. REMOVE ACCUMULATED SILT AND DEBRIS FROM CATCH BASIN SUMP'S & PIPES OF AFFECTED ON & OFF SITE STORM DRAINS.
- C. REMOVE ACCUMULATED SEDIMENT FROM AFFECTED AREAS AND DISPOSE OF LEGALLY.
- D. REMOVE TEMPORARY SEDIMENT AND EROSION CONTROL AND TREE PROTECTION.
- E. MAKE ANY NECESSARY REPAIRS TO PERMANENT SEDIMENT AND EROSION CONTROLS SUCH AS PLANTINGS.

**SEDIMENT AND EROSION CONTROL NOTES:**

1. All sediment and erosion controls shall be done in conformance with the "Connecticut Guidelines for Soil Erosion and Sediment Control" dated May 2002 prepared by The Connecticut Council on Soil and Water Conservation.
2. The contractor is assigned the responsibility for implementing this sediment and erosion control plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan notifying the Zoning Department of any transfer of this responsibility, and Inland Wetlands and Water Courses Agency that construction is to begin three (3) days prior to commencing work.
3. Temporary sediment control measures and tree protection must be installed in accordance with drawings and manufacturer recommendations prior to work in any upland areas.
4. No construction or construction equipment or storage of materials will be allowed on the downhill side of the silt fence or within fenced off areas, except during construction of the proposed facilities shown beyond the fences.
5. Where existing trees are to be saved, trees shall be protected with trunk armoring where shown. Tree limbs shall be trimmed as needed to protect the trees from damage by construction operations. Such trimming shall be minimized. Armoring and any limb trimming should be done before construction begins. Tree protection should be maintained during construction. Equipment Trafficking and materials storage over the tree roots shall be avoided.
6. Anti-tracking pads shall be installed at start of construction and maintained in an effective condition throughout the duration of construction. Pads consist of 2" - 4" crushed stone, 6" minimum thickness and extend the width of the construction access. The length of the access shall be sufficient to prevent dirt from being tracked onto off site roads (minimum length of 25').
7. The location of each stockpile will vary throughout the construction period. Excavated silt and earth stockpiles shall be stored on site. Silt fence shall be placed at the base of the stockpile to prevent sediment from leaving the site and to protect storm drains, wetlands and watercourses.
8. Silt fence shall be Mfrati envirofence, Amoco siltstop or equivalent approved by Site Engineer. Filter fabric used shall be Mfrati 100 or equivalent. Install silt fence according to manufacturer's instruction, particularly, bury lower edge of fabric into ground.
9. Land disturbance shall be kept to a minimum. All disturbed area shall be planted in where permanent plantings are called for as soon as practicable. Seed and mulch disturbed areas with grass seed where permanent plantings are not called for, as soon as practicable. Prepare seeded (4" thick minimum) with topsoil. Seed, rake, roll, water and mulch areas according to mixes below. Water as often as necessary (up to 3 times per day) to establish cover. Mulch seeded areas at 1 to 2 tons/acre with salt hay. Maintain mulch and watering until grass is 3" high with 85% cover. Re-seed or overseed if necessary.

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2	01/18/2024	REVISED PER EPC COMMENTS
1	12/26/2023	ISSUED FOR EPC & P&Z

ANY TREE REMOVALS REQUIRE TOWN OF DARIEN DPW TO POST TREE FOR 10 DAYS PRIOR TO REMOVAL

MATERIAL STAGING ON ISLAND. SENSITIVE MATERIALS STAGING AND EARTH STOCKPIILING SHALL OCCUR ABOVE ELEVATION 14 AND OUTSIDE OF REGULATED AREAS, FLOODED, SPACES, AND OTHER AREAS OF COASTAL RESOURCES TO THE GREATEST EXTENT POSSIBLE.

**SEDIMENT & EROSION CONTROL PLAN**  
 DEPICTING  
**GREAT ISLAND ENTRY DRIVE**  
 DARIEN, CT  
 PREPARED FOR  
**TOWN OF DARIEN**

SCALE: 0 40 80  
 1"=40'

DRAWN BY: JTF CHECKED BY: CJF

**REDNISS & MEAD**  
 LAND SURVEYING  
 CIVIL ENGINEERING  
 PLANNING & ZONING CONSULTING  
 PERMITTING

CRAG J. FLAHERTY, P.E. 21V49  
 July 2, 2024  
 DATE

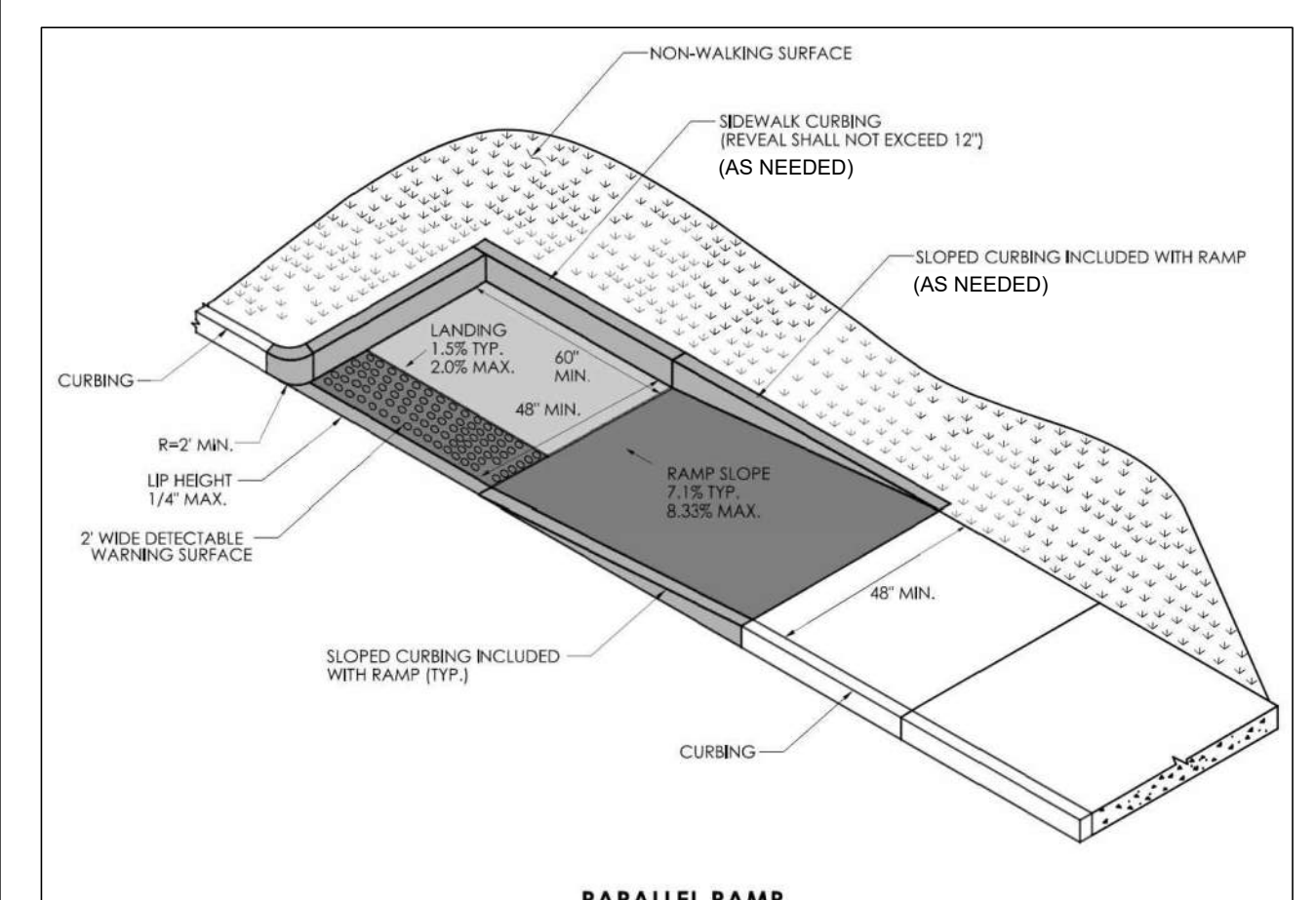
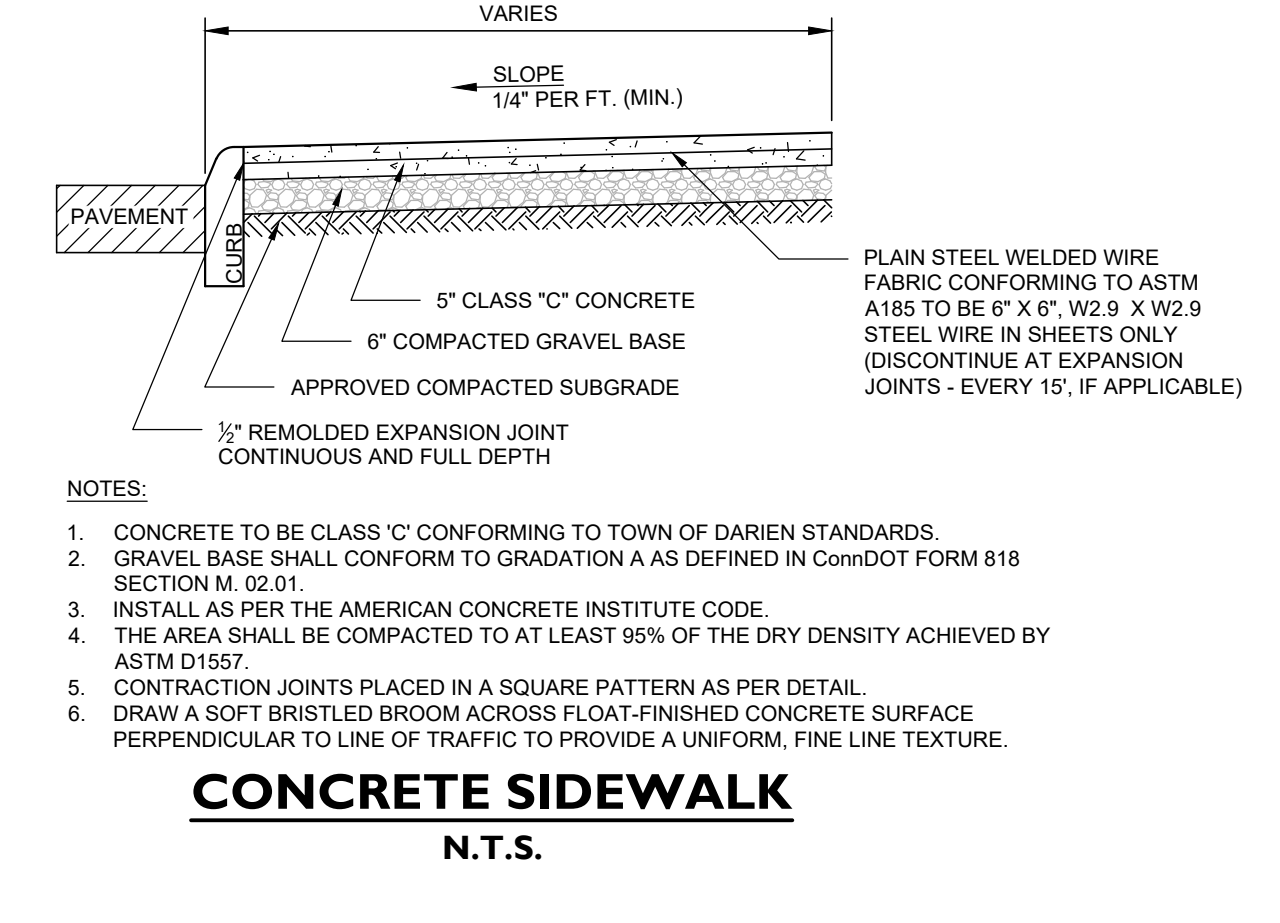
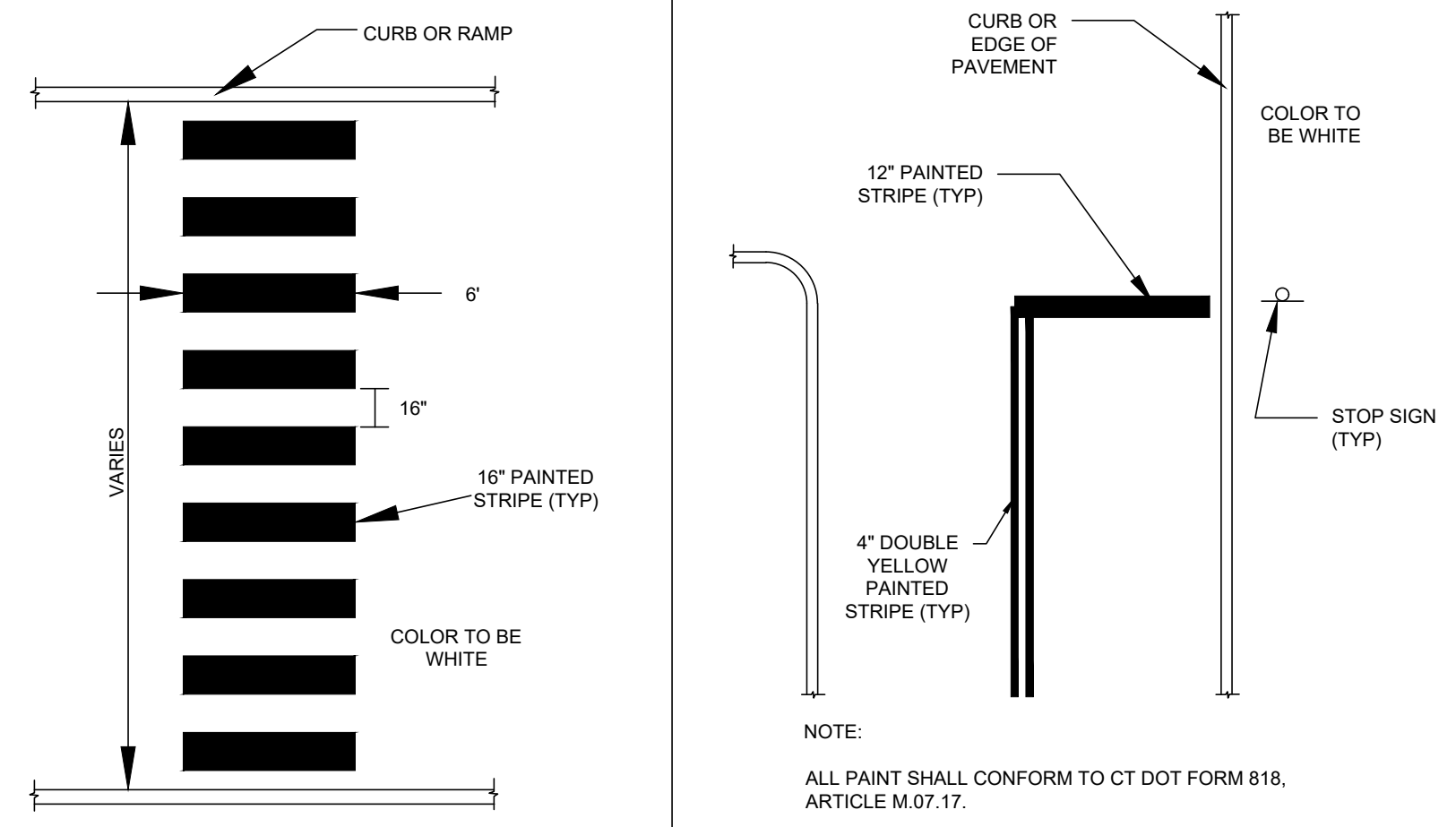
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SHEET No: **SE-4**

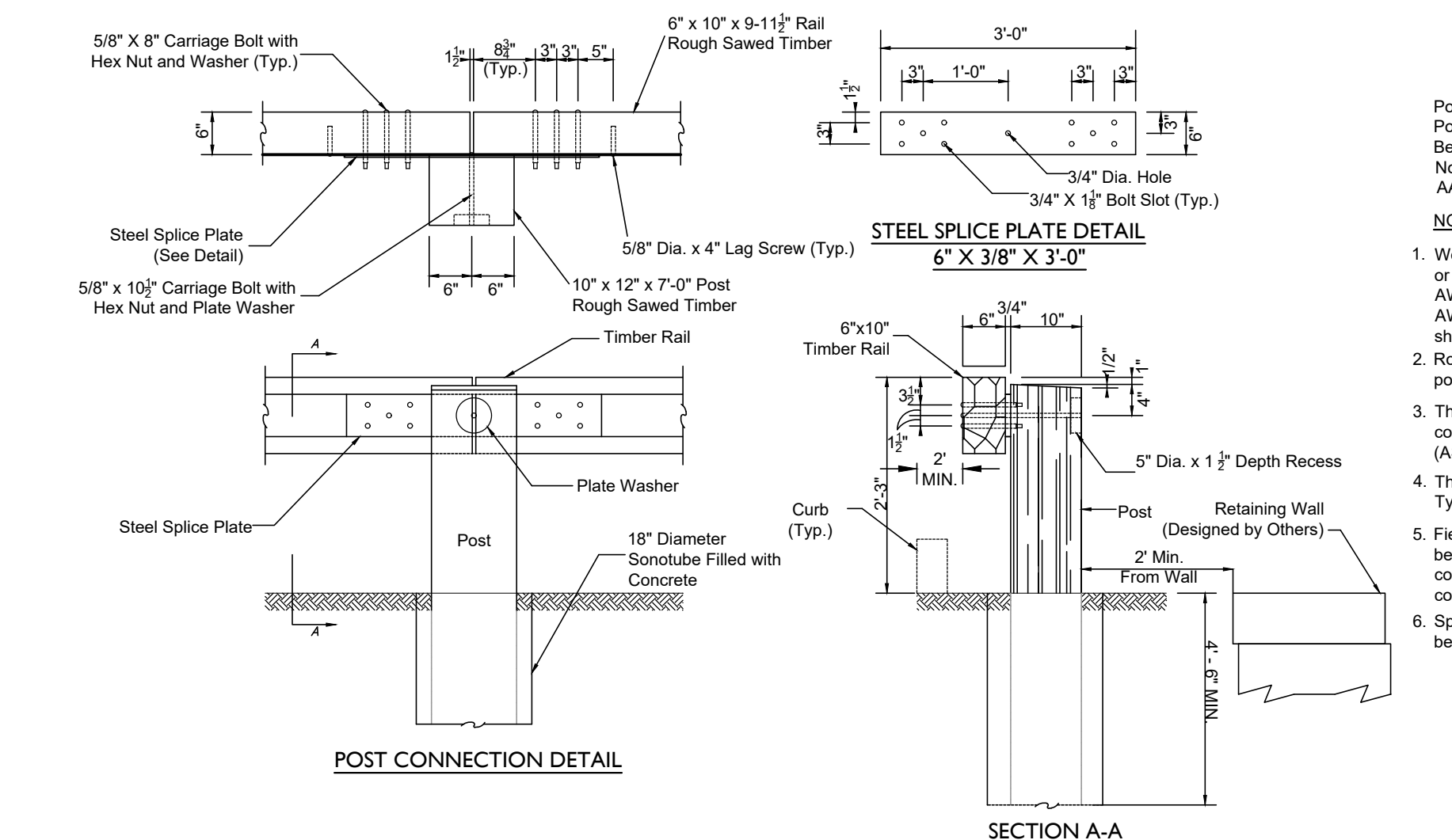
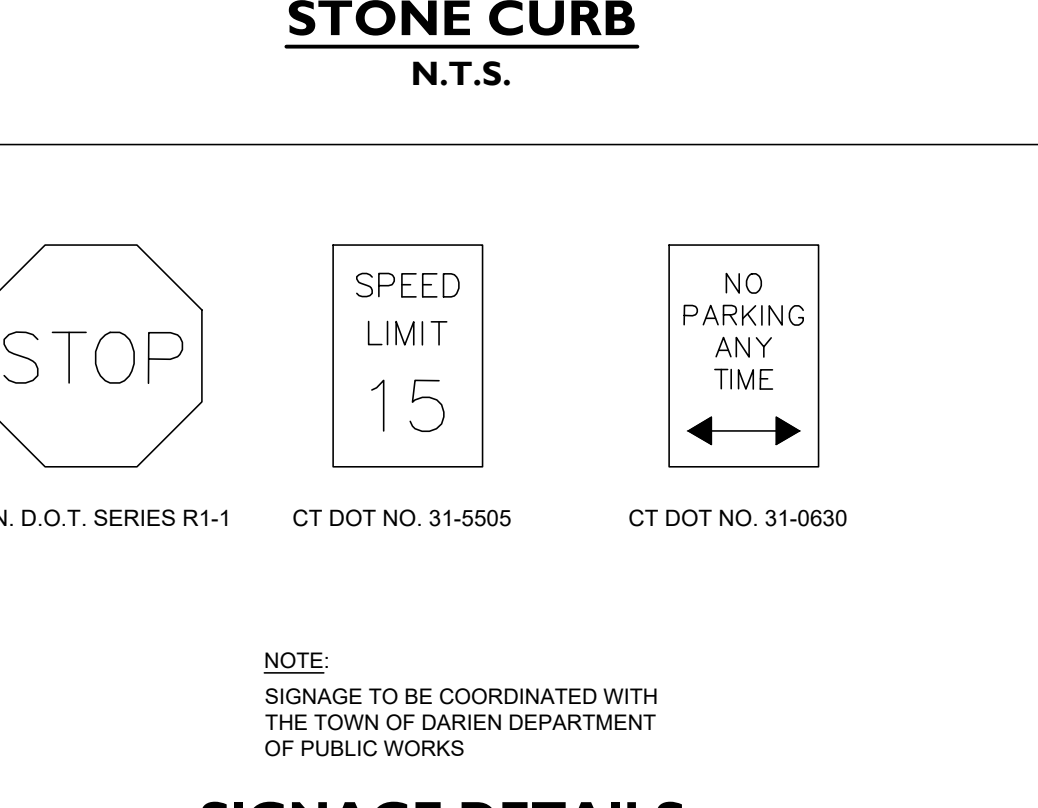
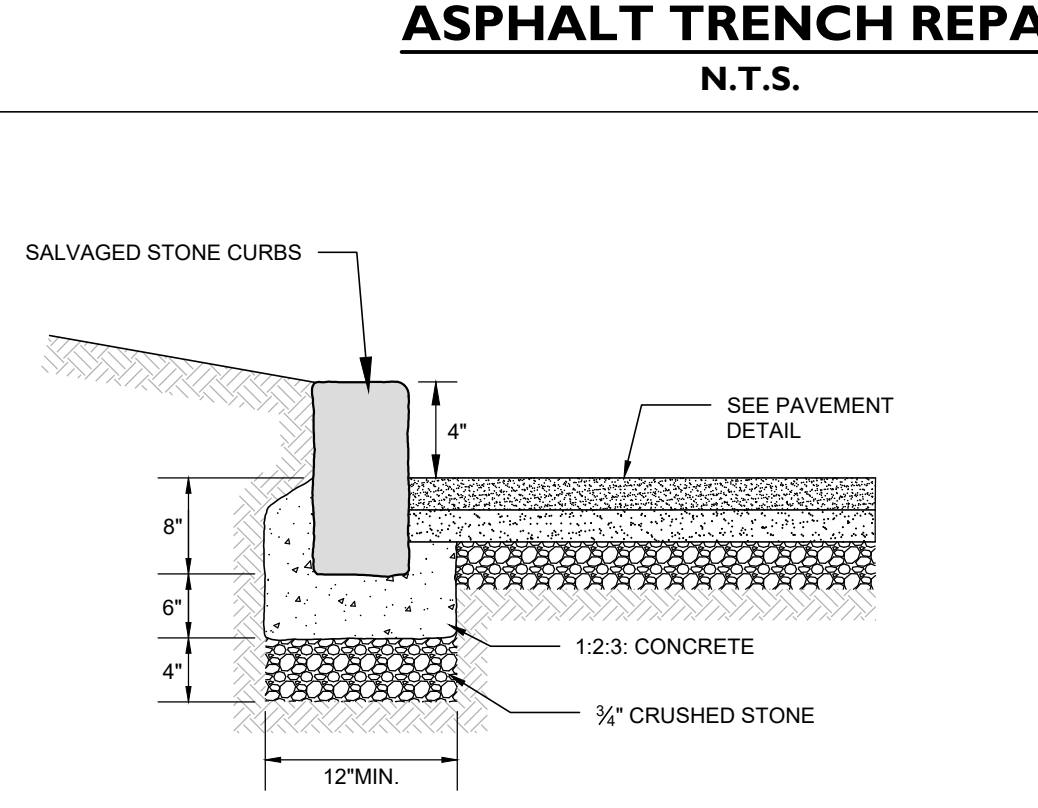
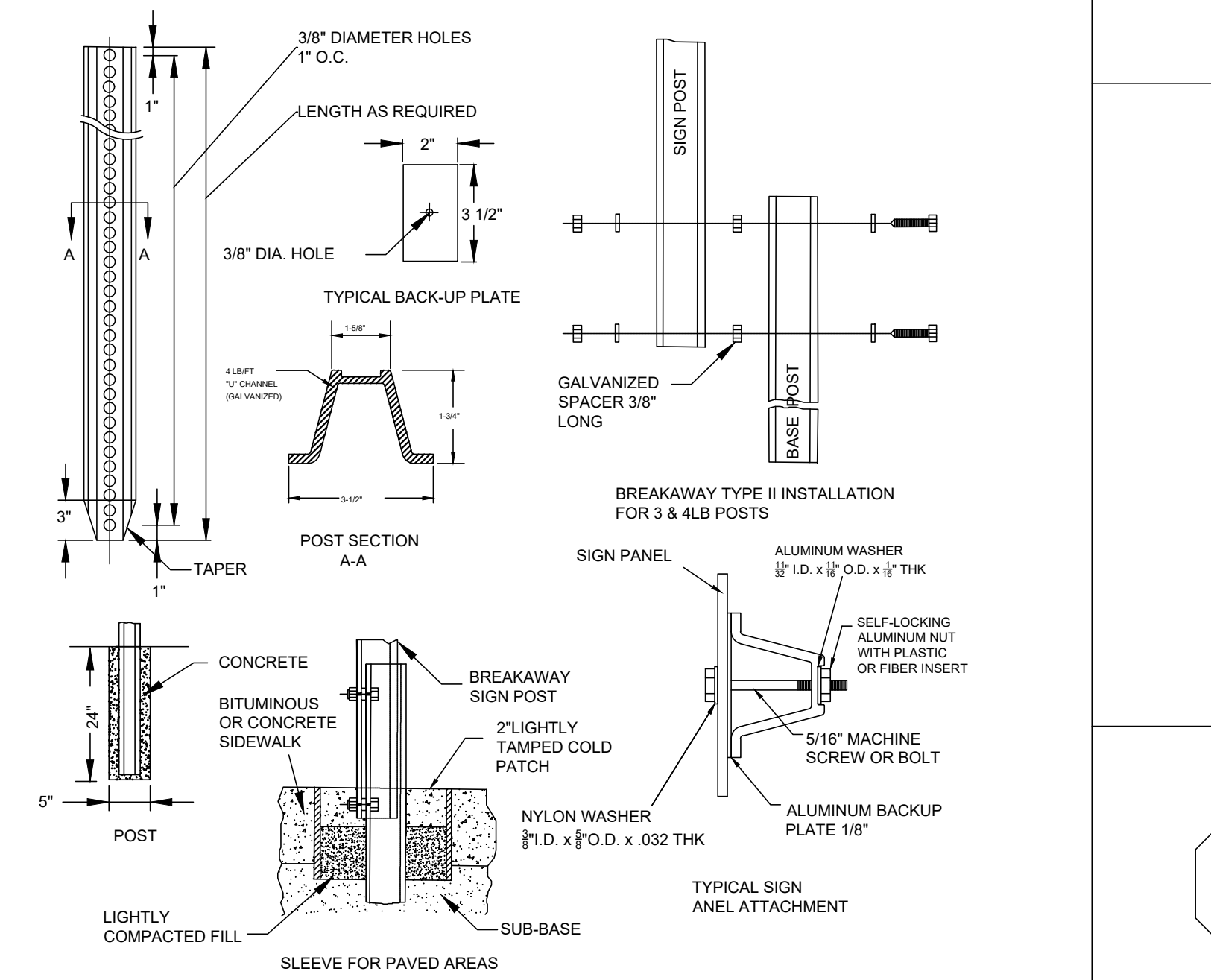
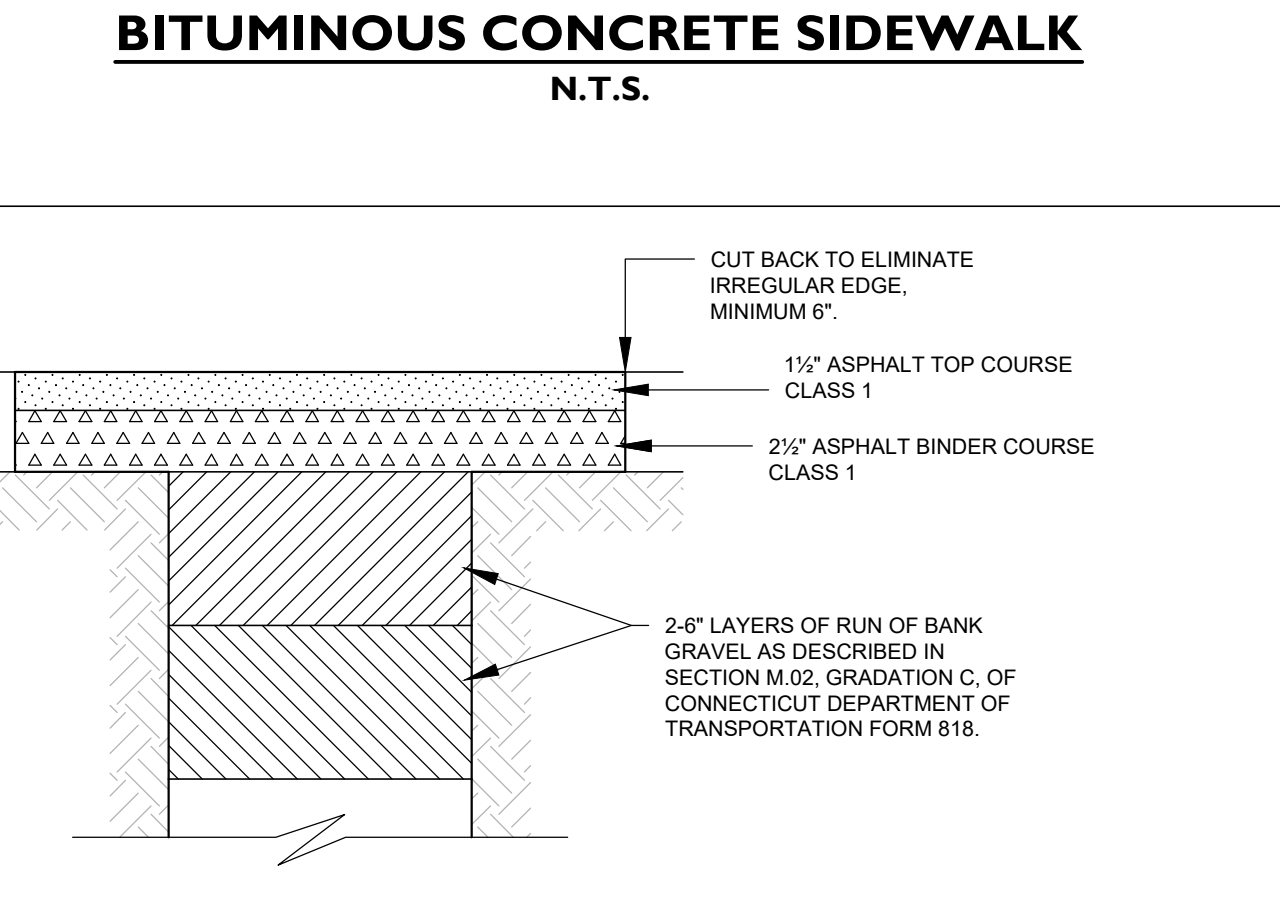
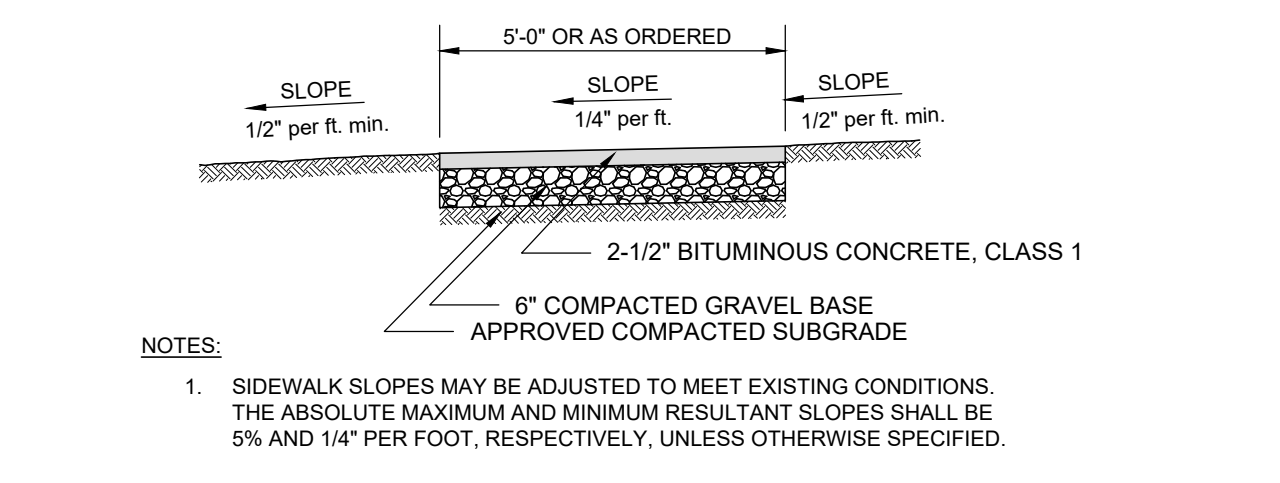
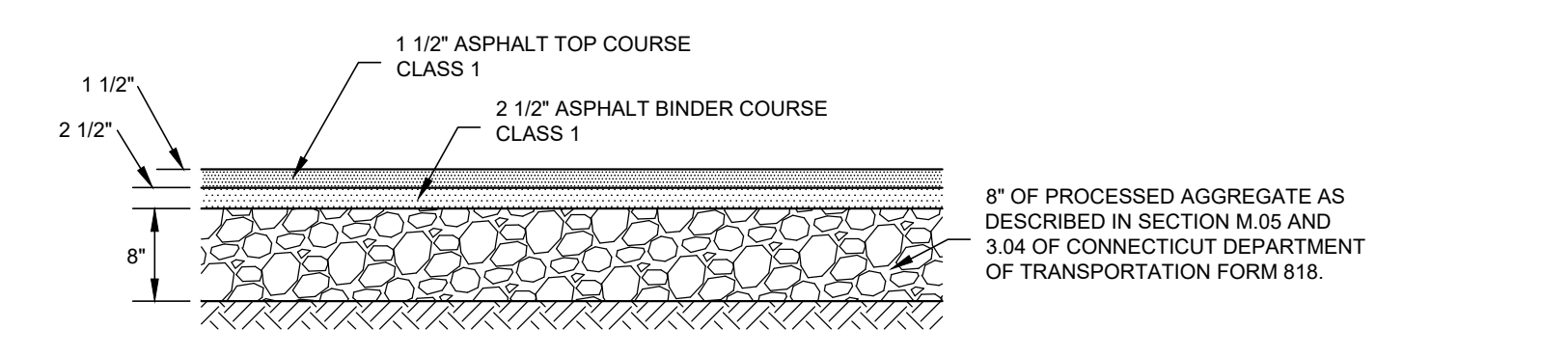
22 First Street | Stamford, CT 06905  
 Tel: 203.327.0500 | Fax: 203.357.1118  
 www.rednissandmead.com

Comm. No.: 8004





REFER TO DRAWINGS PREPARED BY DESTEFANO & CHAMBERLAIN, INC. FOR FINAL WALL DESIGN.



Post Type: 10" x 12" wood  
Post Spacing: 10' O.C.  
Beam Type: 6" x 10" wood  
Nominal Barrier Height: AASHTO Designation: None  
NOTES:  
1. Wood shall be pressure treated and be No. 1KD or better Southern Yellow Pine or Douglas Fir-larch. Pressure treatment shall be CCA in accordance with AWPA p-5, 0.40 lbs. per cubic foot. Pentachlorophenol in accordance with AWPA P-9, Type B(L.P.G.), 0.50 lbs. per cubic foot. Pressure treated wood shall be stained or painted in conformance with the plans or special provisions.  
2. Rough sawn timber tolerance shall apply only to the timber cross section and post length. Rail lengths shall be as shown on the plans.  
3. The structural steel for the steel splice plate shall be weathering steel conforming to AASHTO M 161 (ASTM A 242) or AASHTO M 222 (ASTM A 588).  
4. The fastener hardware shall be weathering steel conforming to AASHTO M 164, Type 3 (ASTM A 325, Type 3).  
5. Field cutting of posts and rails where required to produce a close fit at joints will be permitted. Field cuts shall be retreated with 2 heavy coats of chromated copper arsenate applied with a brush or a sprayer. Field cuts should not be in contact with the ground.  
6. Specified hole diameters and slot dimensions in the structural steel shall not be modified in the field.

4	07/02/2024	REVISED RETAINING WALLS
3	02/27/2024	ISSUED FOR CONSTRUCTION
2	01/30/2024	PZC RESUBMISSION
1	12/26/2023	ISSUED FOR EPC & P&Z
No.	Date	Revision

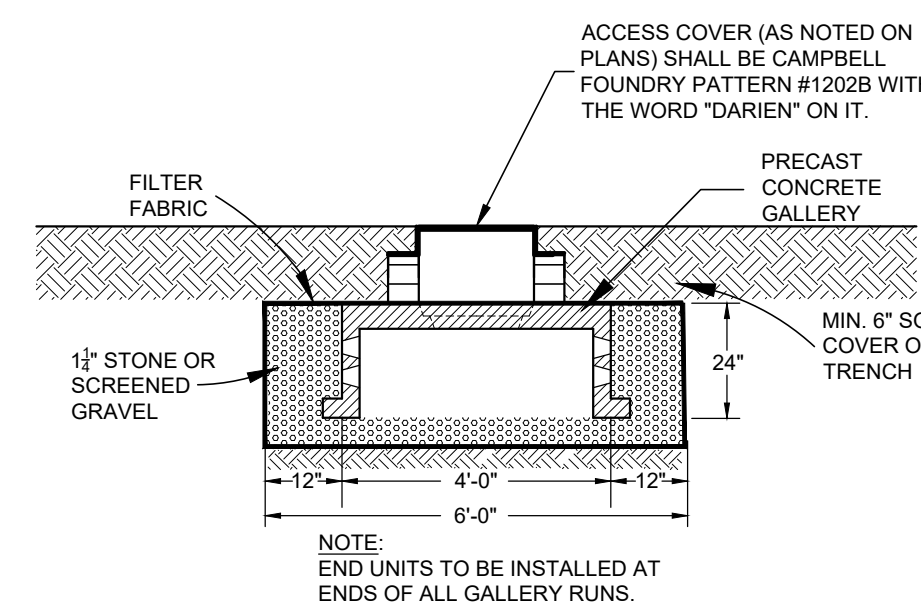
**DETAILS (1 OF 3)**  
DEPICTING  
**GREAT ISLAND ENTRY DRIVE**  
DARIEN, CT  
PREPARED FOR  
**TOWN OF DARIEN**

SCALE: N.T.S.  
DRAWN BY: JTE CHECKED BY: CJF  
CRAIG R. FLAHERTY CT P.E. #1149  
July 2, 2024  
DATE  
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SHEET No: SE-5  
Comm. No.: 8004

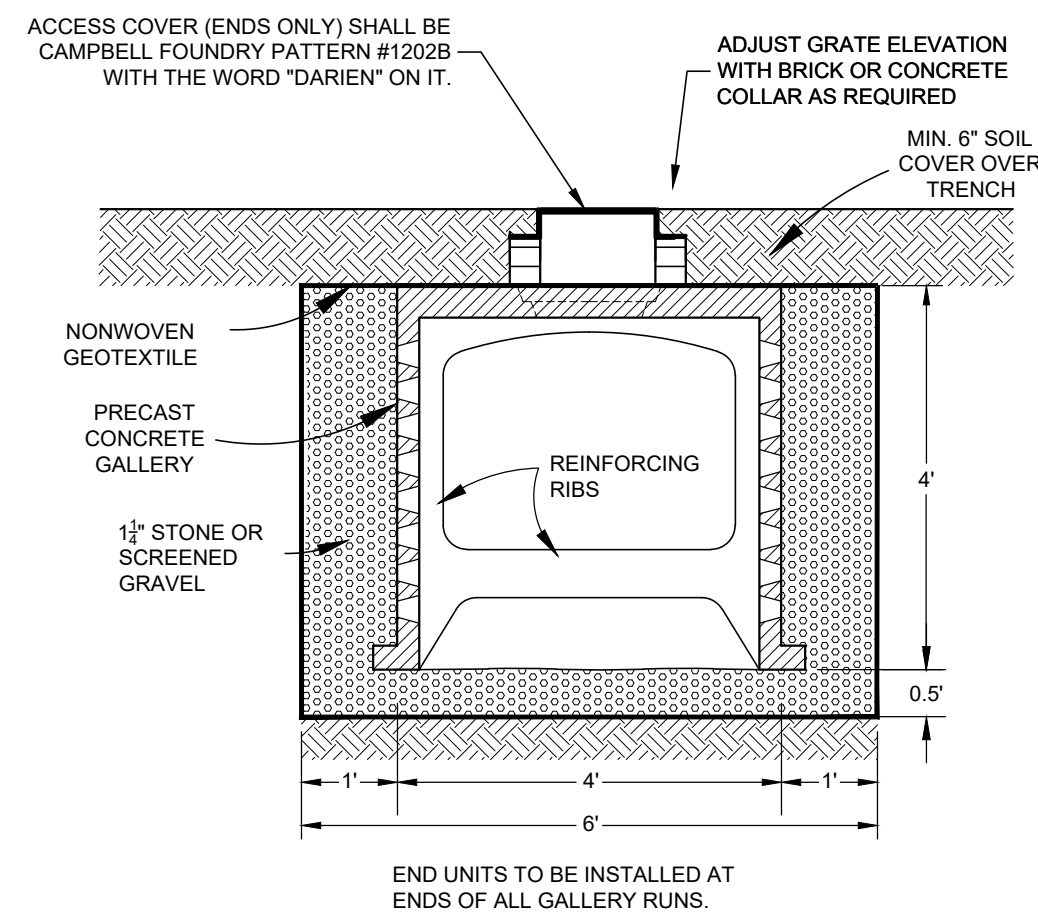
REDNISS & MEAD  
LAND SURVEYING  
CIVIL ENGINEERING  
PLANNING & ZONING CONSULTING  
PERMITTING  
22 First Street | Stamford, CT 06905  
Tel 203.327.0500 | Fax 203.357.1118  
www.rednissandmead.com

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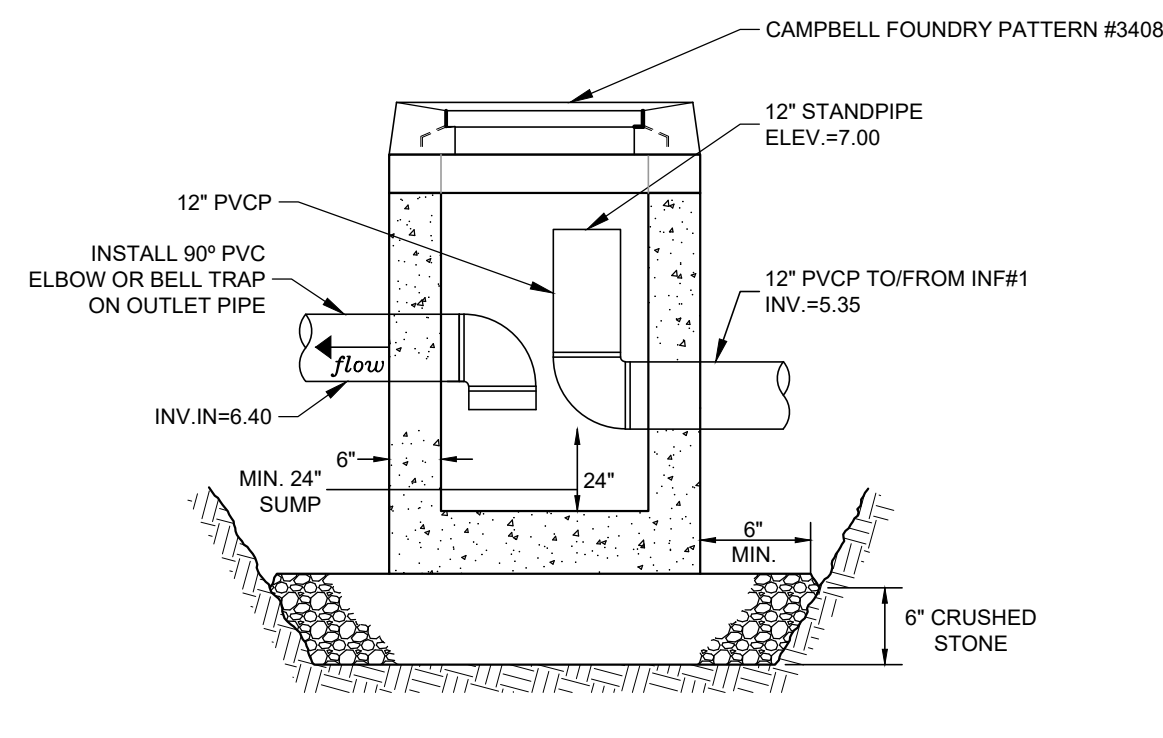
**24" GALLERY DETAIL**  
N.T.S.



**48" GALLERY DETAIL**  
N.T.S.

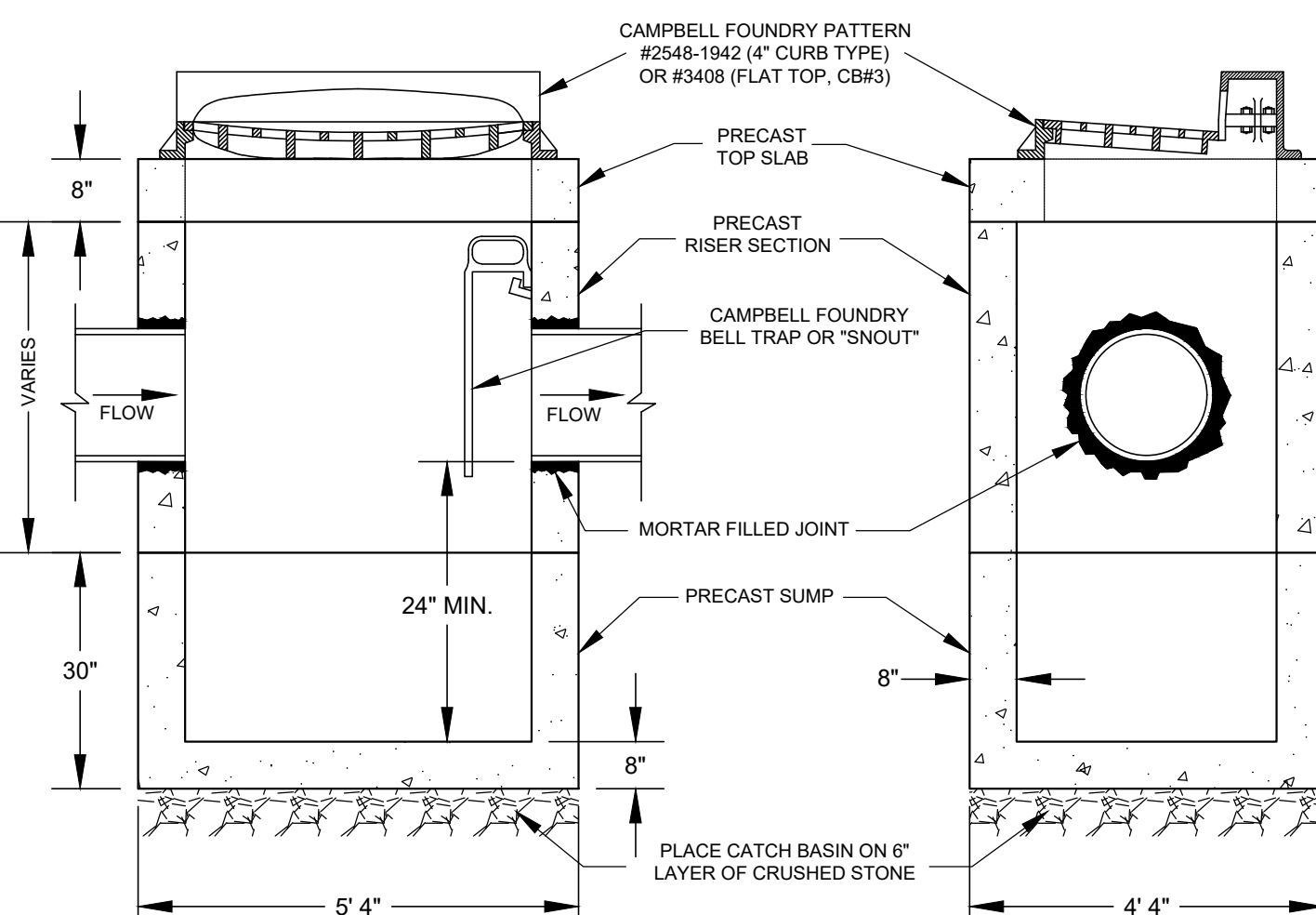
**INFILTRATION SYSTEM NOTES**

1. ALL GALLERIES TO HANDLE H-20 LOADINGS AND SHALL COMPLY WITH THE DETAIL. INTERIOR SECTIONS TO HAVE NO END WALLS. END SECTIONS TO HAVE ONE END WALL AND ACCESS COVER.
2. ALL GALLERY SECTIONS TO HAVE HOLES BROKEN TO ALLOW FLOW PRIOR TO PLACEMENT.
3. THERE SHALL BE A MINIMUM 6" LAYER OF No. 4 CRUSHED STONE BELOW ALL GALLERIES.
4. THERE SHALL BE A MINIMUM OF 12" OF 1/2" CRUSHED STONE ON THE SIDES & ENDS OF THE OUTER GALLERIES.
5. GEOTEXTILE TO BE MIRAFI HP 360" OR APPROVED EQUIVALENT. ELIMINATE WRINKLES IN THE GEOTEXTILE AND ENSURE NOT TO DAMAGE IT DURING CONSTRUCTION.
6. THE INFILTRATION SYSTEM IS TO REMAIN DISCONNECTED UNTIL UP GRADIENT AREAS ARE FULLY STABILIZED.
7. THE INFILTRATION SYSTEMS SHALL BE MINIMUM OF 12" ABOVE HIGH GROUNDWATER AND SHALL BE MINIMUM OF 10' FROM ANY FOOTING DRAIN.
8. A 6" BY 5" BY 4" CONCRETE SLAB (1-2-3 CONCRETE) SHALL BE INSTALLED AT ANY PIPE ENTRANCE TO THE GALLERIES TO PREVENT EROSION.
9. EACH GALLERY RUN TO HAVE ACCESS MHS AS SHOWN ON THE PLAN. CASTING AND COVER SHALL BE EQUAL TO PATTERN NO. 1202B (WITH THE WORD "DARIEN" ON IT) AS MANUFACTURED BY CAMPBELL FOUNDRY COMPANY, HARRISON, NJ. RAISE CASTING TO GRADE USING SOLID CONCRETE BLOCK AND MORTAR.
10. REMOVE ANY TOPSOIL PRIOR TO INSTALLATION OF GALLERY.
11. CONTACT THE DESIGN ENGINEER THREE DAYS PRIOR TO EXCAVATION FOR THE GALLERIES. DURING THE EXCAVATION, THE DESIGN ENGINEER MAY REVISE THE ELEVATIONS OF THE GALLERIES IF FIELD CONDITIONS DICTATE.
12. ALL CRUSHED STONE SHALL BE GRADATION NO. 4 AS PER CT D.O.T. FORM 818, ARTICLE M 01.01. STONE SHALL CONSIST OF SOUND, TOUGH, DURABLE PARTICLES FREE FROM SOFT, THIN, ELONGATED, LAMINATED, FRIABLE, MICACEOUS, OR DISINTEGRATED PIECES, MUD, DIRT, OR OTHER DELETERIOUS MATERIAL.
13. MAINTENANCE OF ALL ONSITE DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE TOWN OF DARIEN. UPON COMPLETION OF PROJECT, CONTRACTOR TO CLEAN ALL DRAINAGE FACILITIES PRIOR TO FINAL PAYMENT AND RETAINAGE RELEASE.



- NOTES:**
1. ALL JUNCTION BOX COMPONENTS TO BE PRE-CAST REINFORCED CONCRETE, ABLE TO WITHSTAND THE APPLIED EARTH LOADS WITH AN H-20 TRUCK LOAD.
  2. ALL JOINTS TO BE MORTARED.
  3. JUNCTION BOX SHALL CONFORM TO ASTM C478.
  4. ALL CRUSHED STONE SHALL BE GRADATION NO. 4 AS PER CT D.O.T. FORM 818, ARTICLE M 01.01. STONE SHALL CONSIST OF SOUND, TOUGH, DURABLE PARTICLES FREE FROM SOFT, THIN, ELONGATED, LAMINATED, FRIABLE, MICACEOUS OR DISINTEGRATED PIECES, MUD, DIRT OR OTHER DELETERIOUS MATERIAL.

**FLAT TOP CATCH BASIN W/ STANDPIPE (CB#3)**  
N.T.S.



- NOTES:**
1. ALL CATCH BASIN COMPONENTS TO BE PRE-CAST REINFORCED CONCRETE, ABLE TO WITHSTAND THE APPLIED EARTH LOADS WITH AN H-20 TRUCK LOAD.
  2. ALL JOINTS TO BE MORTARED.
  3. CATCH BASIN SHALL CONFORM TO ASTM C478.
  4. ALL CRUSHED STONE SHALL BE GRADATION NO. 4 AS PER CT D.O.T. FORM 818, ARTICLE M 01.02. STONE SHALL CONSIST OF SOUND, TOUGH, DURABLE PARTICLES FREE FROM SOFT, THIN, ELONGATED, LAMINATED, FRIABLE, MICACEOUS OR DISINTEGRATED PIECES, MUD, DIRT OR OTHER DELETERIOUS MATERIAL.
  5. IF CRUSHED STONE IS TO BE PLACED ON FILL, ALL FILL BELOW THE CB SHALL BE COMPACTED TO 95% OF THE MAXIMUM PRT DENSITY AS PER ASTM D.1557.

**CATCH BASIN DETAIL**  
N.T.S.

**TEST PIT RESULTS**

Subsurface Soil Investigation		Soil Profile		Date:	11/09/2023
Test Pit #: 1	Inspector: JTF	Depth: 69"	Soil Description	Sanitarian: N/A	Mottling at: N/A
Hole: PH#1	Ledge at: 69"	0'-18"	Topsoil/Fill	Roots at:	
Depth: 26"		18'-44"	Orange-Brown Silty Loam		
9:28 AM		44'-69"	Grey Fine Sandy Loam. Ledge @ 69"		

Subsurface Soil Investigation		Soil Profile		Date:	11/09/2023
Test Pit #: 2	Inspector: JTF	Depth: 86"	Soil Description	Sanitarian: N/A	Mottling at: N/A
Hole: PH#1	Ledge at: N/A	0'-18"	Topsoil/Fill	Roots at:	
Depth: 26"		18'-52"	Orange-Brown Silty Loam		
9:30 AM		52'-86"	Grey Fine Sandy Loam		

Subsurface Soil Investigation		Soil Profile		Date:	11/09/2023
Test Pit #: 3	Inspector: JTF	Depth: 84"	Soil Description	Sanitarian: N/A	Mottling at: N/A
Hole: PH#2	Ledge at: N/A	0'-4"	Topsoil	Roots at:	
Depth: 28"		4'-43"	Brown Silty Loam		
9:30 AM		43'-74"	Orange-Brown Silty Loam		

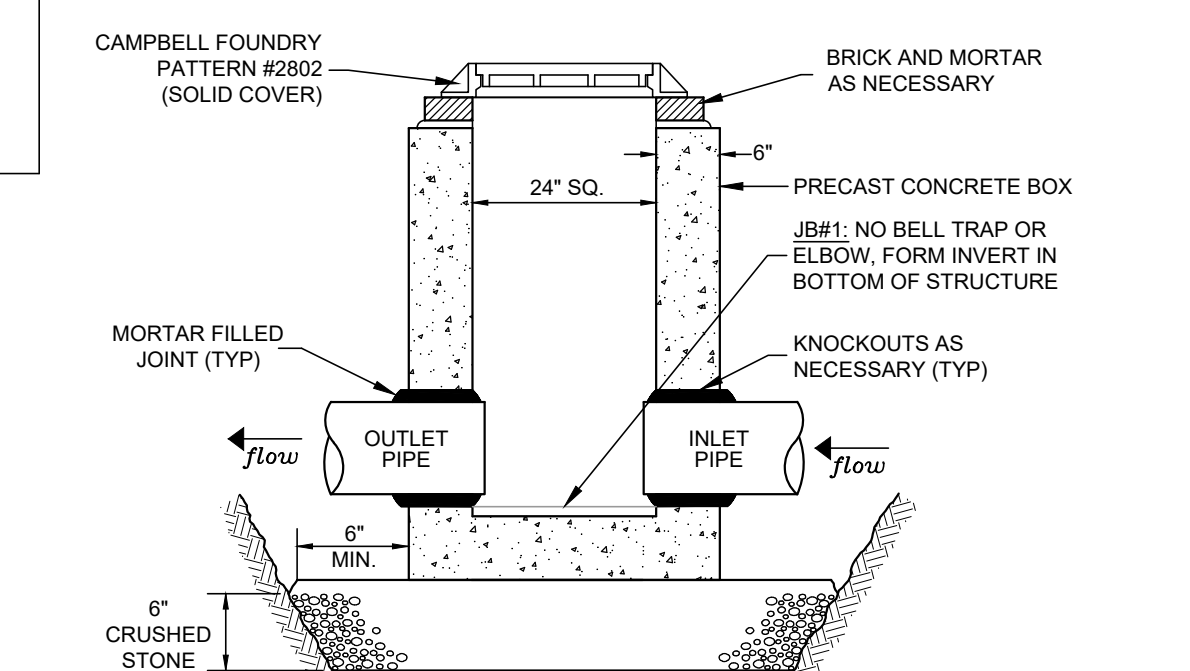
Subsurface Soil Investigation		Soil Profile		Date:	11/09/2023
Test Pit #: 4	Inspector: JTF	Depth: 84"	Soil Description	Sanitarian: N/A	Mottling at: N/A
Hole: PH#2	Ledge at: N/A	0'-12"	Topsoil	Roots at:	
Depth: 28"		12'-84"	Orange-Brown Sandy Loam		
9:30 AM					

**PERCOLATION TEST RESULTS**

Recorded By: JTF		Date: 11/09/23		Recorded By: JTF		Date: 11/09/23	
Hole: PH#1	Project: 8004	Hole: PH#3	Project: 8004	Hole: PH#3	Project: 8004	Hole: PH#3	Project: 8004
Depth: 26"	Diameter: 8"	Depth: 19"	Diameter: 8"	Depth: 19"	Diameter: 8"	Depth: 19"	Diameter: 8"
9:28 AM	2:02 hrs	9:34 AM	2:00 hrs	9:34 AM	2:00 hrs	9:34 AM	2:00 hrs

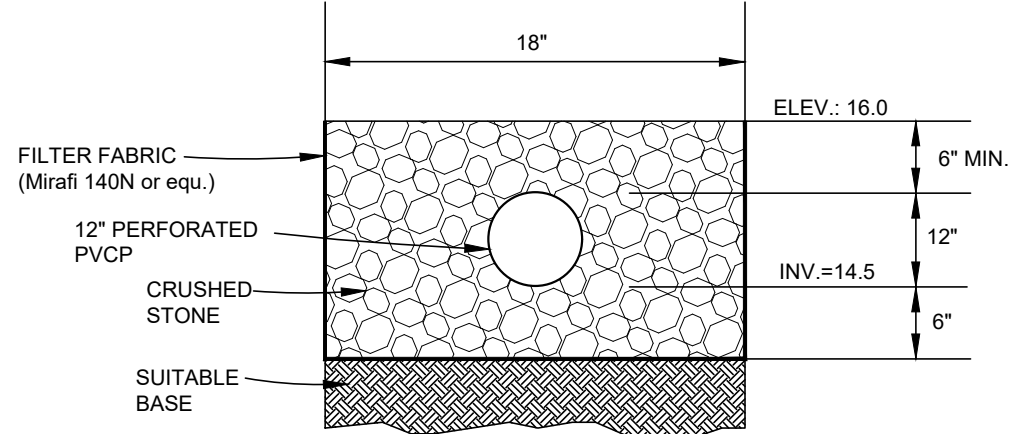
Percolation Rate = 1" drop in 26.67 minutes				Percolation Rate = 1" drop in 26.67 minutes			
Time	Reading In Inches	Increment Drop In Inches	Total	Time	Reading In Inches	Increment Drop In Inches	Total
11:30 AM	14	12/16	-	11:34 AM	7	13/16	-
11:40 AM	16	11/16	1	11:44 AM	8	14/16	1
11:50 AM	17	7/16	12/16	11:54 AM	9	7/16	9/16
12:00 PM	17	15/16	8/16	12:04 PM	9	14/16	7/16
12:10 PM	18	7/16	8/16	12:14 PM	10	4/16	6/16
12:20 PM	18	13/16	6/16	12:24 PM	10	10/16	6/16
12:30 PM	19	3/16	6/16	12:34 PM	11		6/16

Percolation Rate = 1" drop in 12.31 minutes				Percolation Rate = 1" drop in 16.00 minutes			
Time	Reading In Inches	Increment Drop In Inches	Total	Time	Reading In Inches	Increment Drop In Inches	Total
11:30 AM	14	10/16	-	11:35 AM	13	-	-
11:40 AM	17	1/16	2	11:45 AM	14	12/16	1
11:50 AM	18	9/16	1	11:55 AM	15	12/16	1
12:00 PM	19	14/16	1	12:05 PM	16	8/16	12/16
12:10 PM	20	11/16	13/16	12:15 PM	17	2/16	10/16
12:20 PM	21	8/16	13/16	12:25 PM	17	12/16	10/16
12:30 PM	22	5/16	13/16	12:35 PM	18	6/16	10/16



- NOTES:**
1. ALL COMPONENTS TO BE PRE-CAST REINFORCED CONCRETE, ABLE TO WITHSTAND THE APPLIED EARTH LOADS OF AN H-20 TRUCK LOAD.
  2. ALL JOINTS TO BE MORTARED.
  3. JUNCTION BOXES SHALL CONFORM TO ASTM C478.
  4. CRUSHED STONE BENEATH JUNCTION BOX SHALL BE GRADATION NO. 4 AS PER CT D.O.T. FORM 818, ARTICLE M 01.01. STONE SHALL CONSIST OF SOUND, TOUGH, DURABLE PARTICLES FREE FROM SOFT, THIN, ELONGATED, LAMINATED, FRIABLE, MICACEOUS OR DISINTEGRATED PIECES, MUD, DIRT OR OTHER DELETERIOUS MATERIAL.

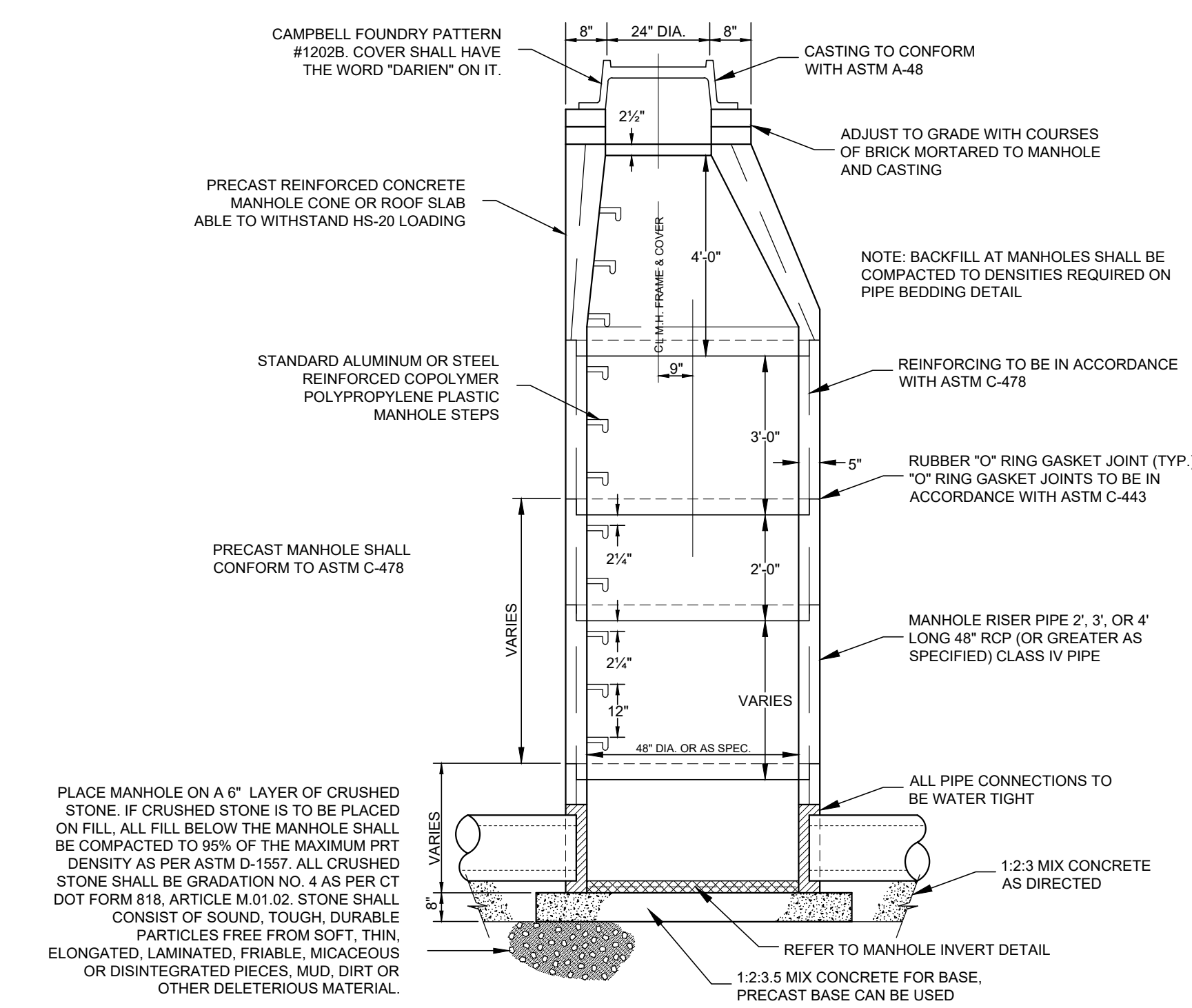
**JUNCTION BOX**  
N.T.S.



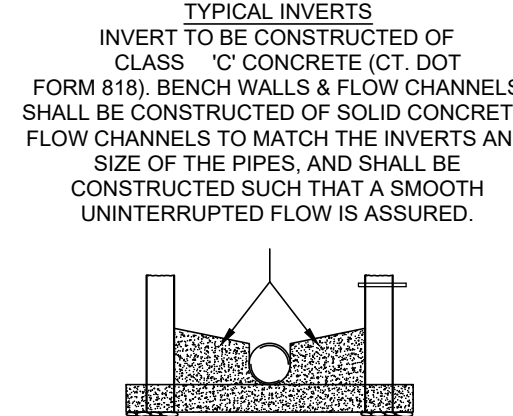
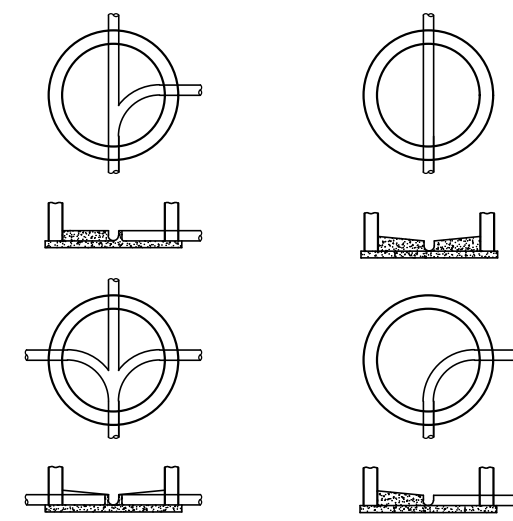
- NOTES:**
1. CRUSHED STONE SHALL BE GRADATION NO. 4 PER CONN. DOT. FORM 818, SECTION M01.01
  2. 12" PVC PIPE SHALL HAVE PERFORATIONS ON THE SIDES & BOTTOM OF THE PIPE.

**CRUSHED STONE LEVEL SPREADER**  
N.T.S.

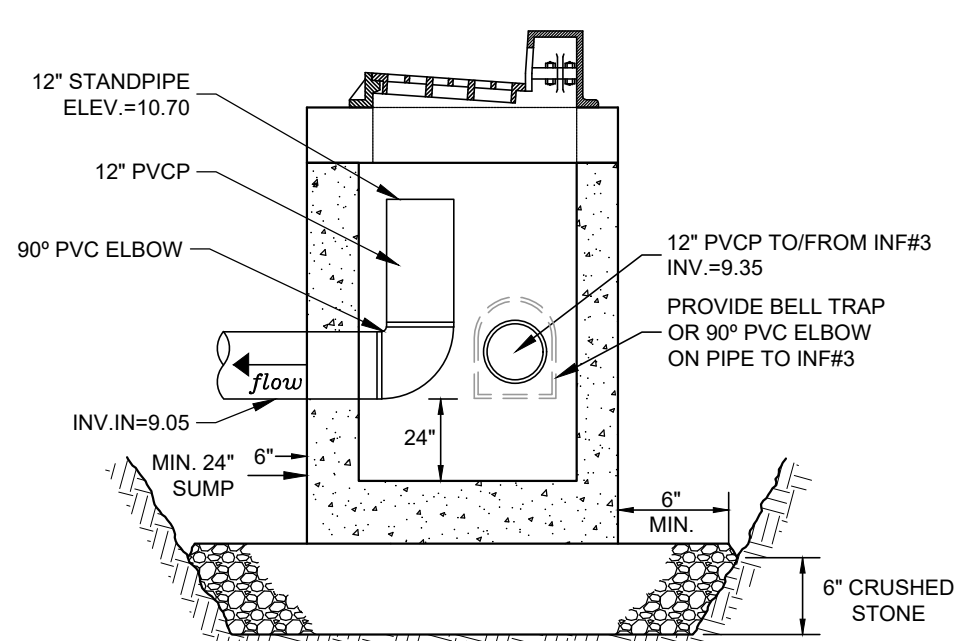
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**STORM MANHOLE DETAIL**  
N.T.S.



**MANHOLE INVERT**  
N.T.S.

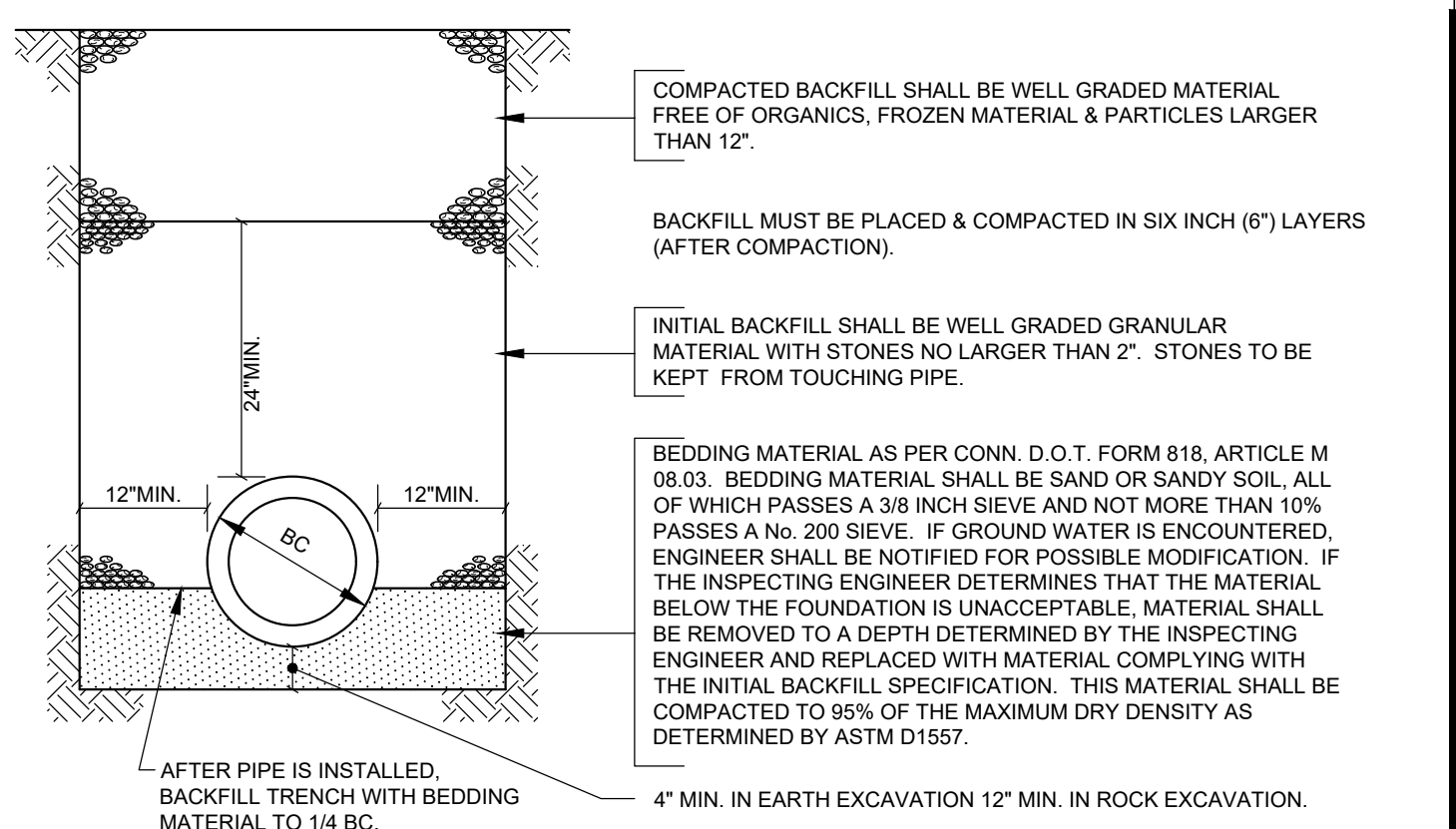


- NOTES:**
1. ALL JUNCTION BOX COMPONENTS TO BE PRE-CAST REINFORCED CONCRETE, ABLE TO WITHSTAND THE APPLIED EARTH LOADS WITH AN H-20 TRUCK LOAD.
  2. ALL JOINTS TO BE MORTARED.
  3. JUNCTION BOX SHALL CONFORM TO ASTM C478.
  4. ALL CRUSHED STONE SHALL BE GRADATION NO. 4 AS PER CT D.O.T. FORM 818, ARTICLE M 01.01. STONE SHALL CONSIST OF SOUND, TOUGH, DURABLE PARTICLES FREE FROM SOFT, THIN, ELONGATED, LAMINATED, FRIABLE, MICACEOUS OR DISINTEGRATED PIECES, MUD, DIRT OR OTHER DELETERIOUS MATERIAL.

**CURB TYPE CATCH BASIN W/ STANDPIPE (CB#6)**  
N.T.S.

WATER STOP: 10' UPSTREAM OF STRUCTURES AND WHERE SHOWN (OR AS DIRECTED BY INSPECTING ENGINEER), FOUNDATION MATERIAL, BEDDING, HAUNCHING, INITIAL BACKFILL, AND THE BOTTOM FOOT OF GENERAL BACKFILL TO BE REPLACED WITH SM, SC, OR ML SOIL AS PER UNIFIED SOIL CLASSIFICATION SYSTEM WITH MAXIMUM PARTICLE SIZE OF 1-1/2". FOR 3 LINEAR FEET OF TRENCH, WATER STOP TO BE KEPT INTO TRENCH BOTTOM AND WALLS A MINIMUM OF ONE FOOT. NO STONES LARGER THAN 6" SHALL BE WITHIN 12" OF THE PIPE.

ALL FOUNDATION, INITIAL BACKFILL & BACKFILL MATERIAL TO BE APPROVED BY THE INSPECTING ENGINEER. ANY DEVIATION FROM THESE METHODS & MATERIALS MUST BE APPROVED IN WRITING BY THE INSPECTING ENGINEER. ALL MATERIAL TO BE COMPACTED TO 95% OF THE MAX. DRY DENSITY AS DETERMINED BY ASTM D1557 EXCEPT COMPACTED BACKFILL NOT UNDER PAVEMENT WHICH SHALL BE COMPACTED TO A DENSITY AT LEAST EQUAL TO THAT OF THE ADJACENT UNDISTURBED MATERIAL.



**PVC/RCP PIPE TRENCH BEDDING DETAIL (48" DIA. & UNDER)**  
N.T.S.

No.	Date	Revision
4	07/02/2024	REVISED RETAINING WALLS
3	02/27/2024	ISSUED FOR CONSTRUCTION
2	01/30/2024	PZC RESUBMISSION
1	12/26/2023	ISSUED FOR EPC & P&Z

**DETAILS (2 OF 3)**  
DEPICTING  
**GREAT ISLAND ENTRY DRIVE**  
DARIEN, CT  
PREPARED FOR  
**TOWN OF DARIEN**

SCALE: N.T.S.

DRAWN BY: JTF CHECKED BY: CJF

**REDNISS & MEAD**  
LAND SURVEYING  
CIVIL ENGINEERING  
PLANNING & ZONING CONSULTING  
PERMITTING

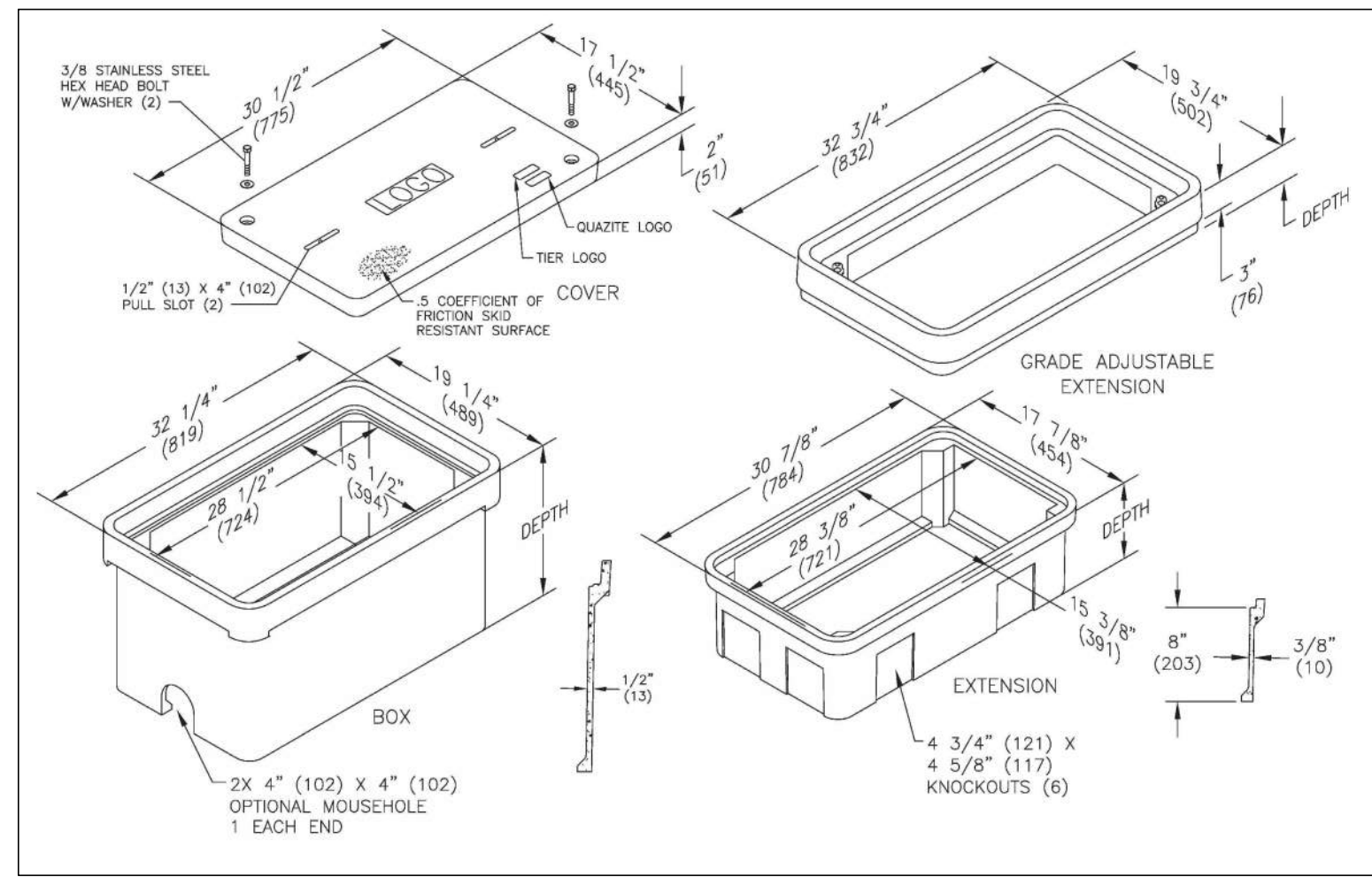
22 First Street | Stamford, CT 06905  
Tel: 203.327.0500 | Fax: 203.357.1118  
www.rednissandmead.com

DATE: July 2, 2024

SHEET No: **SE-6**

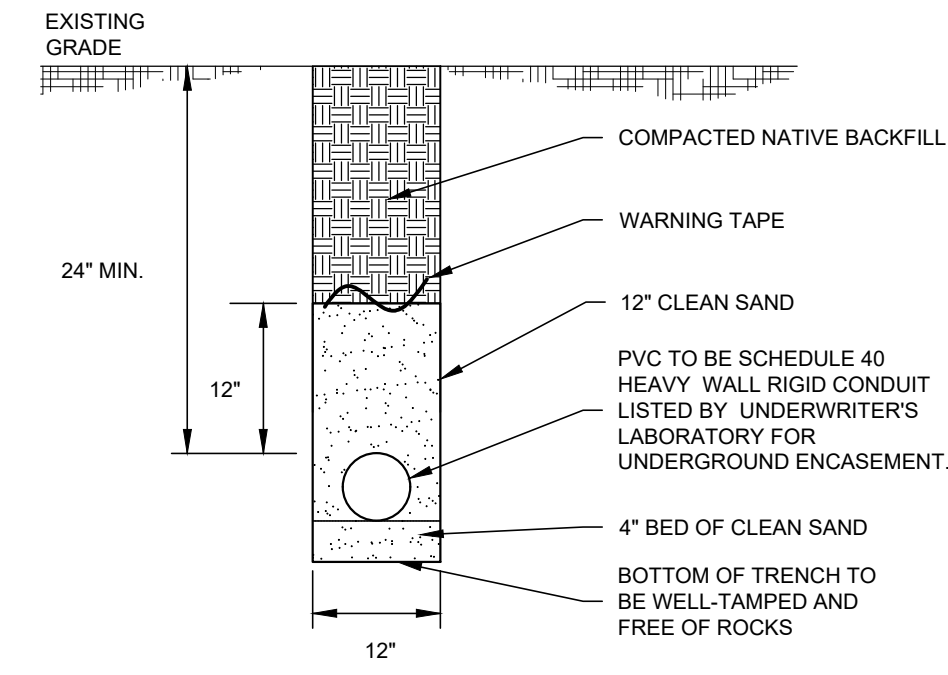
Comm. No.: 8004





\*PROVIDE EXTENSIONS AS REQUIRED TO BE FLUSH WITH FINISHED GRADE.

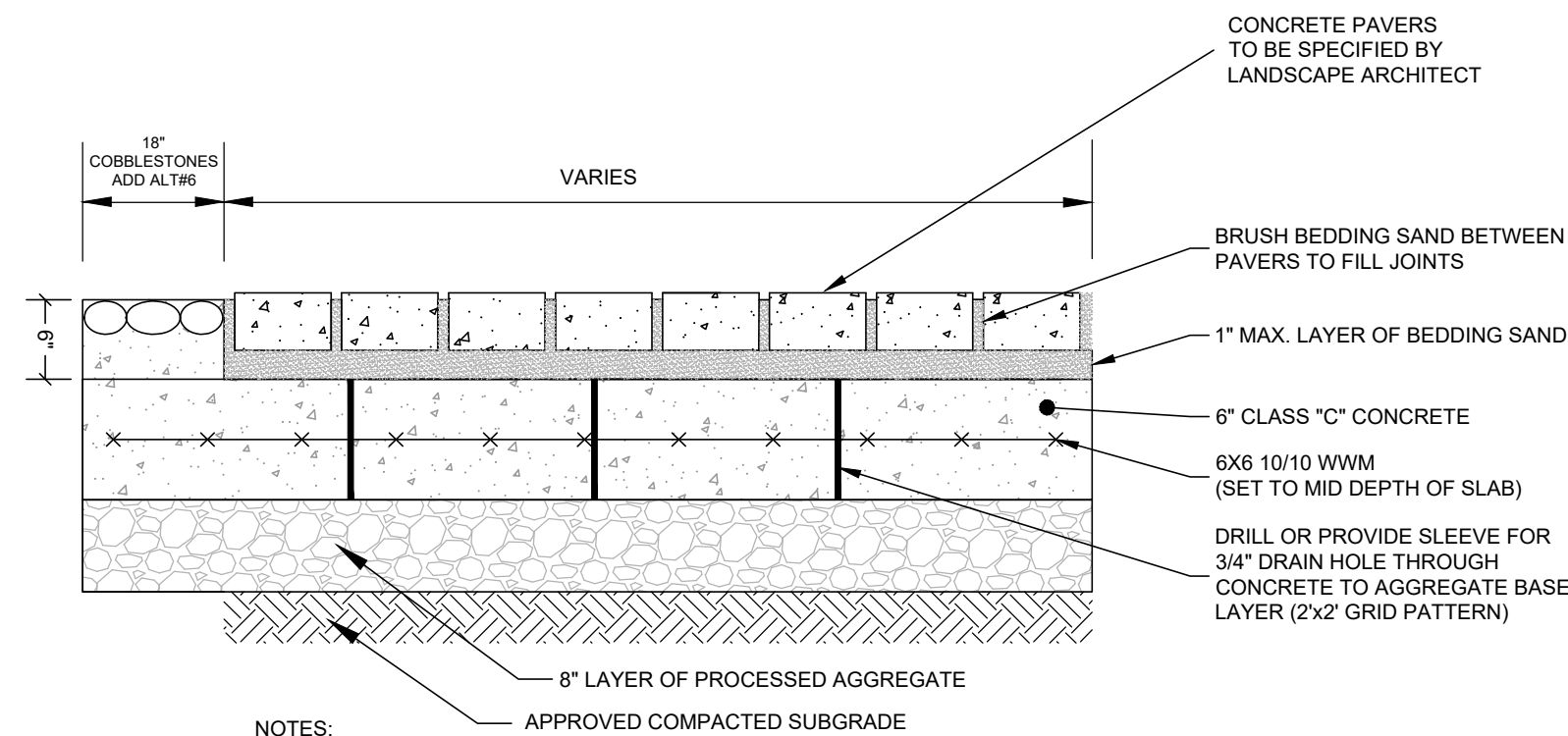
**17" x 30" QUAZITE BOX DETAIL**  
N.T.S.



**NOTES:**

1. IF 24" OF COVER CANNOT BE OBTAINED OVER THE CONDUIT, CONDUIT SHALL BE CONCRETE ENCASED.
2. ALL BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.

**CONDUIT TRENCH DETAIL**  
**(SAND BEDDING)**  
N.T.S.



**NOTES:**

1. REFER TO PLANS BY ENVIRONMENTAL LAND SOLUTIONS, LLC FOR PAVER DETAIL.
2. AGGREGATE BASE SHALL CONFORM TO ASTM D 2940.
3. GRADATION OF SAND BEDDING COURSE SHALL CONFORM TO "BEDDING SAND GRADATION."

**CONCRETE PAVER DETAIL**  
N.T.S.

3	07/02/2024	REVISED RETAINING WALLS
2	02/27/2024	ISSUED FOR CONSTRUCTION
1	12/26/2023	ISSUED FOR EPC & P&Z
No.	Date	Revision

**DETAILS (3 OF 3)**  
DEPICTING  
**GREAT ISLAND ENTRY DRIVE**  
DARIEN, CT  
PREPARED FOR  
**TOWN OF DARIEN**

<p><b>REDNISS &amp; MEAD</b></p> <p>LAND SURVEYING CIVIL ENGINEERING PLANNING &amp; ZONING CONSULTING PERMITTING</p> <p>22 First Street   Stamford, CT 06905 Tel: 203.327.0500   Fax: 203.357.1118 www.rednissmead.com</p>	<p>SCALE: N.T.S.</p> <p>DRAWN BY: JTE CHECKED BY: CJF</p> <p> CRAIG J. FLAHERTY, C.T. P.E. 21149 July 2, 2024 DATE</p> <p>This document and copies thereof are valid only if they bear the signature and embossed seal of the designated licensed professional. Unauthorized alterations render any declaration herein null &amp; void.</p>
	<p>SHEET No: <b>SE-7</b></p> <p>Comm. No.: 8004</p>

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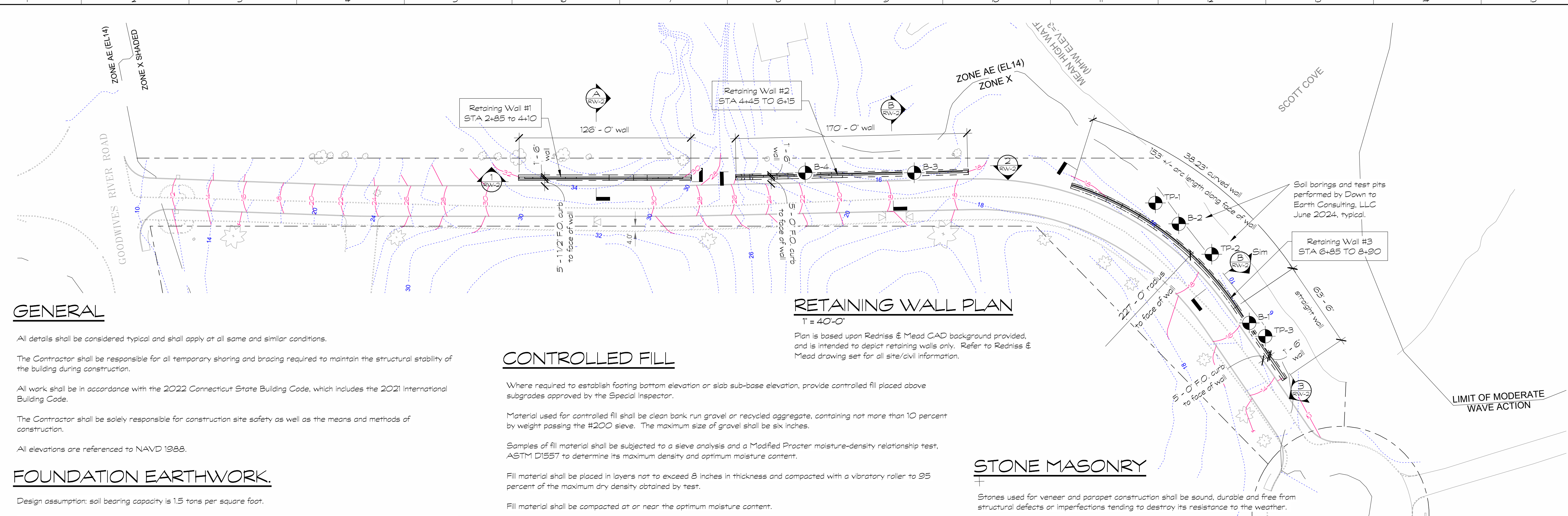






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ISSUED FOR BID



**GENERAL**

All details shall be considered typical and shall apply at all same and similar conditions.  
The Contractor shall be responsible for all temporary shoring and bracing required to maintain the structural stability of the building during construction.  
All work shall be in accordance with the 2022 Connecticut State Building Code, which includes the 2021 International Building Code.  
The Contractor shall be solely responsible for construction site safety as well as the means and methods of construction.  
All elevations are referenced to NAVD 1988.

**FOUNDATION EARTHWORK**

Design assumption: soil bearing capacity is 1.5 tons per square foot.  
Footings shall bear on undisturbed virgin soil, free of frost, mud, and ice, or controlled fill placed over approved subgrade. Undisturbed virgin soil consists of a light brown sand as identified in the soil boring logs.  
Reference is made to Geotechnical Report prepared by Down to Earth Consulting, LLC dated June 2024.  
Inspections shall be made prior to tamping the soil or setting footing forms. The Inspector shall verify that soil is suitable for the support of foundations and is consistent with the soil identified in the Soil Boring Logs.  
Footing sub-grade shall be compacted using a vibratory tamper or a jumping soil rammer after the soil has been inspected and approved.  
The Contractor shall be responsible for all dewatering, shoring, sheeting, or bracing required to maintain a safe, dry, and stable excavation.  
No footings shall be placed in water.  
Soil adjacent to and below footings shall be kept from freezing at all times.  
Where suitable bearing soils is not encountered at indicated bottom of footing elevation carry excavations deeper as directed by the Engineer.  
The Contractor shall verify the location of all underground utility lines, sewers, and fuel storage tanks to avoid any damage. Contractor shall contact 'Call Before You Dig' prior to any excavation. Dial 811.  
Backfill shall be compacted granular soil with not more than 10% passing the #200 sieve, and free of debris and organic material. If on-site soil does not meet this specification, the Contractor shall bring in soil from off-site at his own expense.  
Where bottom of excavation is below the groundwater elevation, place 6 inches of crushed stone above approved subgrade. Crushed stone shall be placed after the subsoil has been inspected, and approved.  
Exterior footings bearing on soil shall be at least 42" below finished grade.

**CONTROLLED FILL**

Where required to establish footing bottom elevation or slab sub-base elevation, provide controlled fill placed above subgrades approved by the Special Inspector.  
Material used for controlled fill shall be clean bank run gravel or recycled aggregate, containing not more than 10 percent by weight passing the #200 sieve. The maximum size of gravel shall be six inches.  
Samples of fill material shall be subjected to a sieve analysis and a Modified Proctor moisture-density relationship test, ASTM D1557 to determine its maximum density and optimum moisture content.  
Fill material shall be placed in layers not to exceed 8 inches in thickness and compacted with a vibratory roller to 95 percent of the maximum dry density obtained by test.  
Fill material shall be compacted at or near the optimum moisture content.  
The Special Inspector shall inspect the subgrade prior to placing controlled fill, and inspect the placement and compaction of the controlled fill. Each layer of fill shall be tested by a trained technician employed by the testing laboratory.

**CAST-IN-PLACE CONCRETE**

Concrete strength at 28 days: 4,000 psi.  
DO NOT ALLOW RELEASE AGENT TO COME IN CONTACT WITH REINFORCING STEEL OR HARDENED CONCRETE.  
Calcium chloride shall not be used.  
Air-entrain all concrete exposed to the weather, omit air-entrainment from interior slabs with trowel finish.  
Reinforcing steel: ASTM A615 grade 60.  
Concrete work shall be in accordance with ACI 301-16 and ACI 318-11.  
Maximum slump: 5 inches.  
Limit length of concrete wall pours to 50 ft at any one time. Interrupt horizontal reinforcing steel at all joints. Provide keyed expansion joint with compressible filler as shown on RW-2.  
Provide 4" PVC weep hole thru concrete wall spaced 4'-0" o.c.  
All embedded masonry anchors, such as dovetail slots, shall be hot dip galvanized. Minimum 12 ga. steel thickness unless noted.  
A testing laboratory shall cast 4 test cylinders for each 50 yards for each day's pour. Slump, air content, and temperature tests shall be performed when cylinders are cast. Test 1 cylinder at 7 days and 2 cylinders at 28 days. Hold 4th cylinder for 56 day break if needed.  
Submit concrete mix design for approval.  
Special Inspections shall be made of reinforcing steel and concrete placement.  
Cold weather concrete work shall conform to ACI 308.1. Protect concrete from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures. Use non-chloride accelerating admixture in all concrete that will be placed in temperatures below 40° F for 24 hours following pour.

**STONE MASONRY**

Stones used for veneer and parapet construction shall be sound, durable and free from structural defects or imperfections tending to destroy its resistance to the weather.  
Build a test section of stone veneer and parapet in place on a concrete wall, 10 ft length, for approval of Owner and Engineer prior to proceeding with any further stone masonry work. If the test section is approved, it shall remain and be considered part of the completed work. Tenth into subsequent work so no joint is apparent.  
REFER TO 'BASIS OF DESIGN - STONE VENEER' IMAGE ON THIS SHEET FOR INTENDED STYLE OF STONE MASONRY.  
Mortar shall consist of one part Portland Cement, 2 to 3 parts clean sand, not more than 1/4 part hydrated lime.  
All necessary dressing or shaping of stone shall be done before the stone is laid in the wall. No dressing or hammering which will loosen the stone will be permitted after it is placed.  
Stones at angles or at ends of walls shall be roughly squared and dressed to the required lines.  
Stone shall not be laid when the air temperature is below 40 degrees F.  
The masonry shall be laid to line in courses, roughly leveled up.  
Each stone shall be cleaned and thoroughly saturated with water before being set.  
Stones shall not be dropped or slid over the wall but shall be carefully set without jarring stone already laid.  
All stones shall be bedded in freshly made mortar. The mortar joints shall be full and the stones carefully settled in place before the mortar has set.  
No spalls shall be permitted in the beds.  
Joints and beds shall of a thickness to produce a 'dry look' with near tight joints at the surface of the wall.  
Collar joint between veneer stones and backup wall shall be filled solid with mortar.  
The vertical joints in each course shall break joints with those in adjoining courses at least 6 inches.  
In case any stone is moved or the joint broken, the stone shall be taken up, the mortar thoroughly cleaned from the bed and joints, and the stone reset in fresh mortar.  
Wherever possible, the face joints shall be pointed before the mortar becomes set. Joints not pointed at the time the stones are laid shall be thoroughly wet with water and filled with mortar. The mortar shall be well driven into the joints and finished with a pointing tool.  
Upon completion of the wall, all mortar shall be removed from the face of the stones and the wall shall be washed down with a solution of muriatic acid.  
All ties and anchors shall be hot dip galvanized. Minimum 12 ga. steel thickness unless noted.

**CONCRETE MIN. COVER**

Conditions	Min. Cover
Concrete cast against and permanently exposed to earth	3"
Concrete exposed to weather #5 bars and smaller	1.5"
Concrete exposed to weather #6 bars and larger	2"
Concrete not exposed to weather #5 bars and smaller	0.75"
Concrete not exposed to weather #6 bars and larger	1"

**Revisions/Submission**

Date	Description

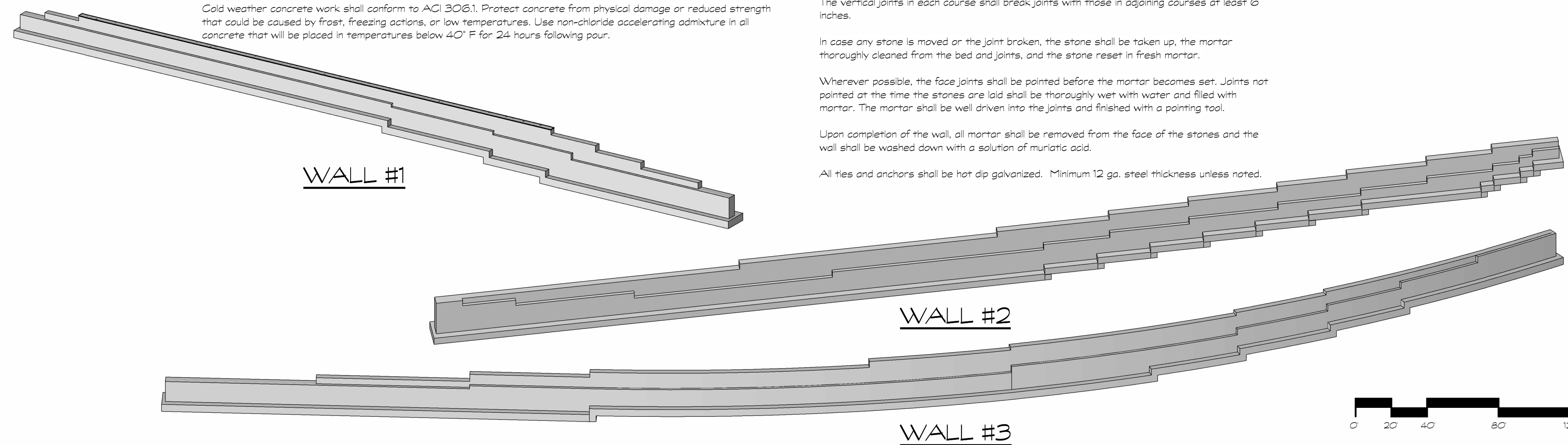
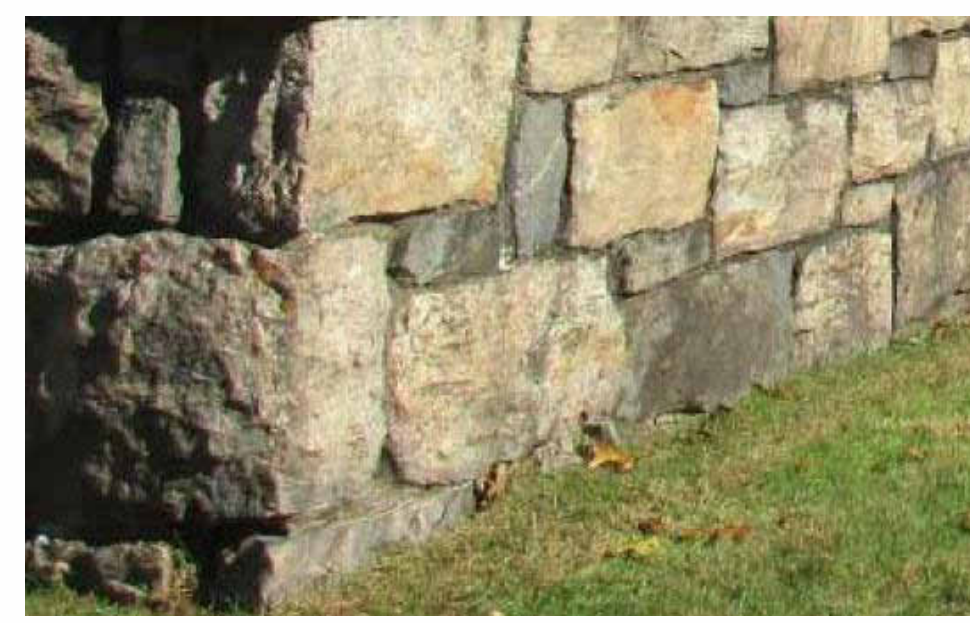
North

**GREAT ISLAND ENTRY DRIVE**  
DARIEN, CT

**RETAINING WALL PLAN & 3D**

Project Number: 24-2174	Date: 6-26-2024
Scale: As Indicated	Drawing number: RW-1
Designed by: KHC	
Drawn by: DC	
Checked by: DC	

Note: the 3D views below only depict the cast-in-place concrete work. There is also stone masonry veneer and parapet, which are not shown in these 3D views.



**BASIS OF DESIGN - STONE VENEER**





