LOCATION MAP NOT TO SCALE

TOWN OF LITCHFIELD

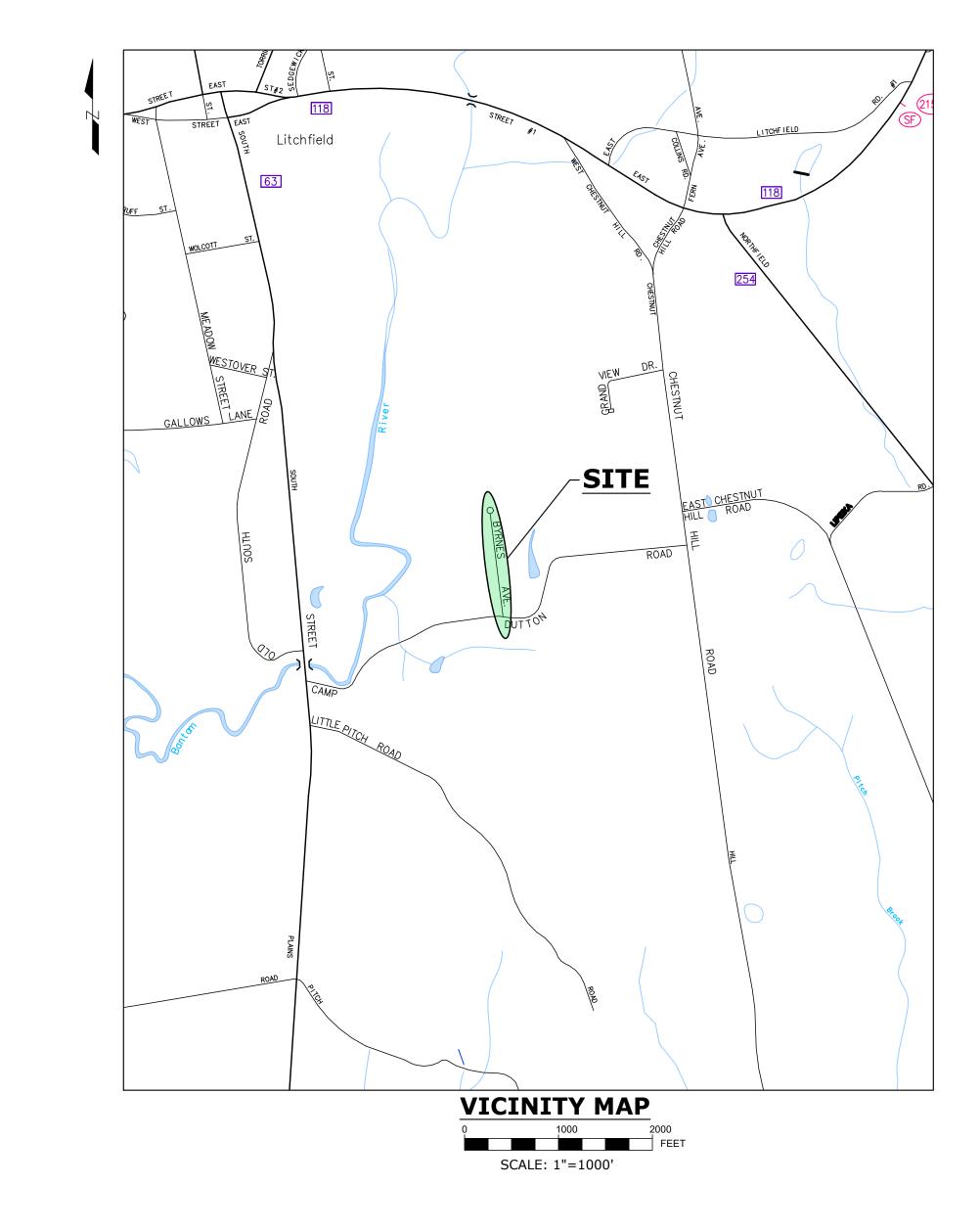
MASSACHUSETTS

TOWN OF LITCHFIELD ROADWAY AND DRAINAGE IMPROVEMENTS

BYRNES AVENUE LITCHFIELD, CT AUGUST 14, 2025

Revisions:





OWNER

Town Of Litchfield Raz Alexe P.E. **Director of Public Works / Town Engineer 74 West Street** Litchfield, CT 06759 Phone: (860) 567-7575 email: ralexe@townoflitchfield.org

ENGINEER and SURVEYOR Haley Ward, Inc. David Battista, P.E., Senior Project Manager Robert Colabella, P.E., Senior Project Manager 140 Willow Street, Suite 8 Winsted, CT 06098 Phone: (860) 379-6669

e-mail: dbattista@haleyward.com e-mail: rcolabella@haleyward.com

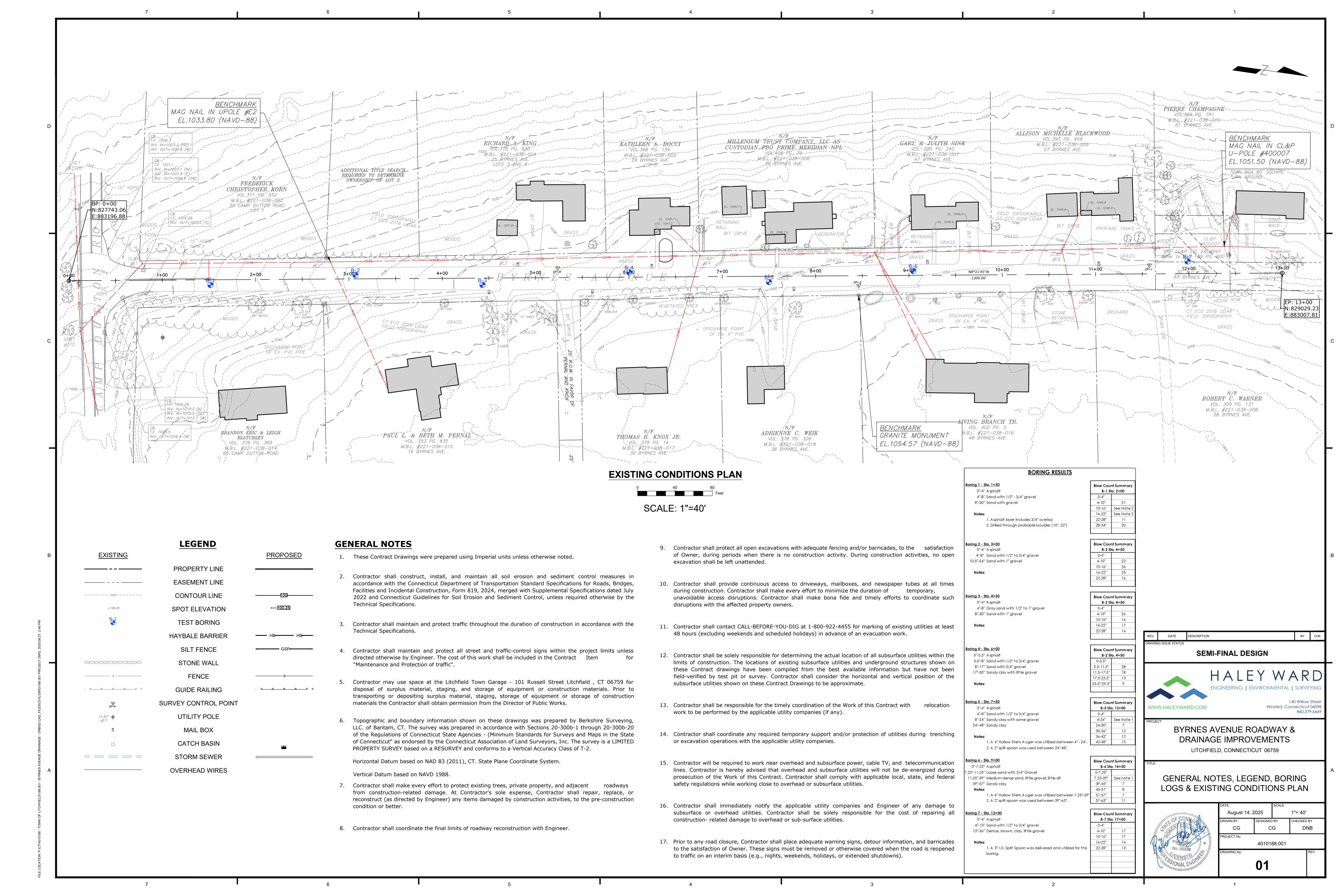


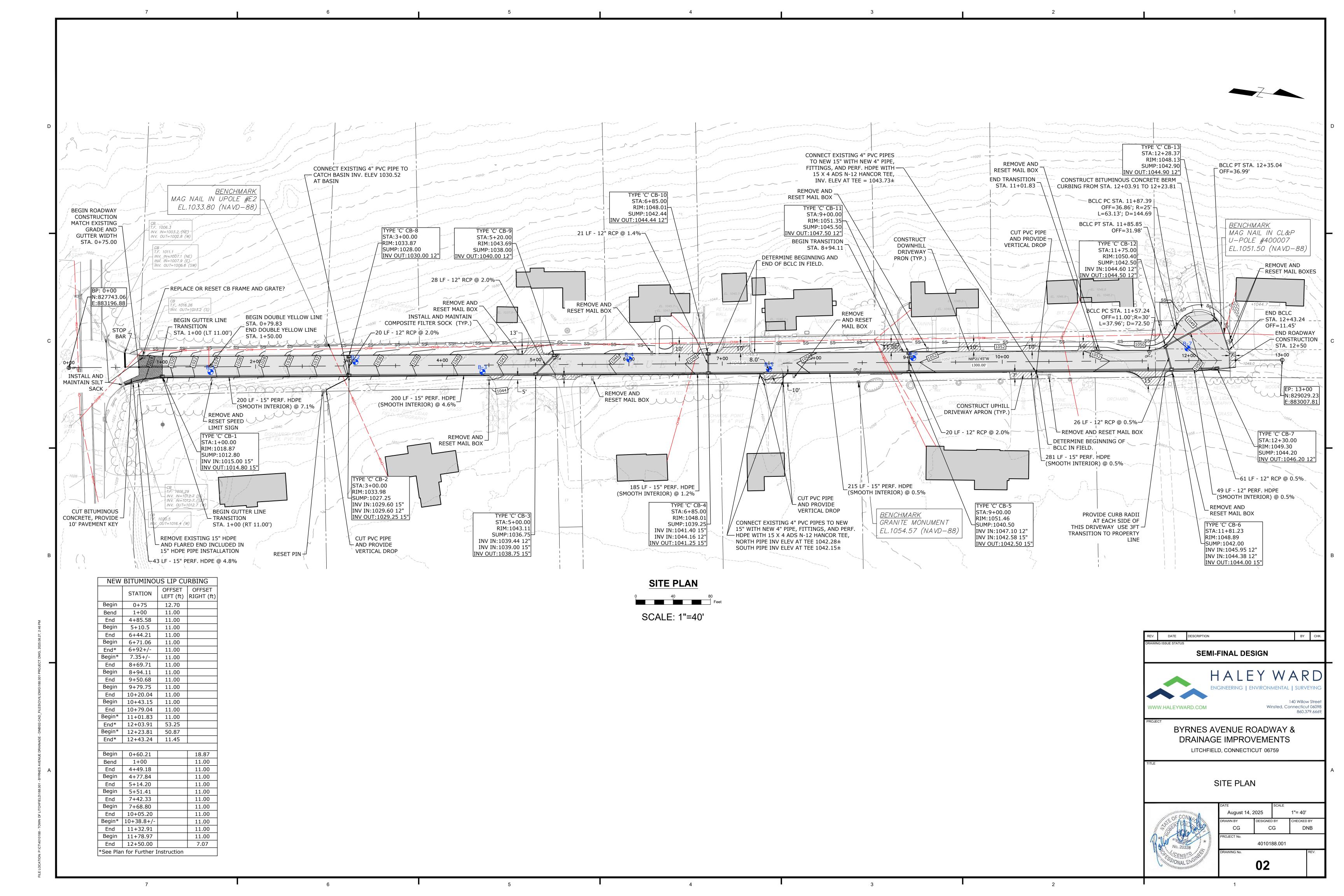
HALEY WARD

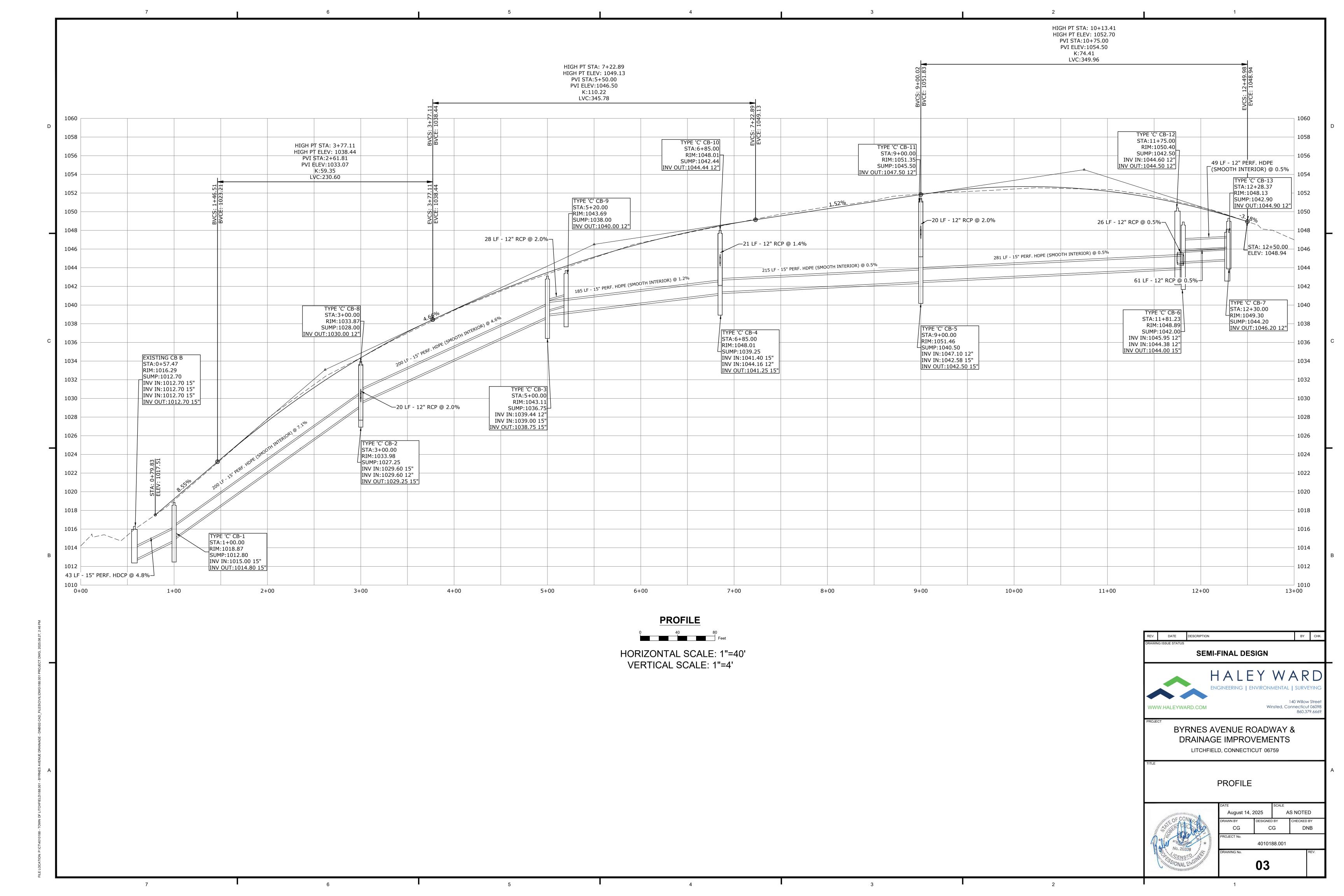
140 Willow Street

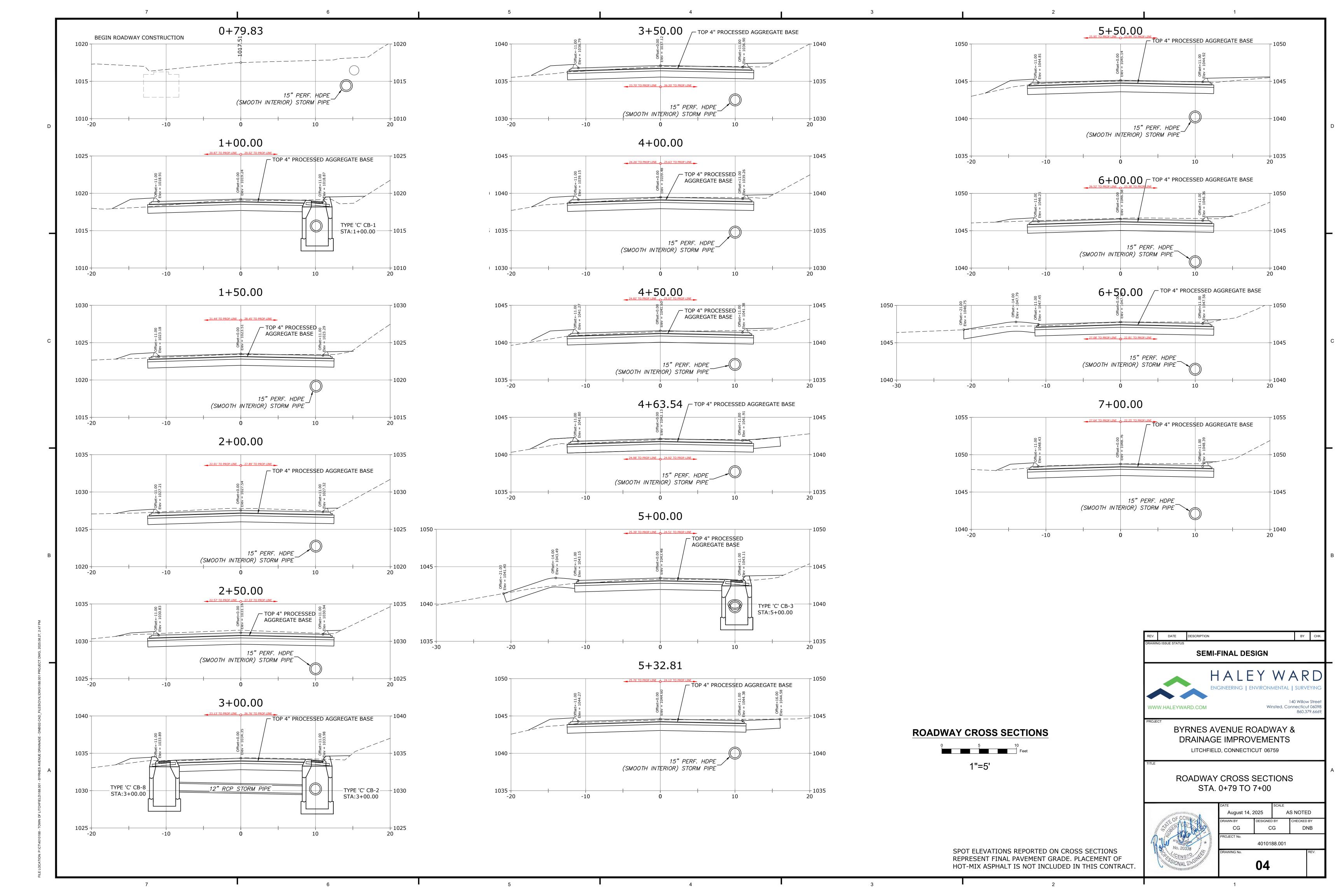
Winsted, Connecticut 06098 860.379.6669

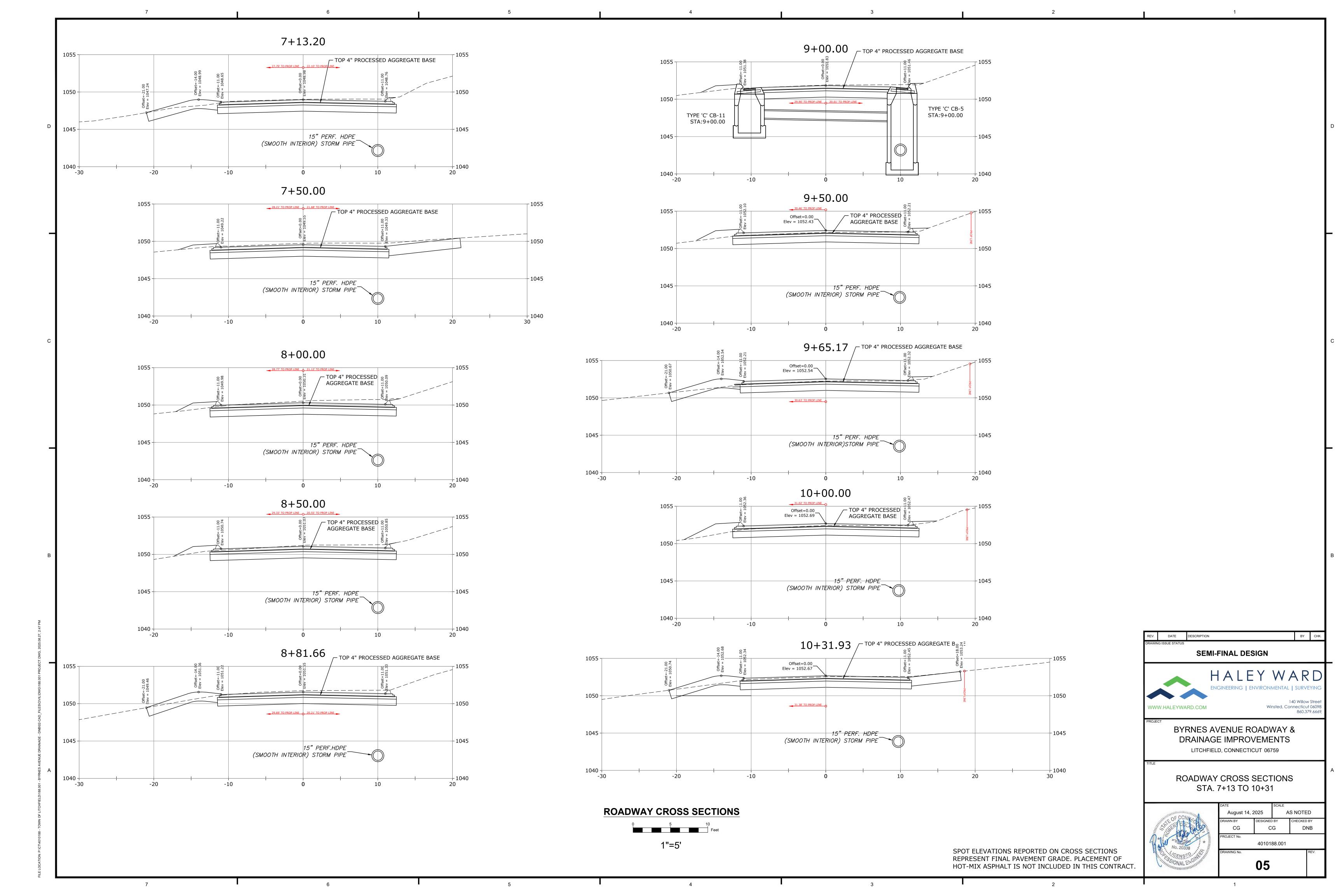
LIST OF DRAWINGS			
SHEET#	SHEET NAME		
00	COVER		
01	GENERAL NOTES, LEGEND, BORING LOGS & EXISTING CONDITIONS		
02	SITE PLAN		
03	PROFILE		
04	ROADWAY CROSS SECTIONS STA. 0+79 TO 7+00		
05	ROADWAY CROSS SECTIONS STA. 7+13 TO 10+31		
06	ROADWAY CROSS SECTIONS STA. 10+50 TO 12+50		
07	SOIL EROSION AND SEDIMENT CONTROL NARRATIVE AND DETAILS		
08	DETAILS		
CT DOT STANDARD DRAWINGS			
HW-586_01	CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" STRUCTURES		
HW-586_07a	CATCH BASIN TYPE "C" AND "C-L" TOPS		
HW-586_08	CATCH BASIN FRAMES AND GRATES		
TR-1210_08	PAVEMENT MARKINGS FOR NON FREEWAYS		
TR-1220_01	SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS		
TR-1220_02	CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES		

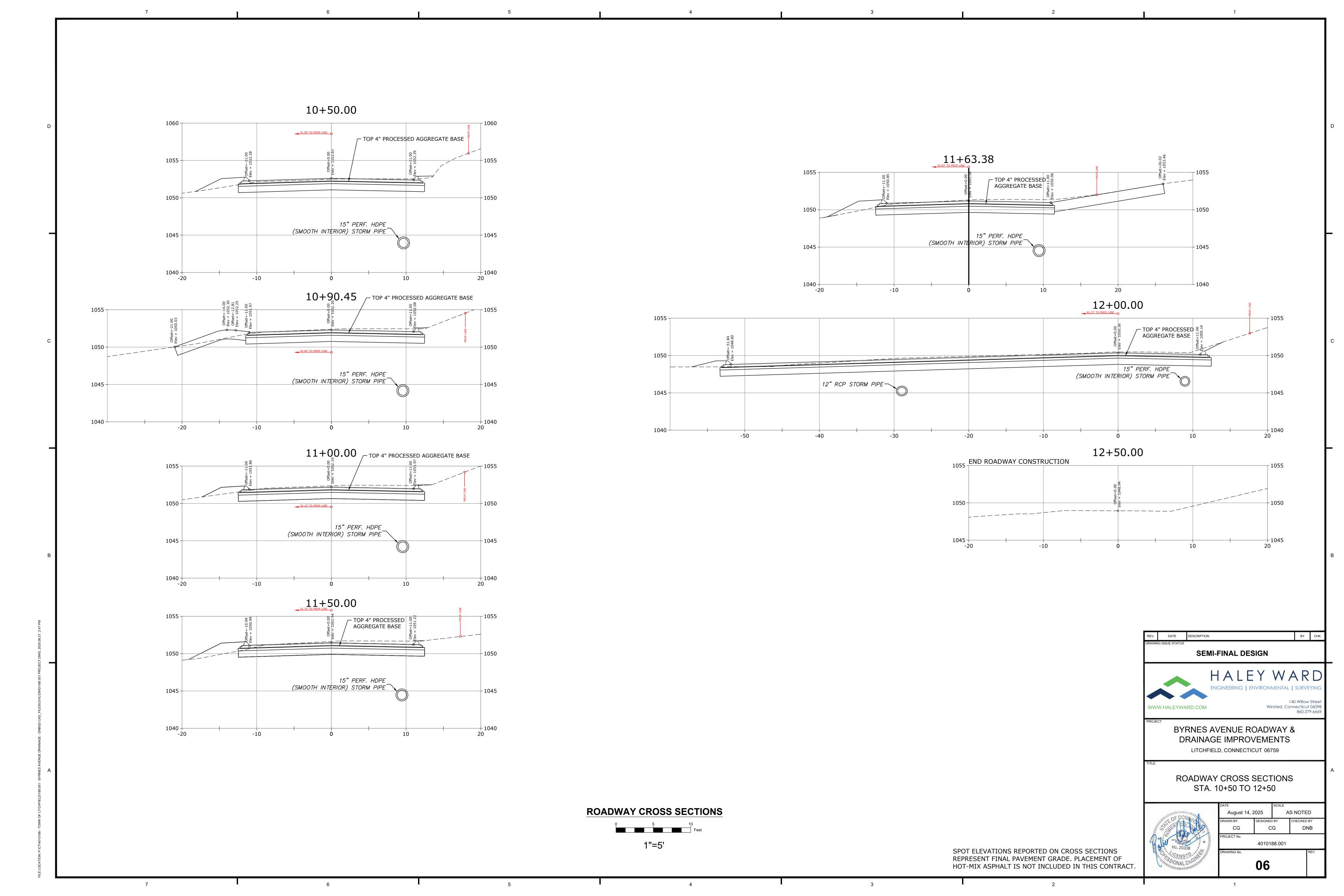












1. INTRODUCTION AND PERMIT COMPLIANCE

Pursuant to Connecticut P.A. 83-388 and the Litchfield Zoning Regulations, this project requires a Soil Erosion and Sediment Control Plan and Narrative.

This narrative describes the **minimum** measures required to control soil erosion during and after construction of the sitework shown on this plan. The soil erosion and sediment control measures shown on this plan are designed in accordance with a document entitled "Connecticut Guidelines for Soil Erosion and Sediment Control" published by the Connecticut Council on Soil and Water Conservation in 2024. The Contractor may be required to implement additional measures to prevent site erosion and sedimentation of downstream waterways.

The Contractor shall obtain copies of and comply with the conditions of all permits for this project.

The Contractor's activities and operations include all site work and work incidental to the project as depicted on the Contract Drawings. If any of the Contractor's activities require approvals above and beyond those already accounted for by the Owner's permits, the Contractor shall apply for and obtain such permits prior to conducting those operations. If incidental work such as haul roads, waste and disposal areas, staging areas, and field offices are not shown on the plans, and require additional erosion control, the Contractor shall provide such controls.

2. PROJECT DESCRIPTION AND SITE CHARACTERISTICS

The Town of Litchfield proposes to reconstruct drainage and pavement on Byrnes Avenue. The project limits begin at Camp Dutton Road and extend continuously in a northerly direction for approximately 1,200 feet. The project's total footprint is approximately 1.5 acres.

The proposed drainage improvements will be comprised of catch basins, and storm sewers. These design features will aid in the collection and discharge of stormwater. The existing roadway is void of an engineered storm water collection system. The runoff collected by the proposed stormwater system will be discharged to the existing catch basin within the curb radius at the northeast corner of the intersection of Byrnes Avenue with Camp Dutton Road.

Bituminous concrete lip curbing will be installed along both edges of Byrnes Avenue. This curbing will help convey surface runoff from the roadway to the proposed storm sewer system. Full-depth reconstruction of Byrnes Avenue will begin on Byrnes Avenue approximately 62 feet north of the south edge of Camp Dutton Road and continue approximately 1,200 feet north. The cul-de-sac at the end of Byrnes Road will also be reconstructed.

Minor changes have been made to the vertical alignment of Byrnes Avenue. All driveway aprons will be reconstructed and blended into the new roadway elevations.

3. CONSTRUCTION SEQUENCING

The Town of Litchfield proposes constructing drainage and pavement improvements on Byrnes Avenue over the course of a 75-90-day period during the 2025 or 2026 construction seasons. The Town anticipates the following construction sequence.

Note: Contractor shall maintain alternating one-way traffic through the construction zone during all construction operations.

<u> Stage 1 - Drainage Improvements</u>

A. Place perimeter erosion controls where shown on the plan.

B. Complete clearing and grubbing activities throughout the length of the project.

C.Construct the storm water collection system's trunk line from the existing discharge catch basin to catch basin no. 8. The contractor shall plug the drain culvert at the end of each day and place silt sacks with deflectors in each catch basin during construction. The Contractor shall provide driveway access throughout construction. Do not end a day's pipe run within the limits of a residential driveway.

D. Construct stormwater culvert crossings where shown on the plan.

E. Catch basins contributing to the discharge at the north end of the project shall remain in-place until such time as they can be connected to the proposed stormwater system.

F. Construct new storm sewers at the north end of the project upon completion of all culvert crossings, including the removal of all pipes and flared ends.

Stage 2 Pavement Construction

A. Excavate existing pavement and base layers (right lane) from beginning to end. Provide driveway access for residents throughout construction. Load these materials onto Town trucks.

B. Excavate to subgrade (right lane) from beginning to end. Simultaneously form roadway embankment on the right side of roadway from beginning to end. Place subbase and processed aggregate base quickly after subgrade is established to provide a traveling surface for vehicles. The contractor shall provide a processed aggregate access pad at each driveway.

C.Perform final grading of roadway embankment from beginning to end.

D. Place topsoil, seed, and mulch. Place erosion-control matting on all areas subject to turf establishment.

E. Excavate existing pavement and base layers (left lane) from beginning to end. Provide driveway access for residents throughout construction. Load these materials onto Town trucks.

F. Excavate to subgrade (left lane) from beginning to end. Simultaneously, form roadway embankment on the left side of roadway from beginning to end. Place subbase and processed

aggregate base quickly after subgrade is established to provide a traveling surface for vehicles. The contractor shall provide a processed aggregate access pad at each driveway.

G.Perform final grading of roadway embankment from beginning to end in both lanes. Final surface shall be the plane between the top of the processed aggregate base and the bottom of the wearing surface's binder course, to the elevation(s), cross slope(s), and dimension(s) shown on the project plans.

H. Place topsoil, seed, and mulch. Place erosion-control matting on all areas subject to turf establishment.

Stage 3 - Final Operations

A. Place topsoil, seed, and mulch in areas adjacent to driveway pavement and in any other un-stabilized areas throughout the site. Place erosion-control matting on all areas with turf-establishment that have slopes 3H:1V or steeper.

B. Install object markers (if required).

D. Paint stop-bars and double-yellow centerlines.

4. RESPONSIBILITY 4.1 RESPONSIBILITIES OF OWNER/PERMITEE

The Owner/Permitee is The Town of Litchfield, 101 Russell Street, Litchfield, CT 06759, Phone 860-567-7575. The Owner/Permittee shall:

A. Provide the Contractor with copies of land-use permits that Owner has acauired.

B. Inform all parties involved with the proposed site work of this plan's objectives and requirements.

4.2 RESPONSIBILITIES OF CONTRACTOR

The Contractor has not been selected at the time of permit application. The Contractor is responsible for preventing erosion of the site.

The Contractor shall:

A. Install, monitor, and maintain the soil erosion and sediment control measures as shown on this plan.

B. Comply with all permit requirements.

C. Provide the Owner, Engineer, and the municipality with 24 hour phone numbers in the event of an emergency at the site.

D. Comply with "Connecticut Guidelines for Soil Erosion and Sediment Control" published by the Connecticut Council on Soil and Water Conservation in 2024

5. PRECONSTRUCTION CONFERENCE

The Owner will conduct a preconstruction meeting with the Contractor, Engineer, and the Wetlands Enforcement Agent to review the proposed soil erosion and sediment control measures, construction sequence, and other factors required to prevent project-related sediment from reaching nearby wetlands or waterways.

6. DESCRIPTION AND MAINTENANCE OF EROSION CONTROL MEASURES

6.1 TEMPORARY STABILIZATION MEASURES

Temporary Grass Cover:

Depending on conditions at time of surface restoration, Contractor may elect to plant temporary grass cover and defer final seeding to the spring of 2024. Contractor shall loosen the soil to a depth of two inches before seeding. If existing soil is not capable of growing grass, the Contractor shall spread at least two inches of topsoil over the loosened surface. If seeding commences during late autumn, the winter ryegrass seed shall be used. Seeding rates shall be 5 lbs./1000 sq. ft. Hay mulch shall be spread at the rate of 100 lbs./1000 sq. ft. and the Contractor shall protect mulch and seed with stapled jute mesh or erosion control matting as stipulated below. The contractor shall irrigate the grass until an acceptable stand of grass is established.

Filter Sock:

Install an erosion control filter sock of the size shown in the Contract Drawings. Remove surface rocks or other obstacles that prevent close contact with the ground surface and firmly stake it as shown in the details. Remove sediment once levels have reached 1/4 the effective barrier height. Repair and/or replace the barrier immediately if damaged or deteriorated. Stake filter sock at intervals recommended by manufacturers, but not less than four feet. For filter sock less than 12 inches, install in a shallow excavation. Where filter sock is not continuous, overlap sections by three feet minimum.

Silt Sacks:

Install a silt sack in the catch basin where shown on the plans. Install in accordance with manufacturer's instructions. Remove and empty according to manufacturer's instructions.

Stockpiling or Storage of Excavated Materials:

Completely surround all temporary (2-4 weeks) material stockpiles with strawbales or silt fence to prevent transportation of sediment. Seed stockpiles that will remain for a longer duration with a quick-growing rye grass. **Erosion Control Matting:**

Install erosion control matting in all areas disturbed by construction activities. The contractor shall select a fabric from the Connecticut Department of Transportation's Qualified Product List. The fabric shall meet the requirements of Class 1 Type D Slope Protection for all areas. The Contractor shall maintain the fabric until a durable stand of grass is established.

The Owner will select trees or groups of trees to remain prior to construction. The Contractor shall provide snow fencing, board fencing, or cord fencing around trees or groups of trees to protect

them against damage. The Contractor shall be responsible for selecting and installing the protection measures most appropriate for the conditions present. The Contractor shall repair and/or replace tree protection measures immediately if damaged during construction.

6.2 PERMANENT STABILIZATION MEASURES

Site Restoration:

The contractor shall be responsible for restoration of all unpaved areas following completion of the project. Restoration shall include the furnishing, placement, and shaping of topsoil and the establishment of a firm stand of turf. At a minimum, Contractor shall restore unpaved areas to the limits indicated on the Contract Drawings; however, the limits shall be extended to include any portion of unpaved areas damaged inadvertently or for Contractor's convenience.

The contractor shall furnish, place, and shape topsoil, to a minimum depth of four inches, in all areas disturbed by construction. Final grade of topsoil shall match existing grade at adjacent areas and shall be shaped to a smooth contour. Topsoil material shall conform to requirements of ConnDOT Form 818, Article M.13.01 - Item 1 (Topsoil)

Following placement of topsoil, contractor shall provide an accepted, uniform stand of established perennial turf grasses by furnishing and placing fertilizer, seed, and mulch on all areas to be treated as shown on the plans or where designated by Engineer.

- Seed shall meet the requirements of ConnDOT Form 818, Article M.13.04.
- Fertilizer shall meet the requirements of ConnDOT Form 818, Article M.13.03.
- Mulch shall be wood fiber, hay, or straw and shall meet the requirements of ConnDOT Form 818, Article M.13.05.
- 4. Erosion control matting shall conform to the requirements specified above.
- Construction Methods for turf establishment shall conform to the following requirements:
- Surface Preparation:

A.Level areas and lawns shall be made friable and receptive for seeding by disking or by other approved methods to the satisfaction of Engineer. All disturbed soil areas brought to final grade shall be seeded within 7 days, or as directed by Engineer, in accordance with these specifications. In all cases, the final prepared and seeded soil surface shall meet the lines and grades for such surface as shown in the plans, or as directed by Engineer.

B. Slopes and Embankment Areas: These areas shall be made friable and receptive to seeding by disking or by other approved methods which will not disrupt the line and grade of the slope surface. In no event will seeding be permitted on hard or crusted soil surface.

C. Seeding shall not be permitted until all weed growth is removed.

plan shall include the following:

Seeding Season: The optimal calendar dates for seeding are: Spring (March 15 to June 30) and Fall (August 15 to October 31). All disturbed soil areas at final grade shall be seeded within 7 days or as directed by the Engineer, in accordance with these specifications. Any seeding outside the optimal dates shall be performed in the same manner. Since acceptable turf establishment is less likely, Contractor shall be responsible for reseeding until the turf stand conforms to the requirements of ConnDOT Form 818 Article 9.50.03-5.

Sowing Methods: The Contractor shall sow the grass seed mixture using traditional methods or hydro-seeding.

A. Sowing by Traditional Methods: The rate of seed application shall be no less than 175 lbs./acre. Fertilizer shall be initially applied at a rate of 320 lbs./acre during or preceding seeding. When wood fiber mulch is used, it shall be applied in water slurry at a rate of 2,000 lbs./acre with, or immediately after the application of seed, fertilizer, and limestone (if limestone is required). Tackifier may be used with straw mulch as proposed by Contractor. When the grass seeding growth has attained a height of 6 inches, the specified grass areas (mowed and un-mowed) shall receive a uniform application of fertilizer hydraulically placed at the rate of 320 lbs./acre

B. Sowing by Hydro-seeding: If hydro-seeding is proposed, Contractor shall furnish a hydro-seeding Plan for Engineer's acceptance two weeks prior to the start of this work. The hydro-seeding

I. Proposed manufacturer and copy of the manufacturer's recommended application rates for various grades and hose angles of application, the site's soil type(s) and expected weather

II. Number of square feet of seeding that can be covered with the quantity of solution per hydro-seeder.

III. Time between mixing of slurry and seed in hydro seeding tank and application.

IV.Type of hydro seed machine, including nozzle type and automation information if applicable. If the Hydro-seeding Plan is accepted for use, deviation from ConnDOT Form 818, Article 9.50.03-1 (Surface Preparation) will not be allowed. Hydro-seeding shall not be used if the extended weather patterns are hot and dry and the soil surface is dry and dusty, unless Contractor's submission addresses application of straw or hay mulch and addresses follow up maintenance (i.e. additional watering) for "drought conditions." The hydro seed tank and hoses(s) shall be completely flushed and cleaned each day before seeding is to be started and shall also be thoroughly flushed of residue after application to every 10 acres.

Disturbance: Contractor shall keep all equipment and vehicular and pedestrian traffic off areas that have been seeded to prevent excessive compaction and damage to young plants. Where any disturbance has occurred, Contractor shall rework the soil to make a suitable seedbed, then re-seed and mulch such areas with the full amounts of the specified materials, at no additional cost to the State.

Stand of Perennial Turf Grasses: Contractor shall provide and maintain a uniform stand of established turf grass species having attained a height of 6 inches consisting of no less than 60% coverage per square foot throughout the seeded areas until the entire Project has been accepted. Reseeding, as required to achieve and maintain a uniform stand of established turf grass

Establishment: Contractor shall keep all seeded areas free from weeds and debris, such as stones, cables, baling wire, and shall mow at its own expense, on a 1_time_only basis, all slopes 4:1 or less (flatter) and level turf established (seeded) areas to a height of 3 inches when the grass growth attains a height of 6 inches. Clean-up shall include, but not be limited to, the removal of

all debris from the turf establishment operations on the shoulders, pavement or elsewhere on adjacent properties publicly and privately owned. Mowing shall be done at least once. Erosion Control Matting: Erosion control matting shall be installed following seeding where called for on the plans or as directed by Engineer. Staples shall be installed as per the manufacturer's recommendations. Where two lengths of matting are joined, the end of the up-grade strip shall overlap the down-grade strip per the manufacturer's recommendations. The Contractor shall maintain and protect the areas with erosion control matting until such time as the turf grass is established. Contractor shall replace or repair all erosion control matting areas damaged by fire, water or other causes including the operation of construction equipment, at no cost to Owner. No mowing will be required in the locations where erosion control matting is installed.

6.3 PERMANENT STRUCTURAL MEASURES (POST CONSTRUCTION STORMWATER MANAGEMENT)

Land Grading:

Proposed grades are shown in detail on the plan. In general, the Contractor shall properly stockpile earth, move it to fill areas, or export it from the site. Place and compact fill in shallow lifts, proceeding uphill from the toe area. Create large but shallow runoff collection areas at the end of each working day to help collect and prevent runoff from running down the fill face. Bring all excavated, filled, or disturbed areas to final grade as soon as possible and stabilize areas with loam, seed and mulch immediately. Keep erosion control measures in place until the site is stabilized with pavement and/or vegetation.

6.4 OTHER CONTROLS

Waste Disposal:

Provide an adequate number of covered waste containers to ensure that no litter, debris, building materials, or similar materials are discharged to wetlands or watercourses. Instruct subcontractors to use the containers for waste material. Empty the containers promptly when full.

The Contractor shall sweep paved roadways adjacent to the site on a routine basis to prevent tracking of mud onto public roadways and washing of mud into waterways. If the Contractor's schedule for cleaning the pavement is found to be inadequate by the Owner, Owner's Representative, or the municipality, the Contractor shall increase the frequency at no additional cost to

Cleaning of Stormwater Structures:

Clean all stormwater structures, including, but not limited to pipes, swales, detention basins, sediment traps, and riprap aprons of sediment upon completion of the project.

7. GENERAL CONDITIONS

7.1 If erosion control measures are damaged by construction vehicles, acts of vandalism, or severe weather conditions, the Contractor shall immediately remove sediment in the vicinity of the erosion control measures and repair these measures to a functional condition.

7.2 If, during or after construction, it becomes apparent that existing erosion control measures are incapable of controlling erosion, the Owner or Engineer may require additional control measures including, but not limited to; additional haybales, silt fence, sediment basins, or mechanically anchored mulch.

7.3 Refueling of equipment or machinery within 75 feet of any wetland or watercourse is prohibited.

7.4 No construction shall proceed until a written proposal of methods to prevent construction debris, paint, spent blast materials, or other materials from entering the wetland or watercourse has been submitted by the Contractor to the Owner and approved by the Owner, and such methods have been implemented as the Owner directs. These materials shall be collected and disposed of in an environmentally safe manner in accordance with all applicable Federal and State laws and regulations. The Owner may order the Contractor to cease such activity temporarily if, in the judgement of the Owner, wind or storm conditions threaten to cause the deposit of such materials into a waterway.

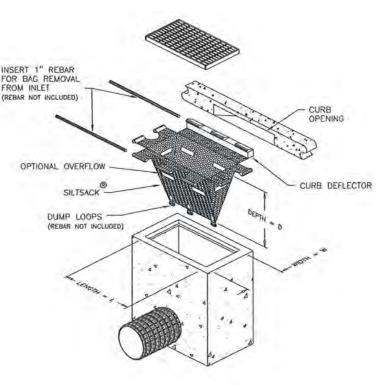
7.5 No materials resulting from construction activities shall be placed in or allowed to contribute to the degradation of an adjacent wetland or watercourse. Disposal of any material shall be in accordance with Connecticut General Statutes, including, but not limited to, Sections 22a-207 through 22a-209.

7.6 Fording of streams with equipment is prohibited, except as allowed by the Owner and the Owner's permits. Minimize such equipment travel. Where frequent, place washed stone to minimize erosion, scour, and turbidity, provided no significant grade change will be required for any haul road or temporary structure placed in wetlands or watercourses. Unless the above activities are specifically authorized by the Owner's permits, the Contractor shall acquire permits for such activities before commencement of the work.

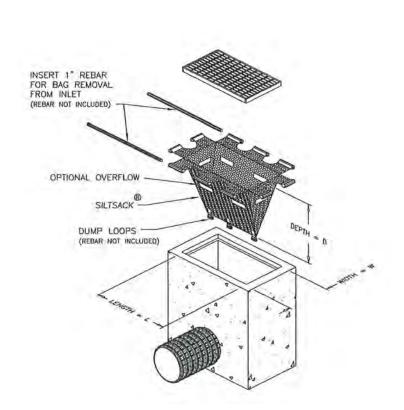
7.7 Conduct work within or adjacent to watercourses during periods of low flow, whenever possible. The Owner shall remain aware of flow conditions during the conduct of such work and shall cause such activity to cease should flow conditions threaten to cause excessive erosion, siltation or turbidity. The Contractor shall make every effort to secure the work site before prediction of a major storm event. A major storm shall be defined as a storm predicted by NOAA Weather Service with warnings of flooding, severe thunderstorms, or similarly severe weather

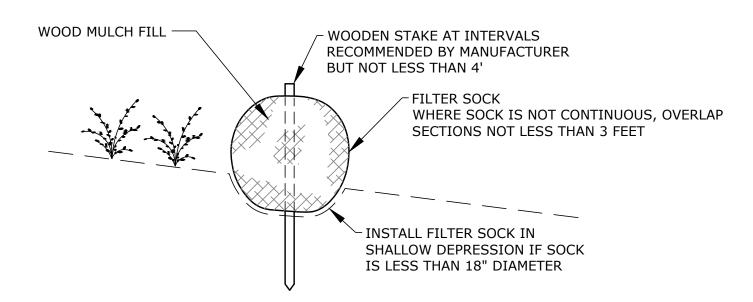
7.8 Stabilize all temporary fill to prevent erosion and to prevent sediment or other particulate matter from reentering a wetland or watercourse. Restore and revegetate all areas affected by temporary fills to their original contours or as directed by the Owner. Confine the temporary fill or excavation to that area necessary to perform the work, as approved by the Owner. 7.9 Dumping of oil, chemicals or other deleterious materials on the ground is forbidden. The Contractor shall provide a means of catching, retaining, and properly disposing of drained oil,

removed oil filters, or other deleterious material. All spills of such materials shall be reported immediately by the Contractor to the DEEP. 7.10 No application of herbicides or pesticides within 75 feet of any wetland or watercourse will be allowed. All such applications must be done by a Connecticut licensed applicator. The Contractor shall submit to the Owner the proposed applicator's name and license number, and must receive the Owner's approval of the proposed applicator, before such application is carried out.









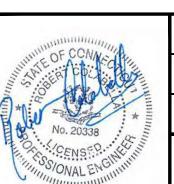
COMPOSITE FILTER SOCK NOT TO SCALE



BYRNES AVENUE ROADWAY & DRAINAGE IMPROVEMENTS LITCHFIELD, CONNECTICUT 06759

SOIL EROSION AND SEDIMENT CONTROL NARRATIVE AND DETAILS

August 14, 2025



VWW.HALEYWARD.COM

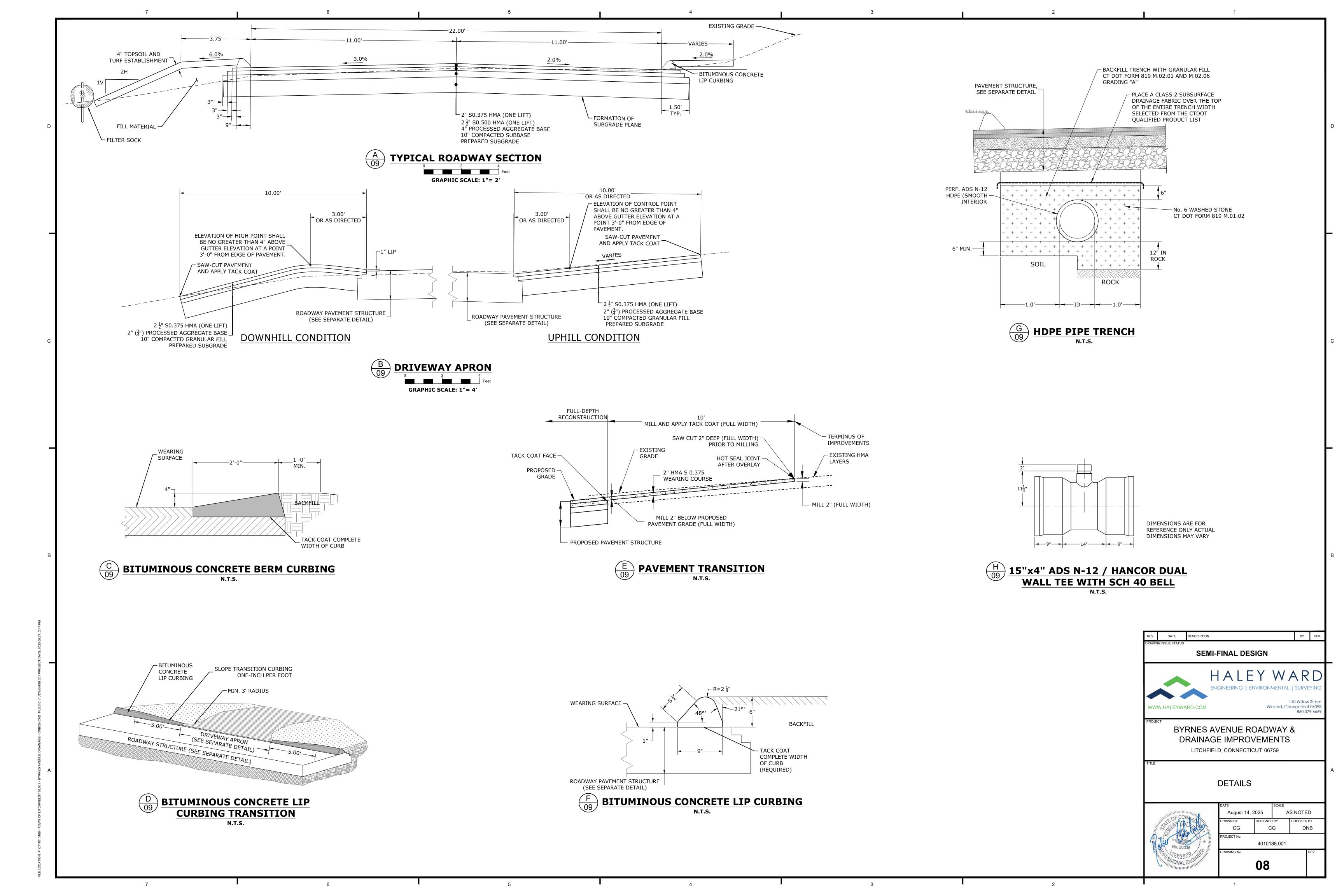
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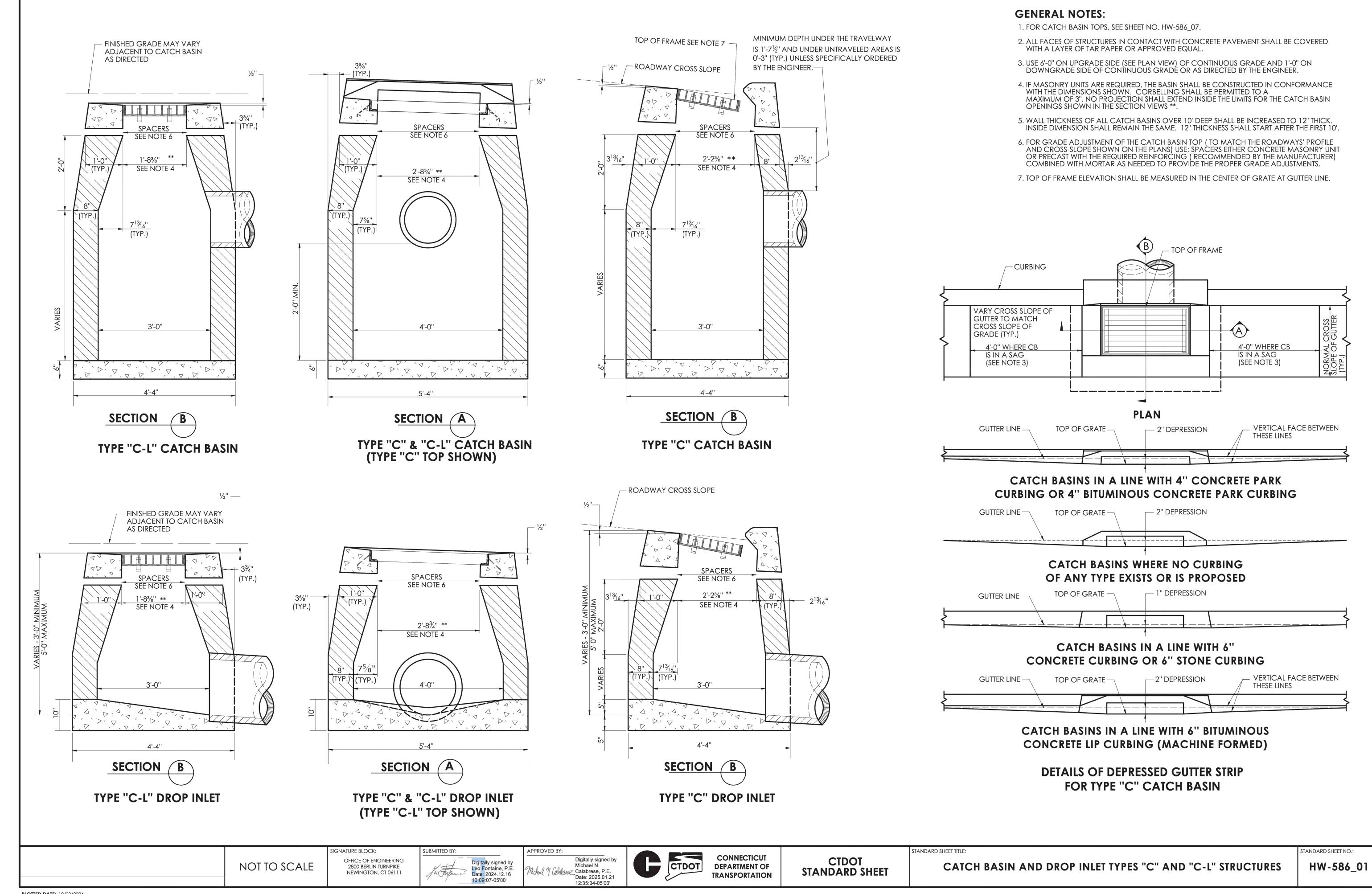
140 Willow Stre

AS NOTED

860.379.666

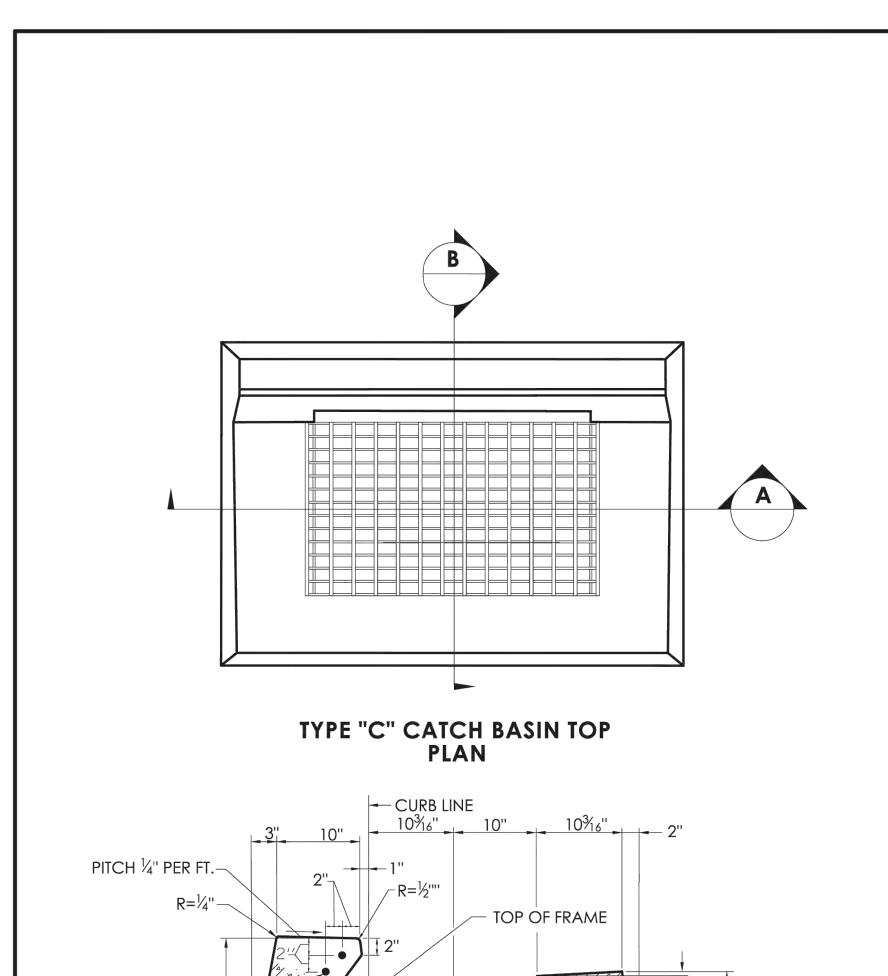
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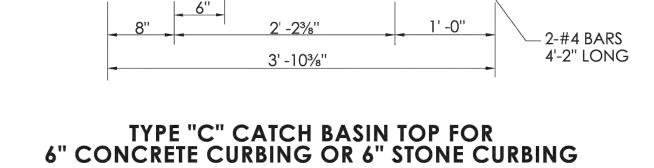


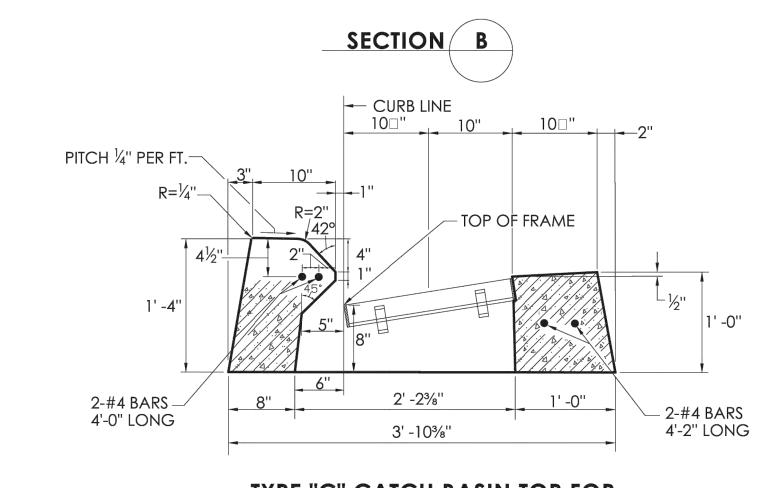


ELLE LOCATION: P.ICTAD1/0/88 - TOWN OF LITCHFIELD/488 NOT - RYBNES AVENLIF DRAINAGE - DNRIOZ-CAD FILES/CIVII (DWG

PLOTTED DATE: 10/22/2024

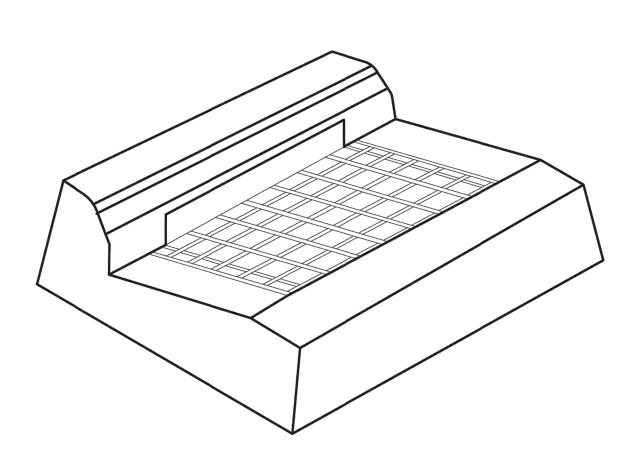




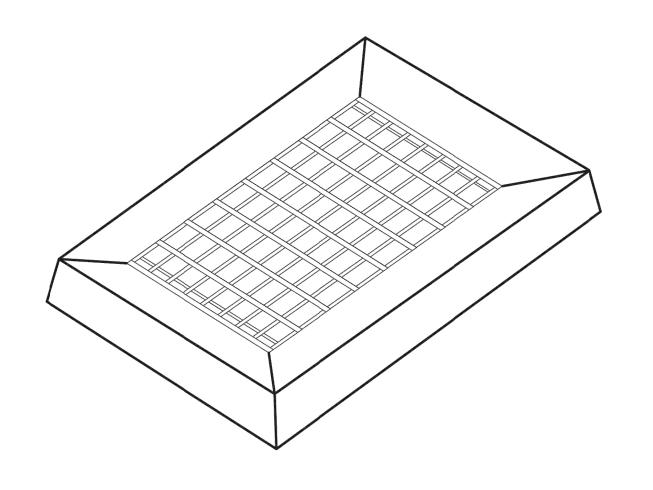


TYPE "C" CATCH BASIN TOP FOR 6" BITUMINOUS CONCRETE LIP CURBING

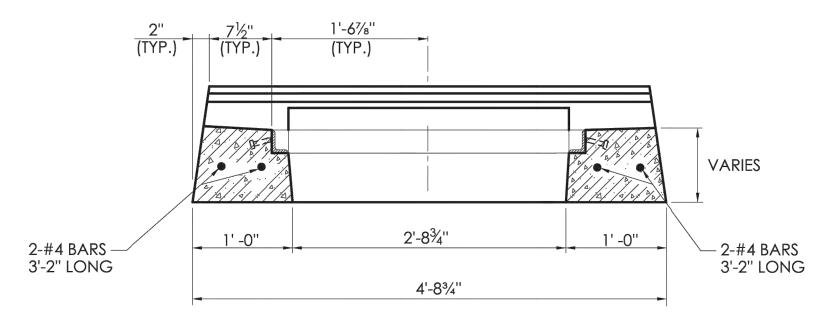




TYPE "C" CATCH BASIN TOP

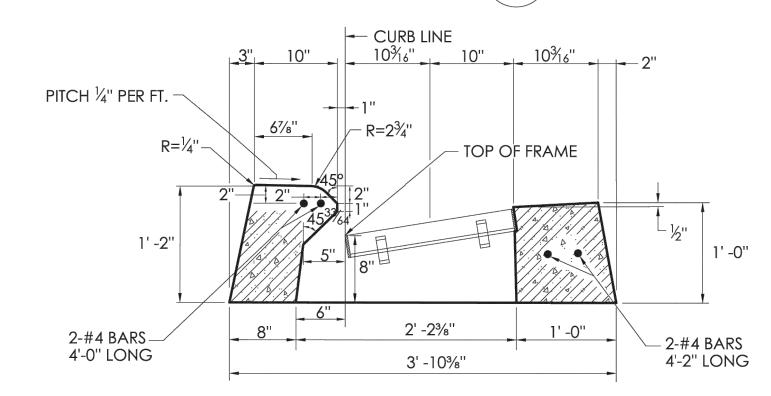


TYPE "C-L" CATCH BASIN TOP



TYPE "C" CATCH BASIN TOP

SECTION A



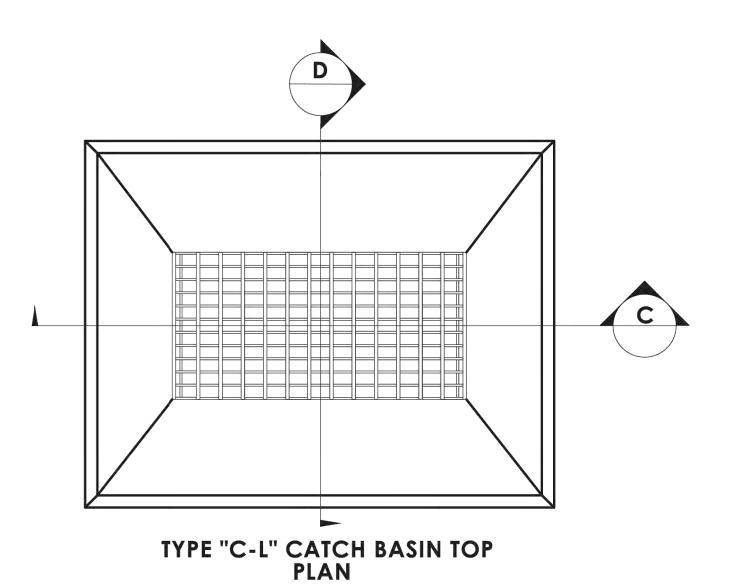
TYPE "C" CATCH BASIN TOP FOR 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



GENERAL NOTES:

- SEE SHEET HW-586_08, FOR CATCH BASIN FRAMES AND GRATES AND HW-586_09 FOR CATCH BASIN LOCK DOWN TOPS.
- 2. SEE SHEET HW-586_01, CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" TO DETERMINE THE TOP OF FRAME DEPRESSION AT THE GUTTER.
- 3. ALL BARS SHALL HAVE A MINIMUM 2" COVER.
- 4. Manufacturing Dimensional Tolerance Table

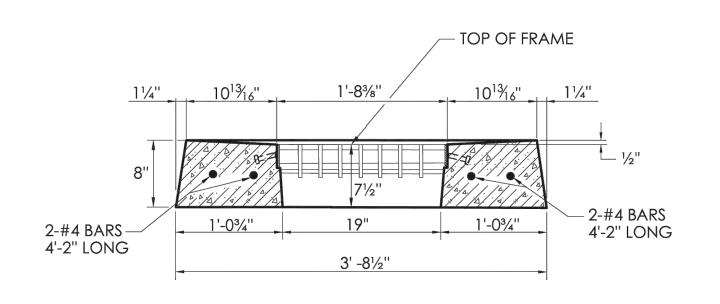
Any Dimension (D)	Allowable Tolerance
D < 5"	± ¼"
5" ≤ D ≤ 10"	± ½"
D > 10"	+ 1"



2-#4 BARS 3'-2" LONG

TYPE "C-L" CATCH BASIN TOP





TYPE "C-L" CATCH BASIN TOP

SECTION D

NOT TO SCALE

SIGNATURE BLOCK:

OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

Digitally signed by Leo Fontaine, P.E. Date: 2024.12.16 10:20:48-05'00'

APPROVED BY:

Digitally signed by Michael N.
Calabrese, P.E.
Date: 2025.01.21
12:42:28-05'00'





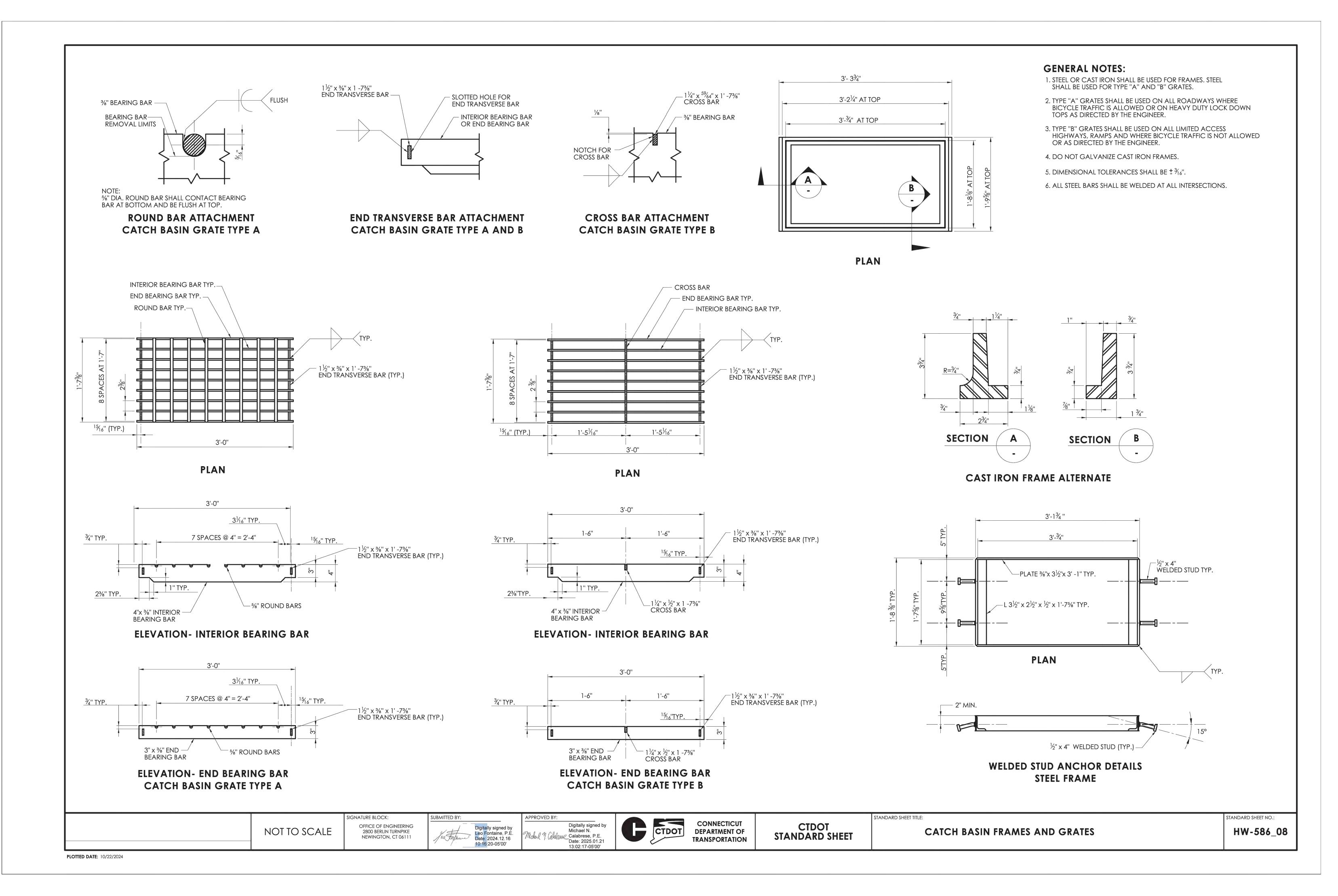
CTDOT STANDARD SHEET STANDARD SHEET TITLE:

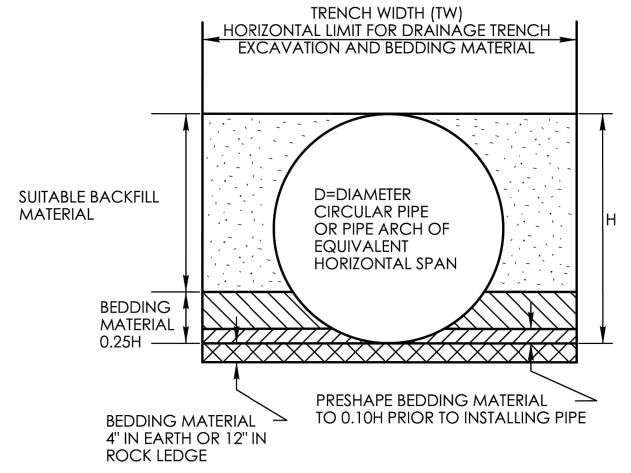
CATCH BASIN TYPE "C" AND "C-L" TOPS

STANDARD SHEET NO.:

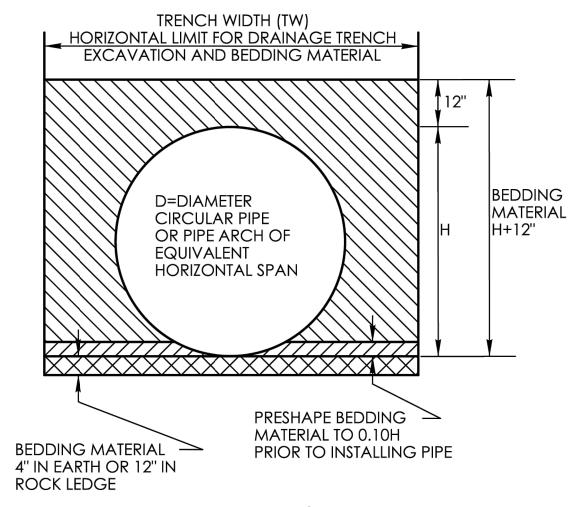
HW-586_07a

2-#4 BARS — 4'-0" LONG





PIPE TRENCH FOR PIPES LESS THAN 48"



PIPE TRENCH FOR PIPES GREATER THAN OR EQUAL TO 48"

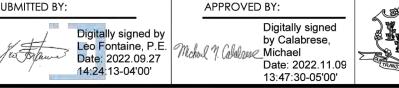
TRENCH WIDTH (TW) CHART

ikeiton wibin (iw) chaki			
PIPE, PIPE-ARCH, OR DRAINAGE STRUCTURE	TRENCH WIDTH		
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN LESS THAN 30"	2' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN		
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN GREATER THAN OR EQUAL TO 30"	3' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN		
PIPE OR PIPE-ARCH FABRICATED FROM STRUCTURAL PLATES	4' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN		
DRAINAGE STRUCTURES	2' BEYOND ALL EXTERIOR OR FOUNDATION WALLS		

CROSS CULVERT PIPE TRENCH DETAIL

NOT TO SCALE

OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111

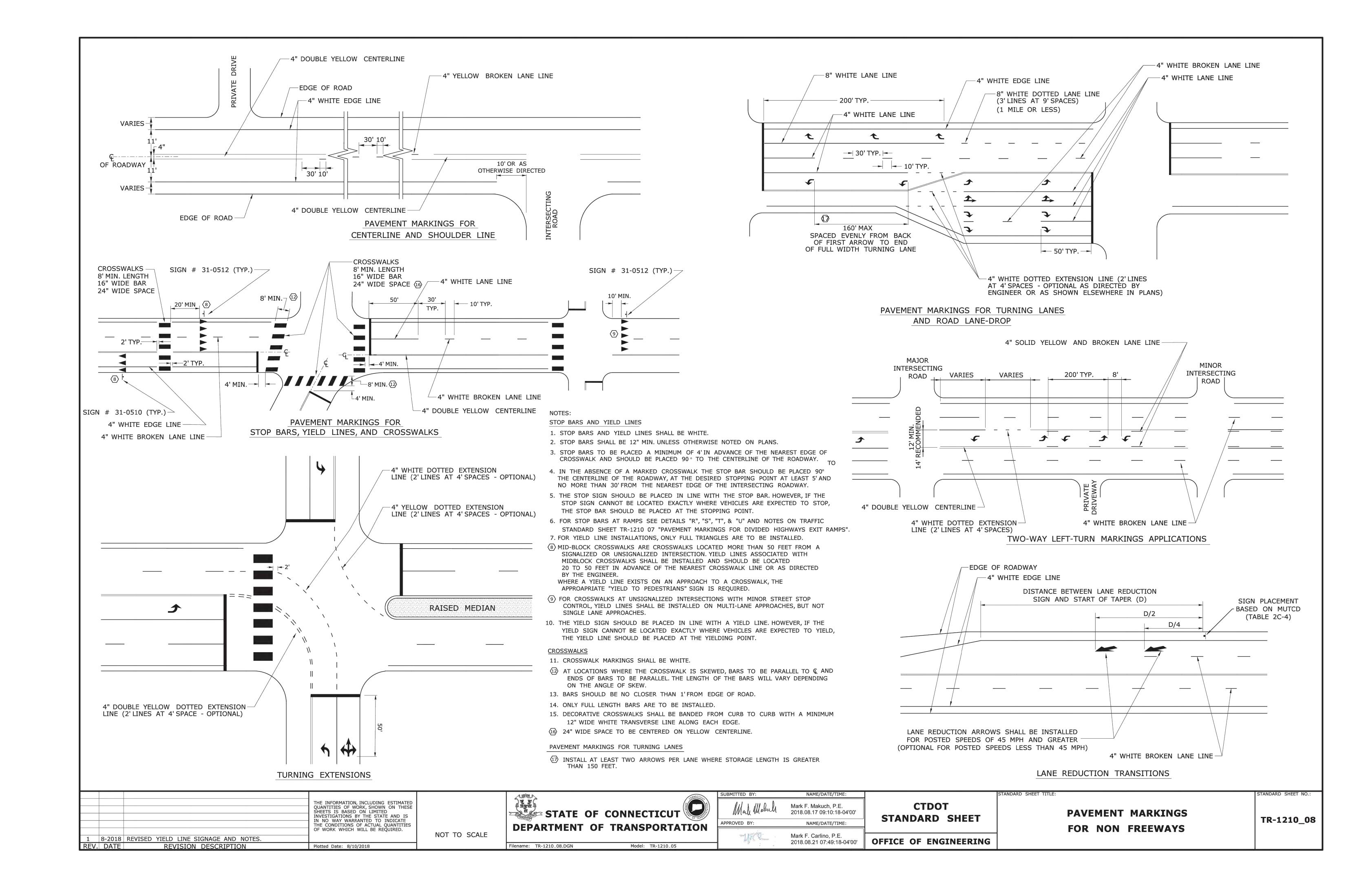




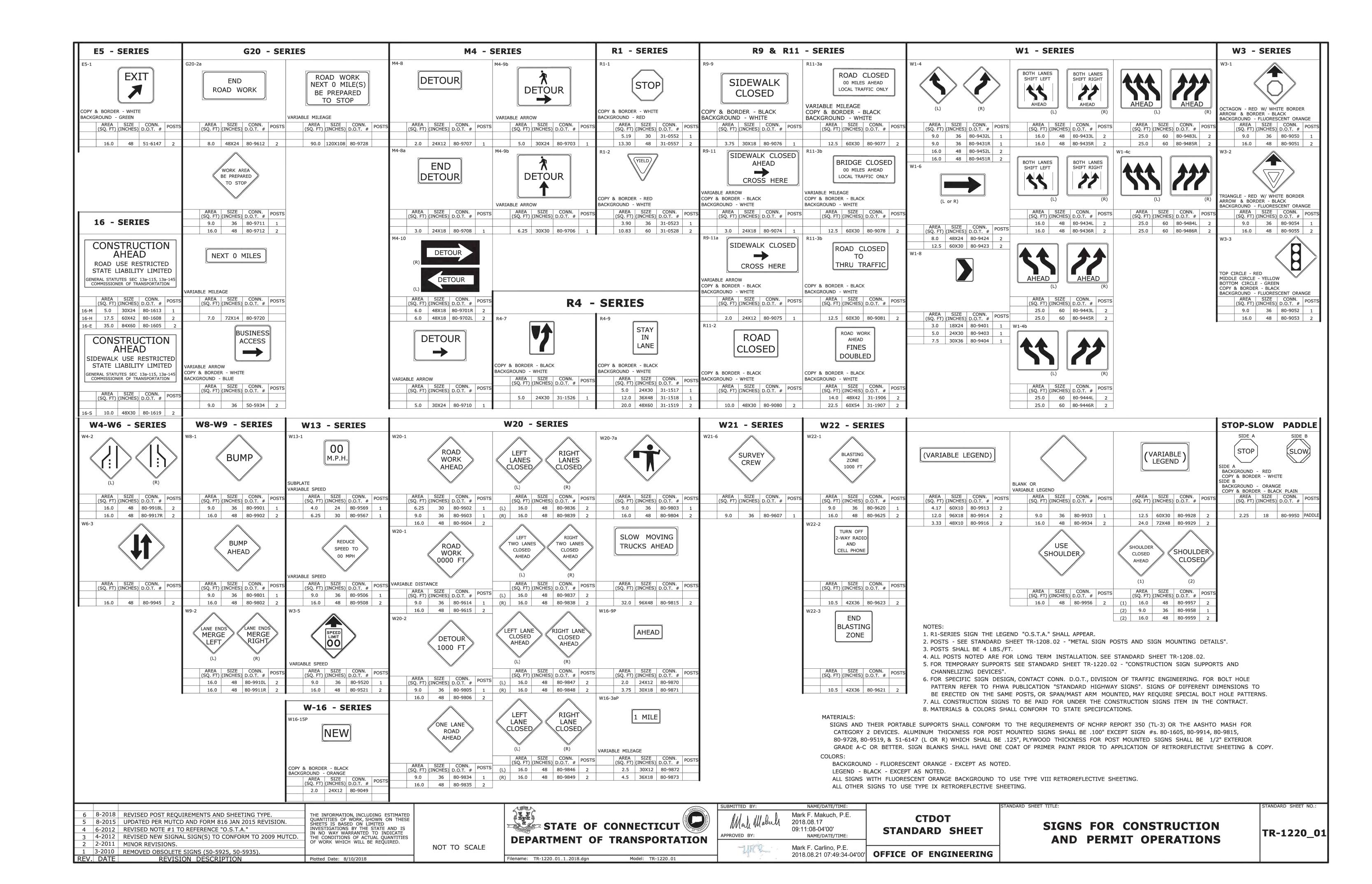
CTDOT STANDARD SHEET

DRAINAGE TRENCH EXCAVATION

HW-286_01



FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.001 - BYRNES AVENUE DRAINAGE - DNB\02-CAD_FILES\CIVIL\DWG\188.001 PROJECT.DWG, 2025.



PORTABLE CONSTRUCTION SIGNS

OR THE AASHTO MASH FOR CATEGORY 2 DEVICES AND THE LATEST EDITION OF THE MUTCD.

2. MOUNTING HEIGHT OF SIGNS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 24".

1. SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3)

3. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SUPPORT DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.

SIGNS SHALL BE MOUNTED HIGHER AS NEEDED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.

4. PORTABLE SIGN SUPPORTS SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3)

5. PORTABLE CONSTRUCTION SIGN SUPPORTS SHOULD NOT BE USED FOR DURATION OF MORE THAN 3 DAYS EXCEPT FOR R9-8 THROUGH

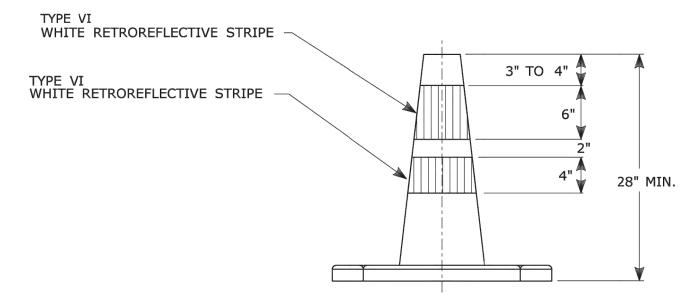
R9-11a SERIES, R11 SERIES, W1-6 THROUGH W1-8 SERIES, M4-10, AND E5-1. SEE STANDARD SHEET TR-1220_01 - "SIGNS FOR

TYPE IV OR TYPE VIII FLUORESCENT ORANGE RETROREFLECTIVE STRIPE TYPE IV OR TYPE VIII WHITE RETROREFLECTIVE STRIPE — -CENTERED ON TYPE IV OR TYPE VIII FLUORESCENT ORANGE SECTION (TYP.) RETROREFLECTIVE STRIPE TYPE IV OR TYPE VIII WHITE RETROREFLECTIVE STRIPE -

42" TRAFFIC CONE

NOTES:

- 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 6. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



TRAFFIC CONE

- 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. THE ENTIRE AREA OF WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 6. TRAFFIC CONES NOT USED AT NIGHT MAY UTILIZE TYPE III SHEETING.
- 7. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.

TYPE IV OR TYPE VIII

FLUORESCENT ORANGE

6" (TYP.)

3" MAX. (TYP.)

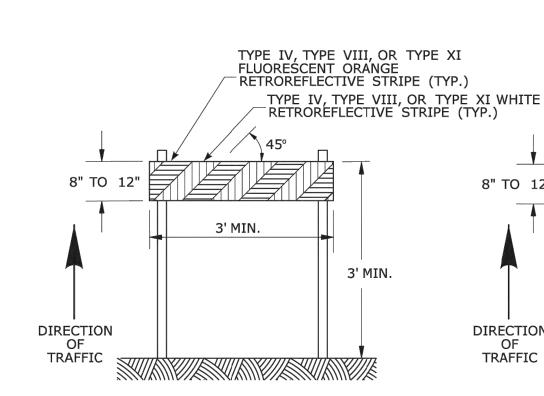
TYPE IV OR TYPE VIII

RETROREFLECTIVE STRIPE (TYP.)

TYPE IV OR TYPE VIII WHITE RETROREFLECTIVE STRIPE (TYP.)

FLUORESCENT ORANGE RETROREFLECTIVE STRIPE (TYP.)

TYPE IV OR TYPE VIII WHITE RETROREFLECTIVE STRIPE (TYP.)



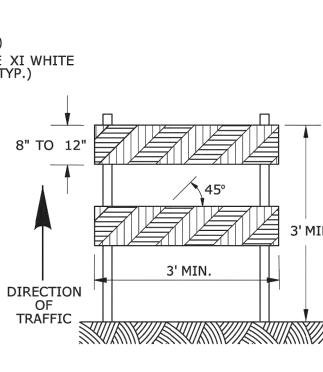
NOTES FOR PORTABLE SIGN SUPPORTS:

* FOR E5-1 (EXIT SIGNS) USE MIN 48".

OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.

CONSTRUCTION AND PERMIT OPERATIONS" FOR SIGN DETAILS.





TYPE II BARRICADE

CONSTRUCTION BARRICADES

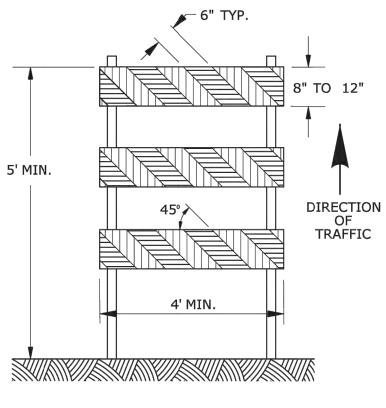
1. CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP

WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO

3. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE

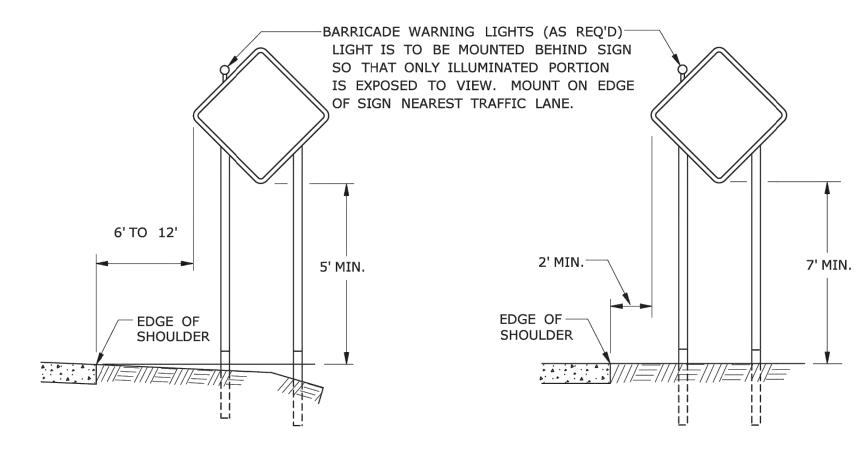
2. MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE FLUORESCENT ORANGE AND

REPORT 350 (TL-3) OR THE AASHTO MASH AND THE LATEST EDITION OF THE MUTCD.



TYPE III BARRICADE

NOT TO SCALE



RURAL AREA

URBAN AREA

PLACEMENT OF CONSTRUCTION SIGNS TYPICAL LONG TERM INSTALLATION

NOTES:

SUPPORTS SHALL BE METAL SIGN POSTS AND HAVE BREAK-AWAY FEATURES.

REFER TO STANDARD SHEETS:

TR-1208_01 - "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS." TR-1208_02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."

TRAFFIC DRUM **FRONT VIEW**

36" MIN.

NOTES:

- 1. TRAFFIC DRUM SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 3. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 4. THE SECTIONS OF DRUMS NOT COVERED WITH RETROREFLECTIVE STRIPES

SHALL BE ORANGE.

RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.

- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. CORNERS OF BARRICADE RAILS SHALL BE ROUNDED.

PASS. 6" WIDE STRIPES SHALL BE USED.

6. SIGNS MAY ONLY BE INSTALLED ON TYPE III BARRICADES AND SHALL BE PLACED SO AS TO COVER NO MORE THAN ONE BARRICADE RAIL.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED. 3 8-2018 UPDATED SHEETING TYPE AND COLOR. 2 8-2015 UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION. 1 2-2011 MINOR REVISIONS. REV. DATE REVISION DESCRIPTION Plotted Date: 8/10/2018

NOTES:

STATE OF CONNECTICUT **DEPARTMENT OF TRANSPORTATION** Filename: TR-1220_02_3_2018.dgn Model: TR-1220_02

NAME/DATE/TIME: Mark F. Makuch, P.E. 2018.08.17 09:12:43-04'00' NAME/DATE/TIME: Mark F. Carlino, P.E. 2018.08.21 07:49:51-04'00

CTDOT STANDARD SHEET

OFFICE OF ENGINEERING

CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

TR-1220_02