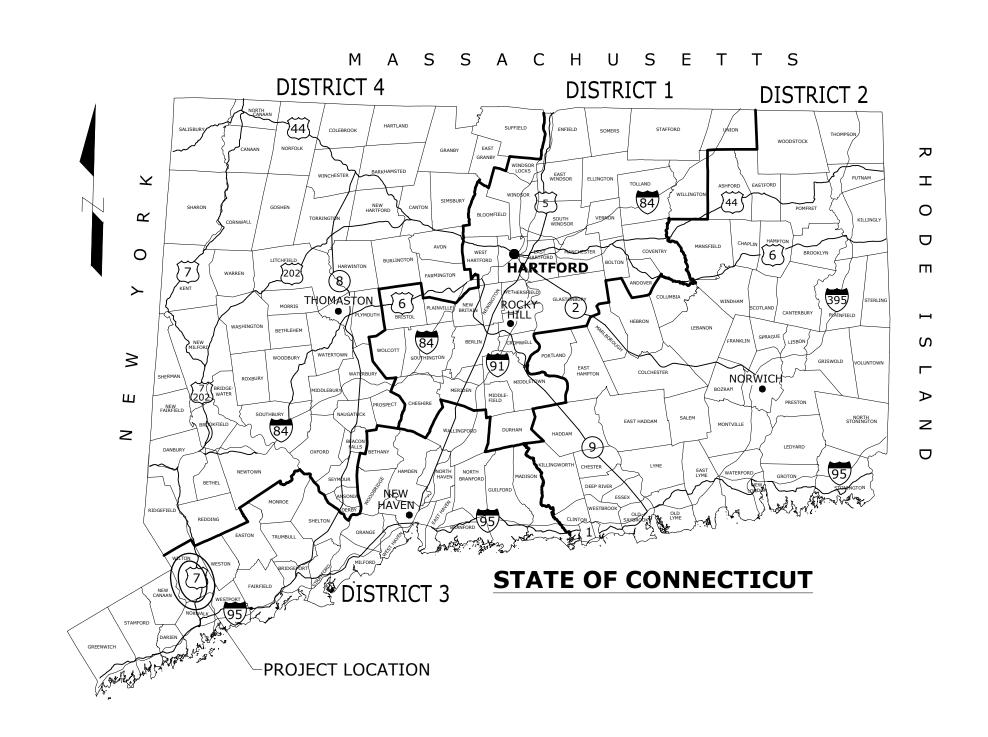
# NORWALK RIVER VALLEY TRAIL



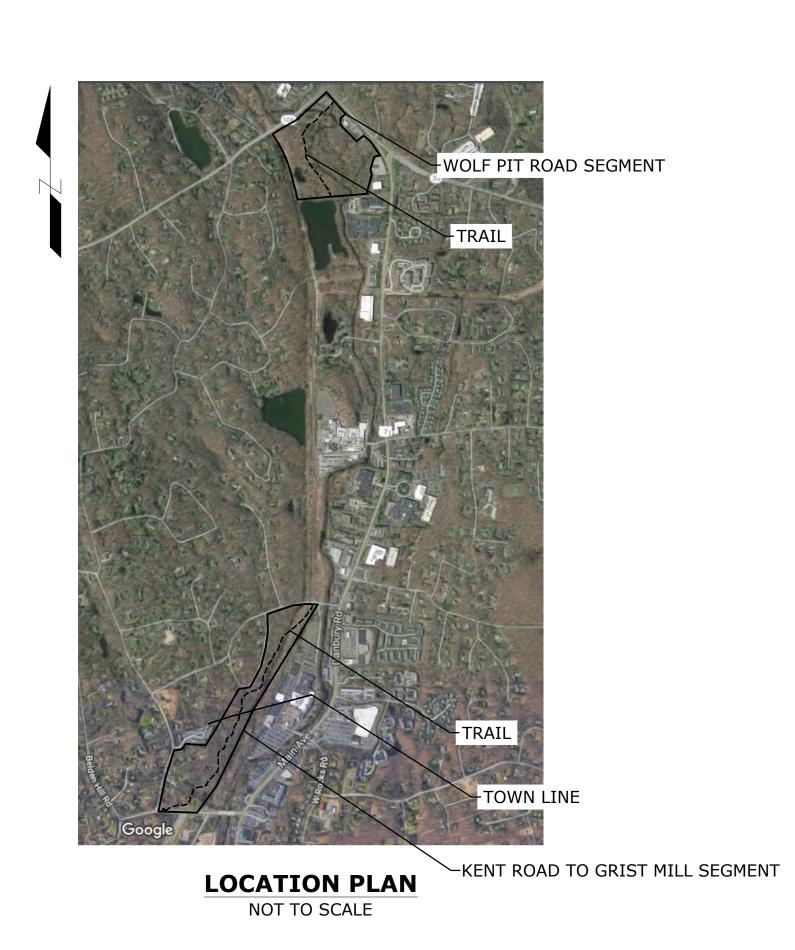
Plans for 'WIL-WALK' SEGMENT

GRIST MILL ROAD TO KENT ROAD AND
WOLF PIT ROAD TO EXISTING POND

Town of WILTON

&

City of NORWALK



## LIST OF DRAWINGS

EX 01-02 EXISTING CONDITIONS PLAN

PLN 01-06 TRAIL PLANS

PRO 01-05 PROFILE PLANS

D-01 SEDIMENTATION & EROSION

CONTROL DETAILS

D 02 DETAILS

D 03-05 BOARDWALK DETAILS

JUNE 24<sup>TH</sup>, 2020

Plans For

NORWALK RIVER VALLEY TRAIL 'WIL-WALK' SECTION

Town of WILTON

City of NORWALK

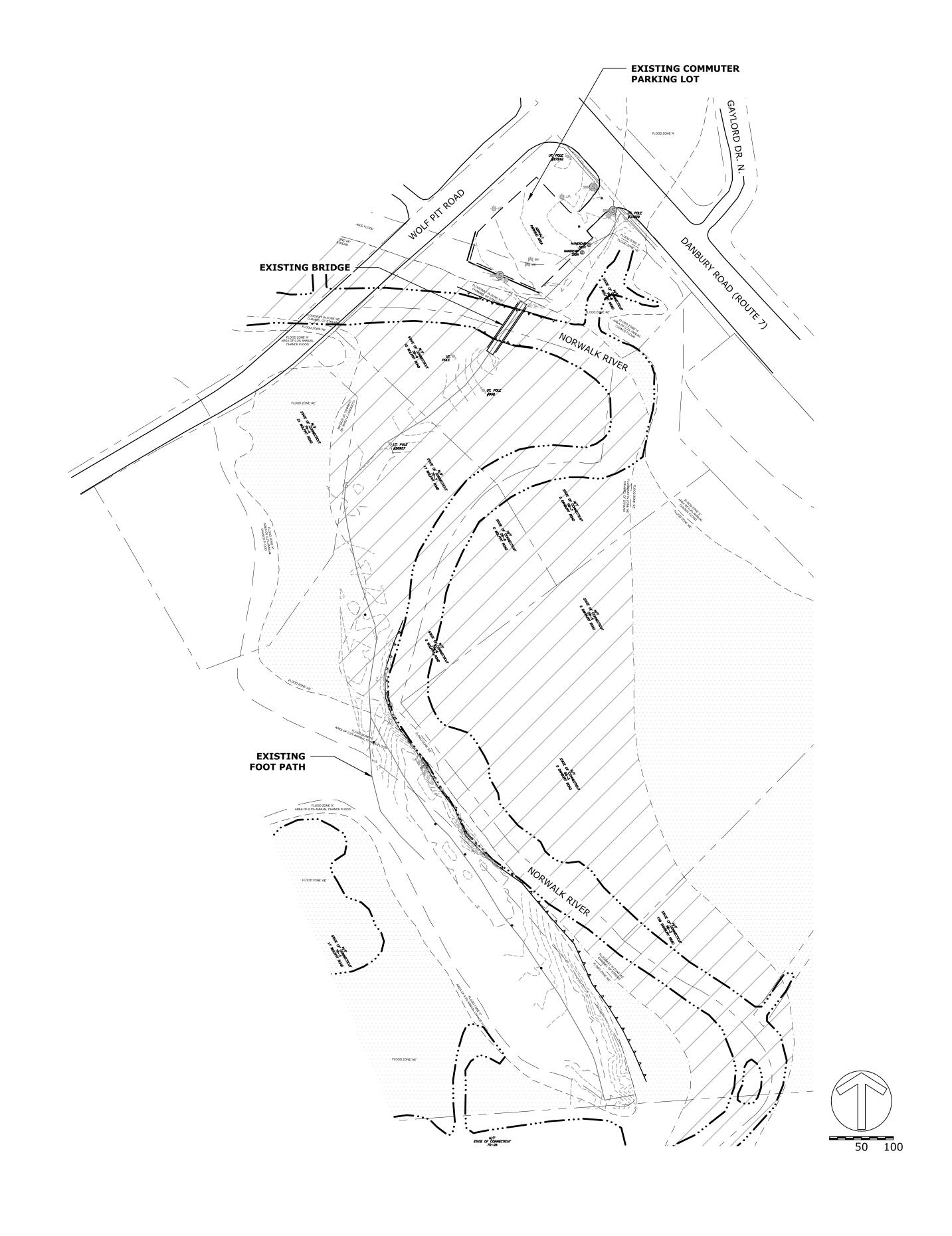
PROJECT NO.

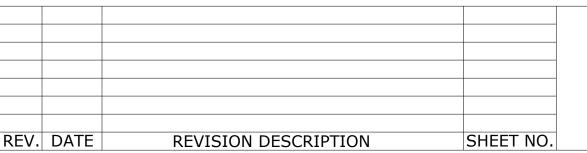
drawing no. **G-01** 

SHEET NO.

G-01









DESIGNER/DRAFTER: M. PATE CHECKED BY: A. DICAMILLO AS NOTED

Filename:

CITY OF NORWALK/ **TOWN OF WILTON** CONNECTICUT

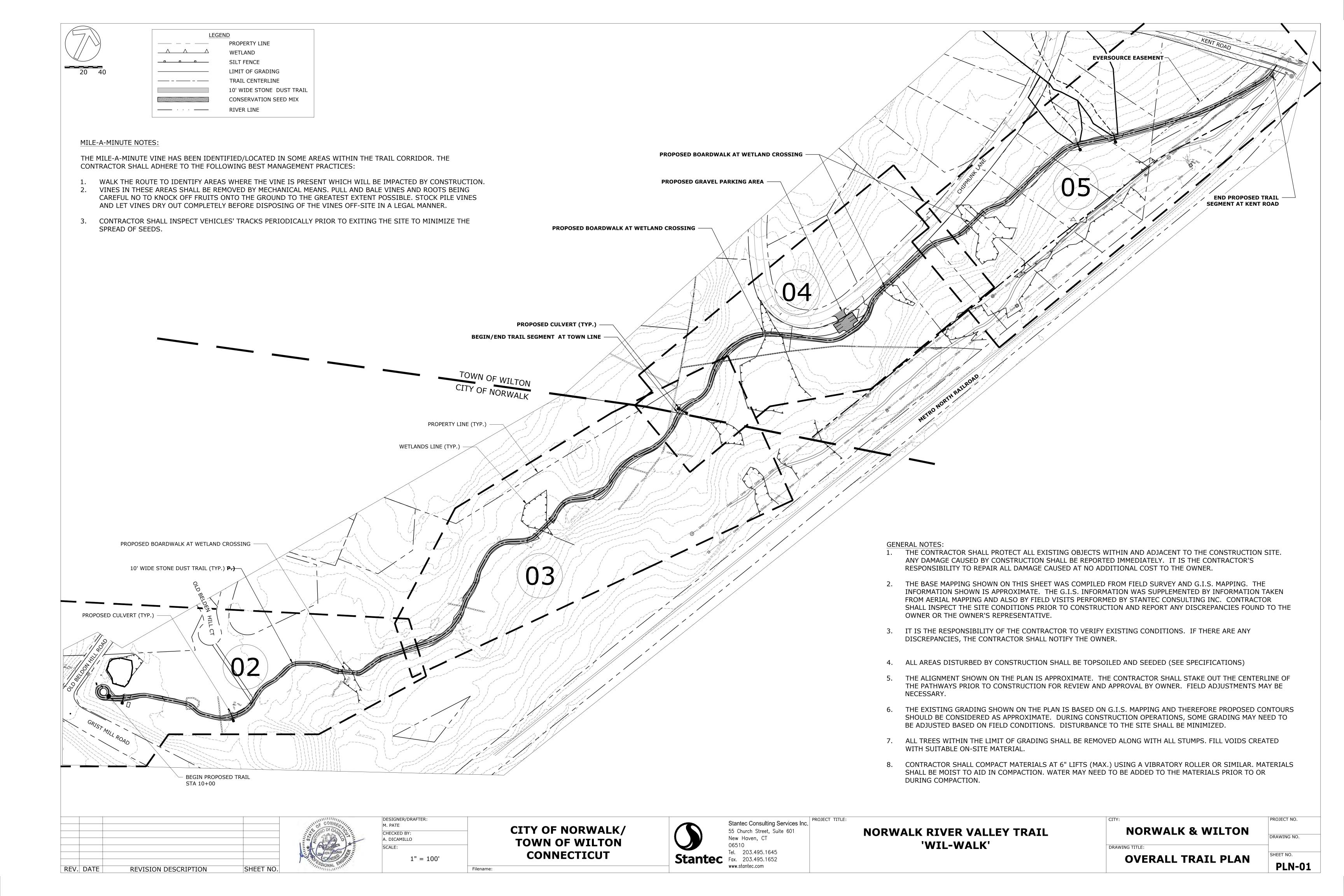


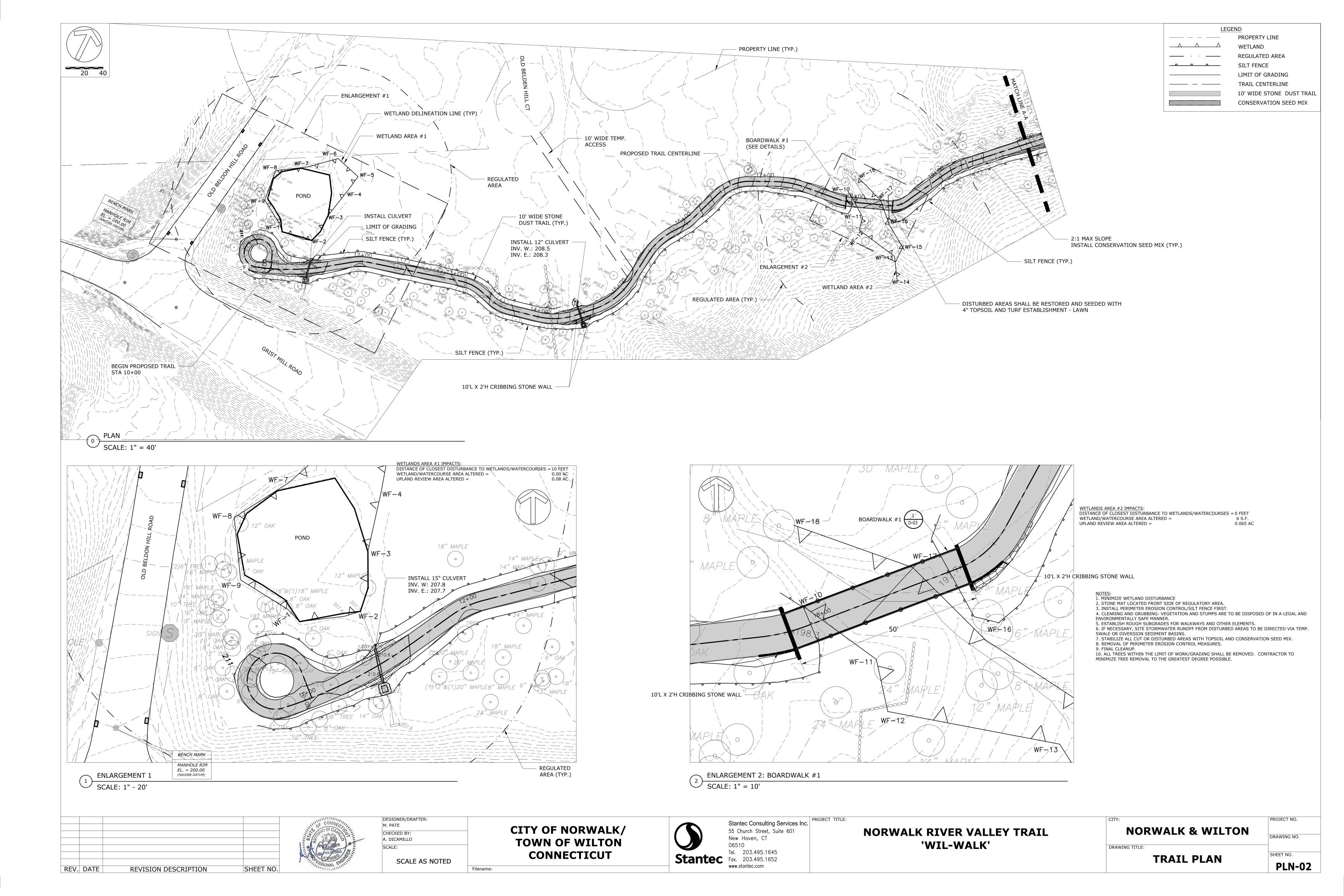
**NORWALK RIVER VALLEY TRAIL** 'WIL-WALK'

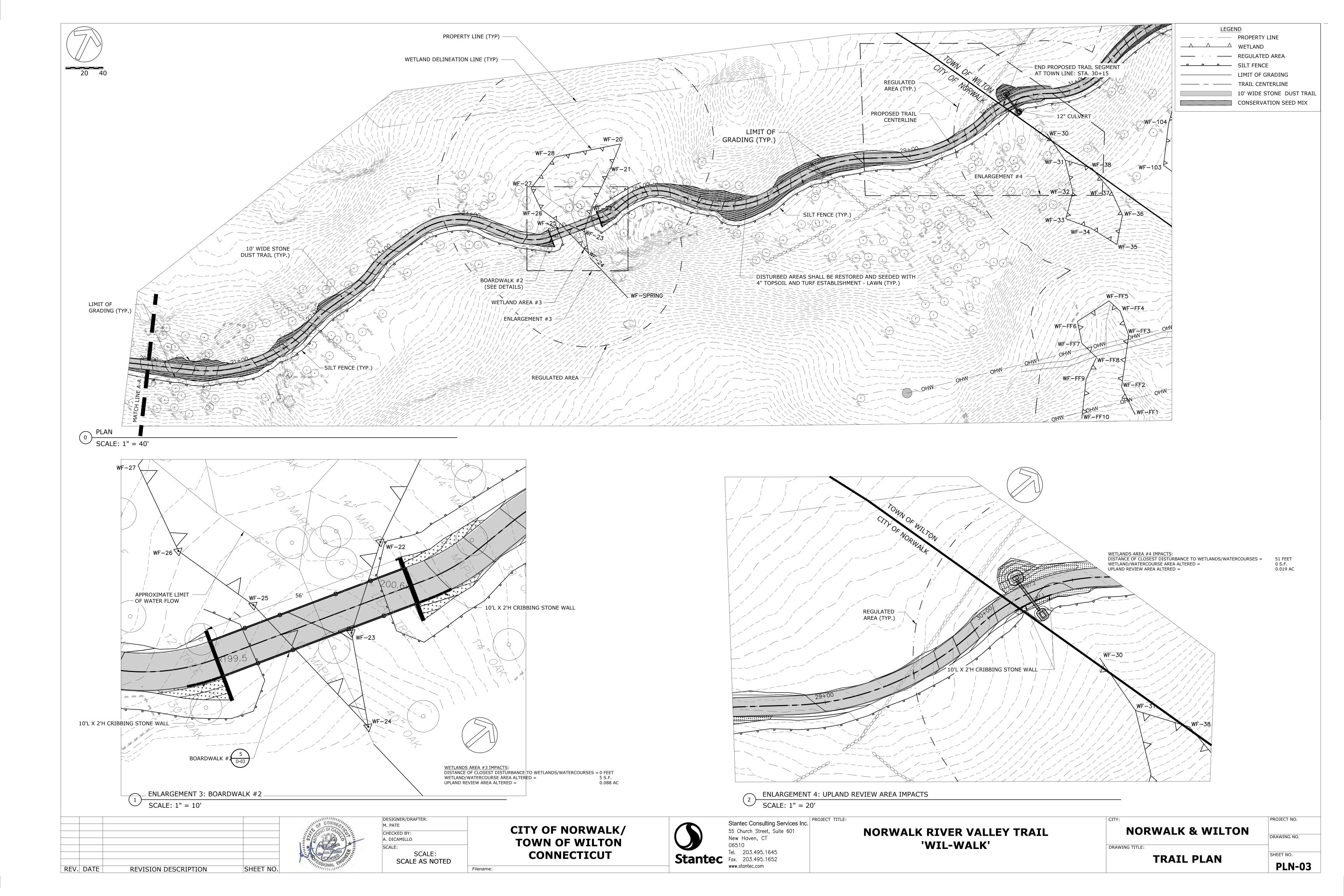
**NORWALK & WILTON** 

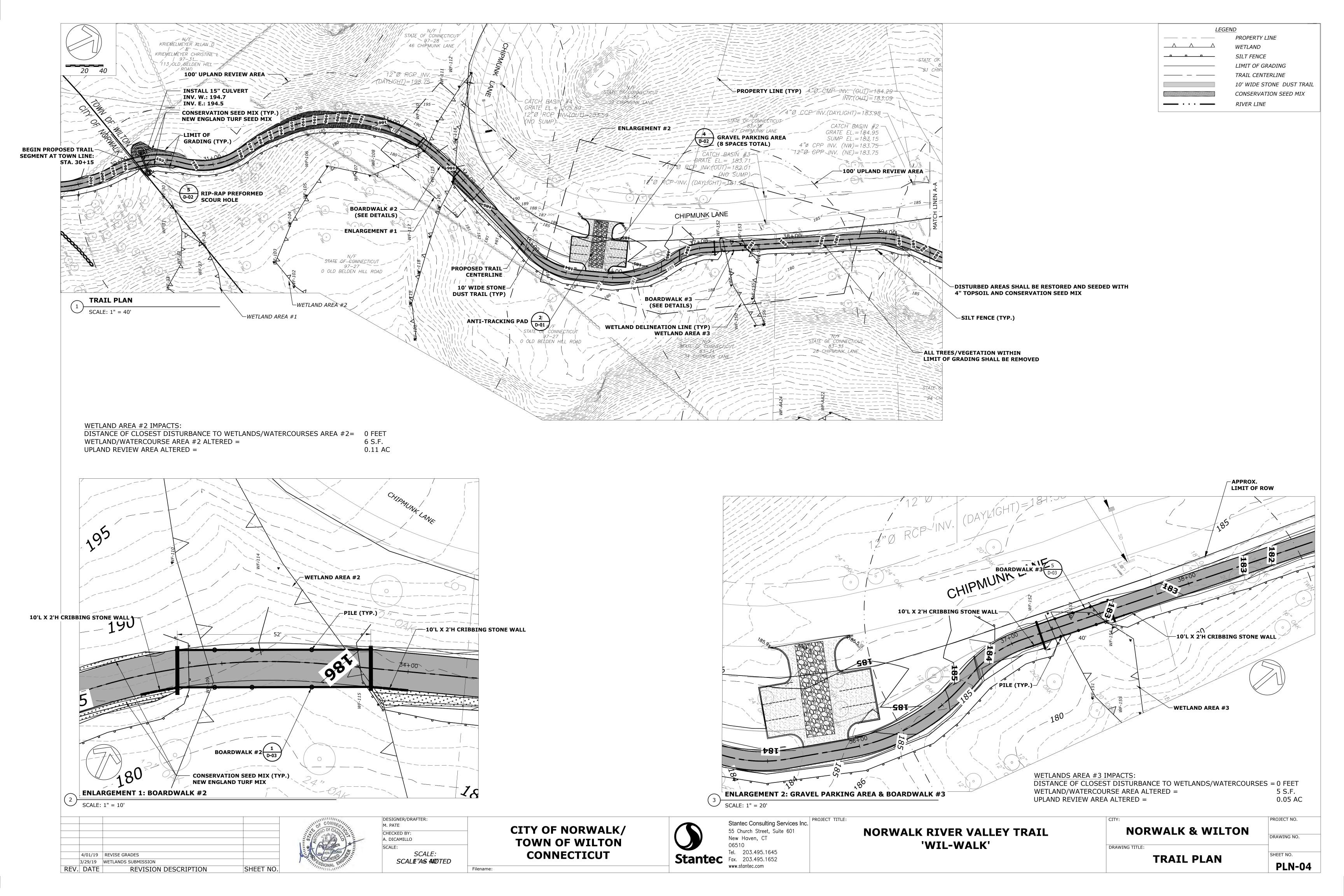
**EXISTING CONDITIONS PLAN EX-02** 

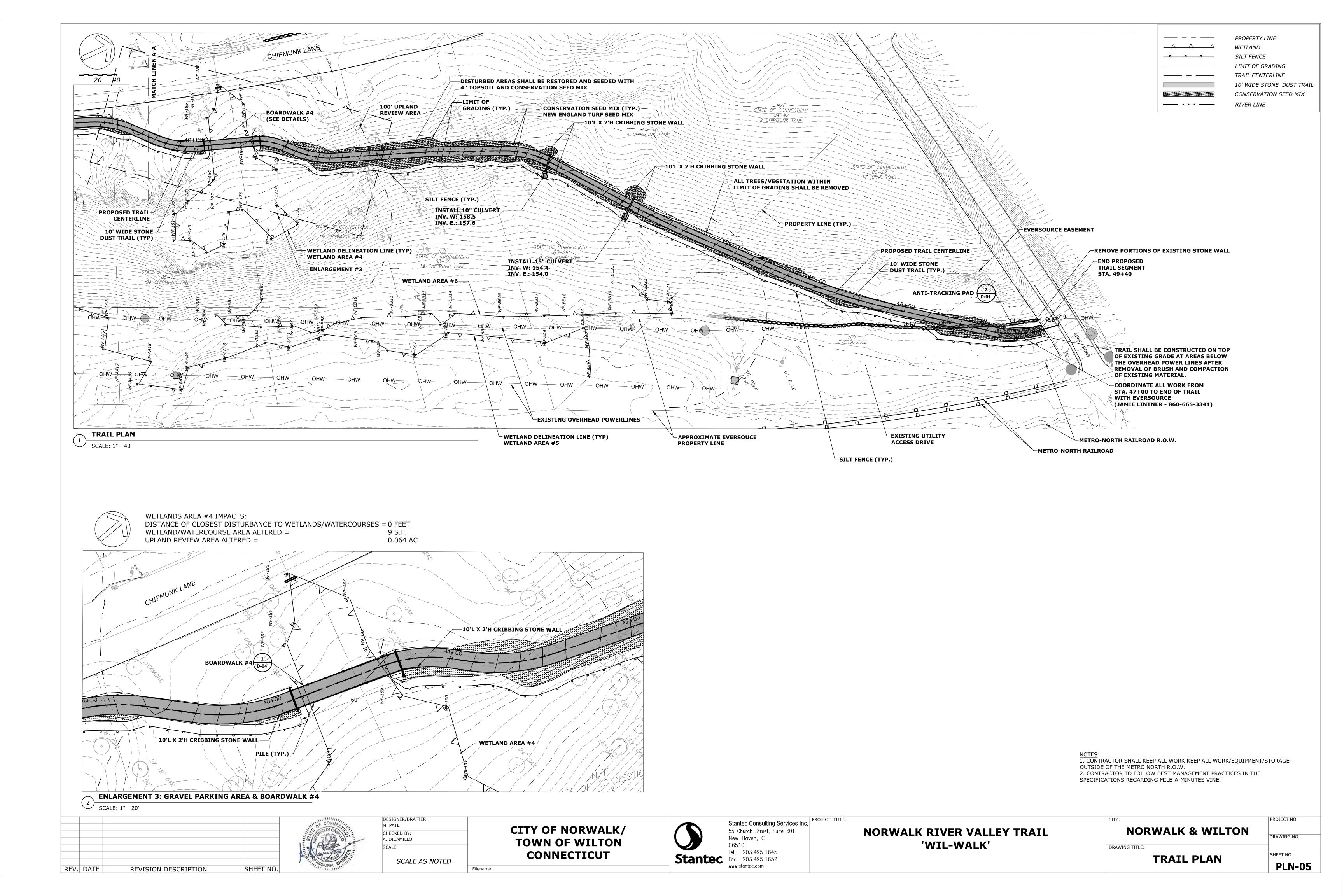
PROJECT NO.

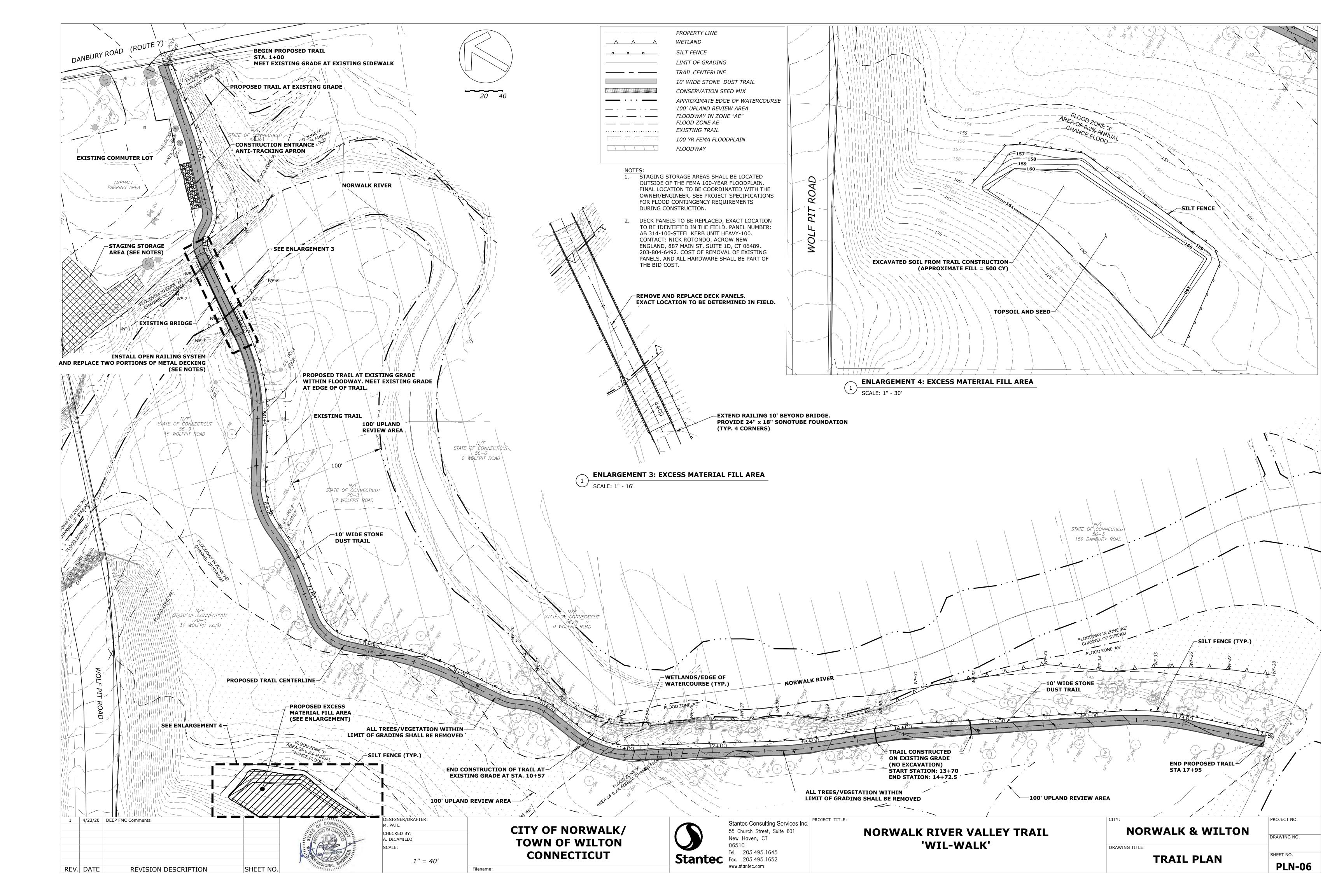


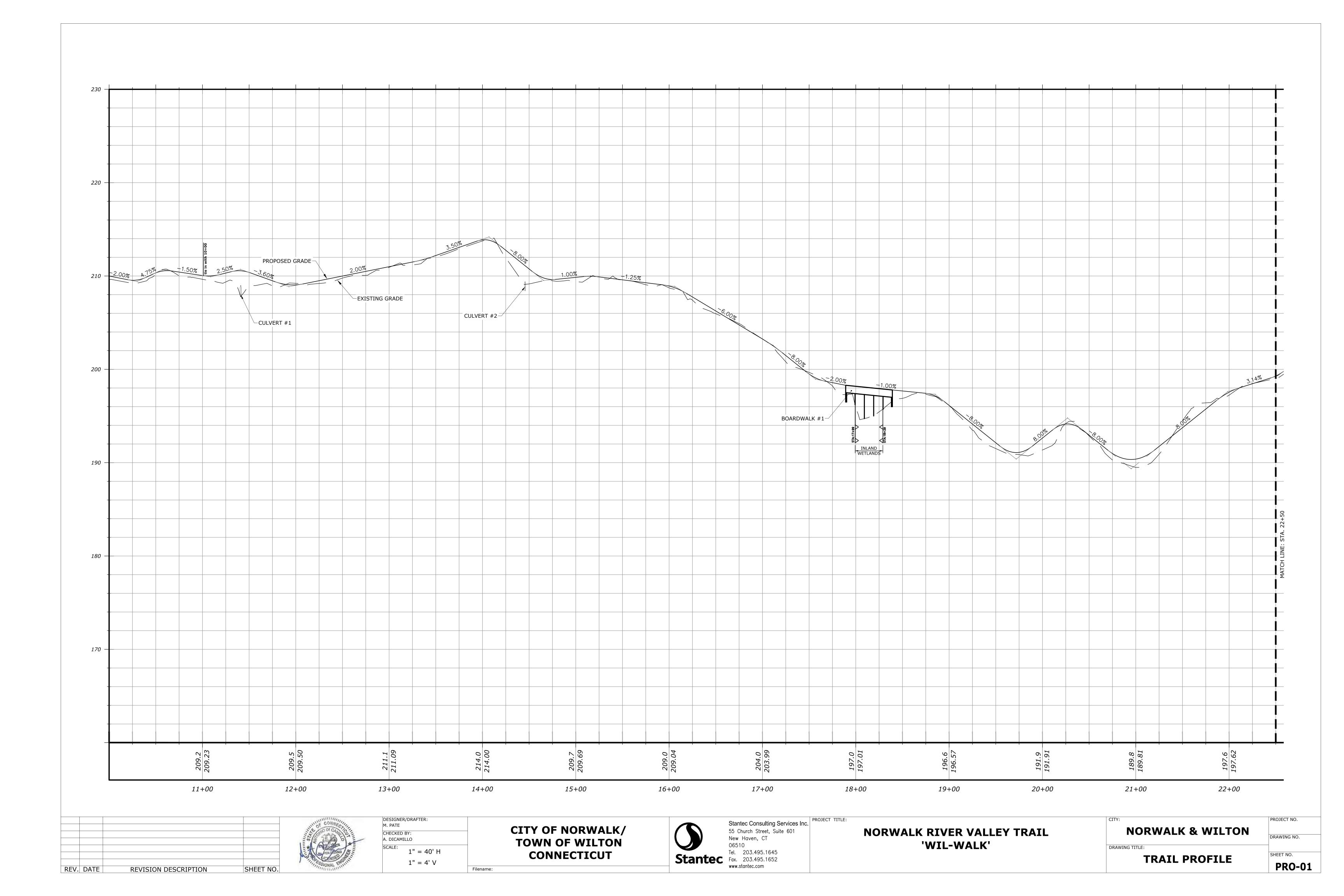


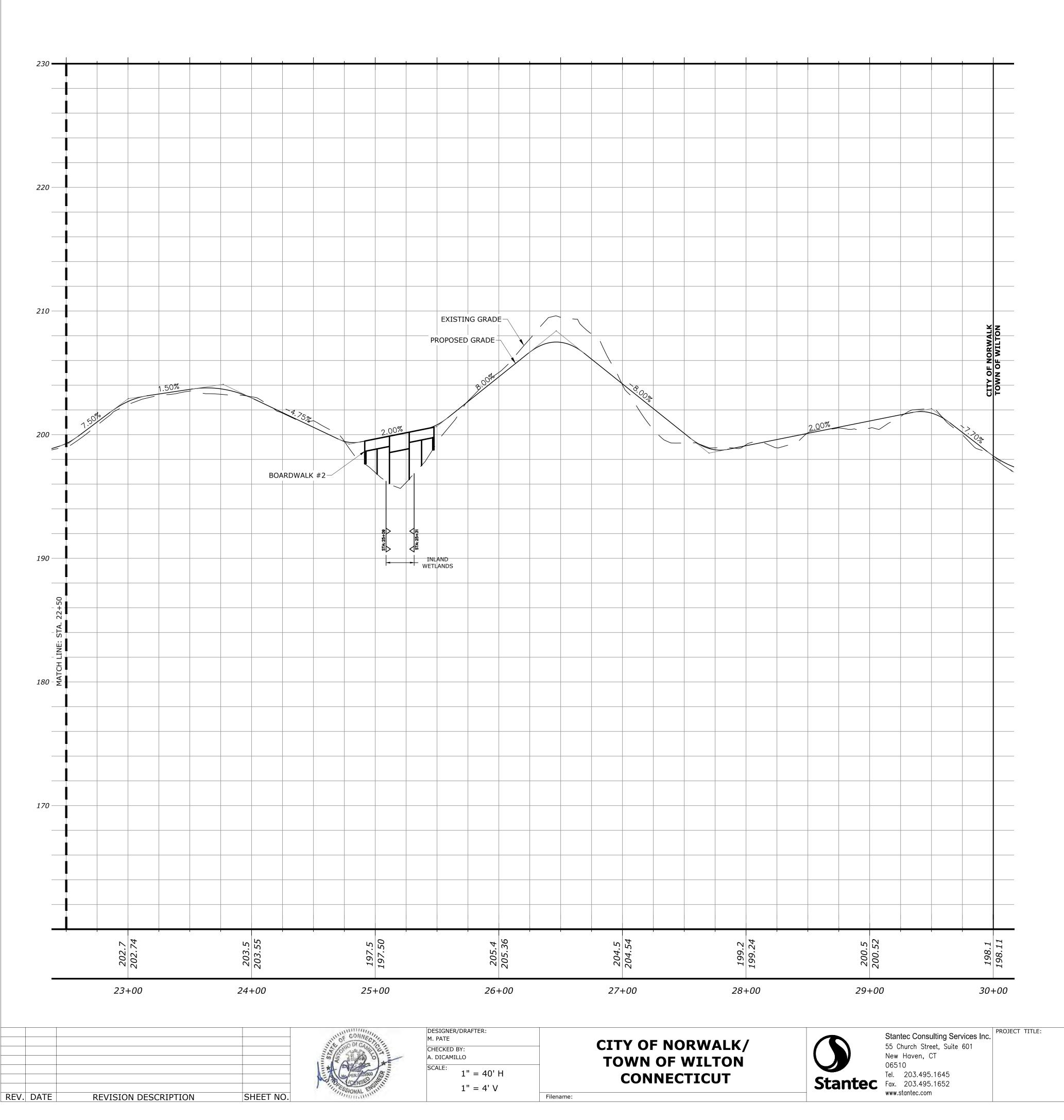












1" = 4' V

Filename:

SHEET NO.

REV. DATE

REVISION DESCRIPTION

CONNECTICUT

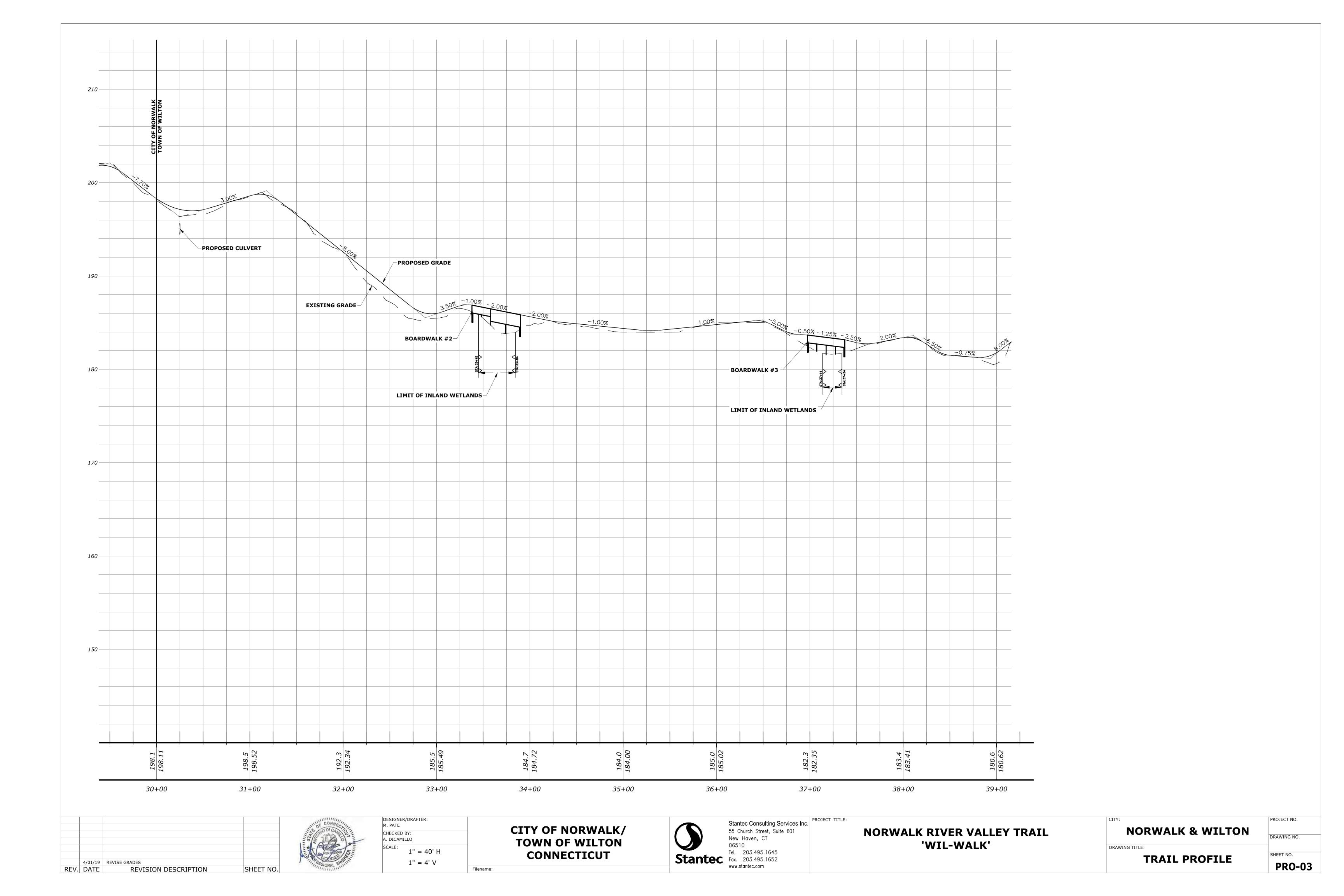
**NORWALK & WILTON NORWALK RIVER VALLEY TRAIL** 'WIL-WALK' TRAIL PROFILE

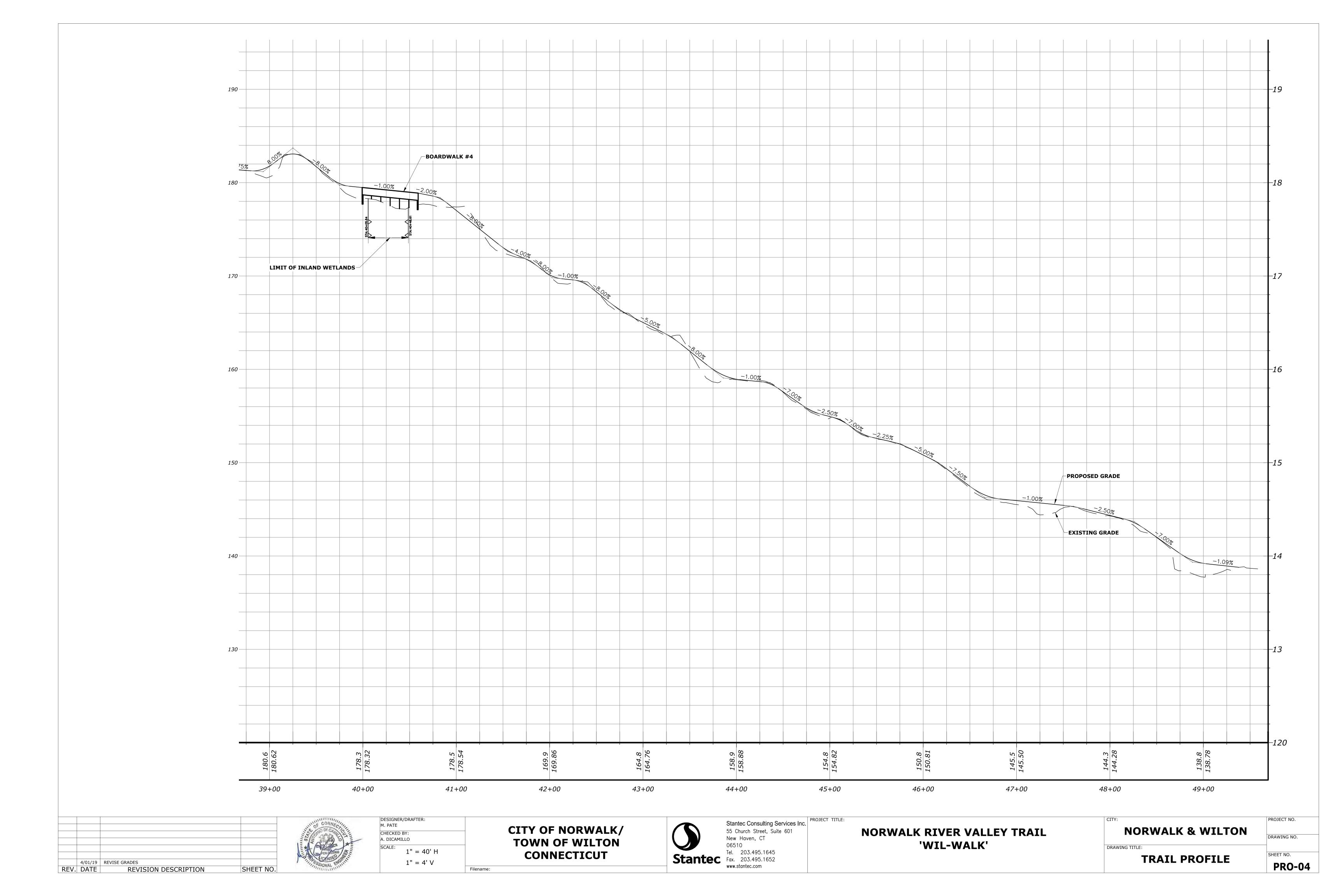
PROJECT NO.

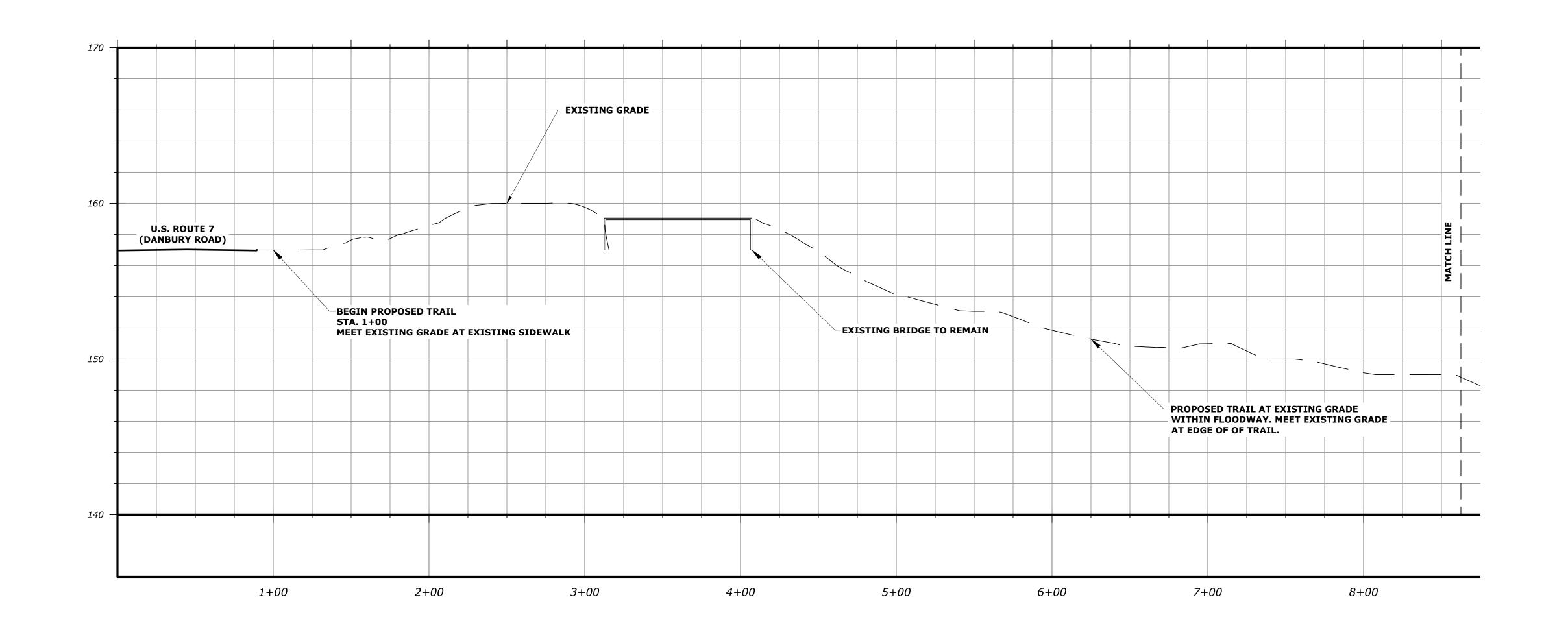
DRAWING NO.

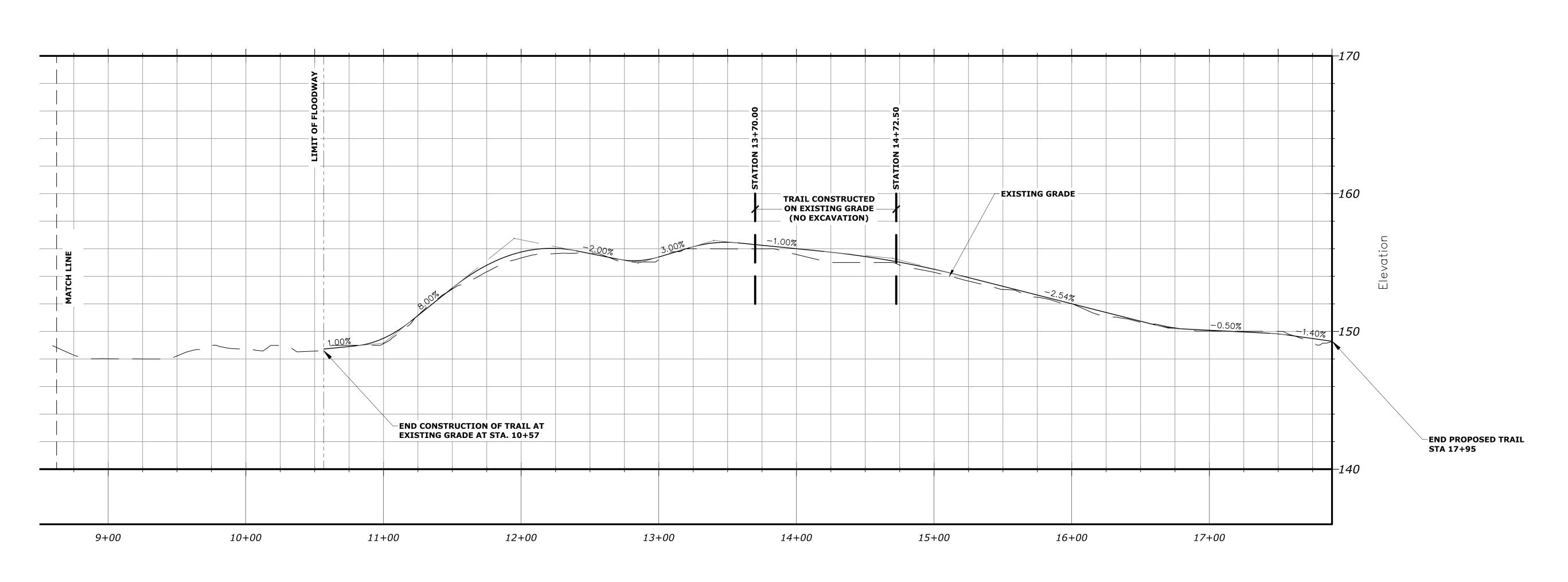
SHEET NO.

**PRO-02** 









SHEET NO.

REV. DATE

REVISION DESCRIPTION

DESIGNER/DRAFTER: M. PATE CHECKED BY: A. DICAMILLO 1" = 40' H

1" = 4' V

Filename:

CITY OF NORWALK/ **TOWN OF WILTON** CONNECTICUT

**Stantec**Tel. 203.495.1645
Fax. 203.495.1652
www.stantec.com

Stantec Consulting Services Inc.

55 Church Street, Suite 601

New Haven, CT

06510

**NORWALK RIVER VALLEY TRAIL 'WIL-WALK'** 

**NORWALK & WILTON** 

DRAWING NO. SHEET NO. TRAIL PROFILE **PRO-05** 

PROJECT NO.

#### PROJECT DESCRIPTION:

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A MULTI-USE TRAIL IN WILTON, CONNECTICUT.

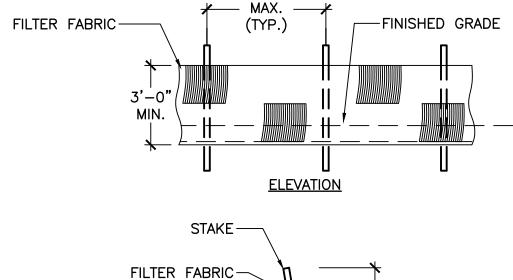
THE INTENT OF THE SEDIMENT AND EROSION CONTROL PLAN IS TO COLLECT SEDIMENT IN RUNOFF DURING CUTTING AND FILLING OPERATIONS BEFORE CONSTRUCTION AREAS ARE STABILIZED. SEDIMENT AND EROSION CONTROL MEASURES AS DESCRIBED HEREIN SHALL BE INSTALLED WHERE SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER OR STATE INSPECTOR. EXISTING DRAINAGE CHANNELS AND STORM DRAINAGE STRUCTURES WILL BE MAINTAINED AND PROTECTED DURING CONSTRUCTION UNTIL NEW DRAINAGE APPURTENANCES, WHERE PROPOSED, ARE OPERATIONAL.

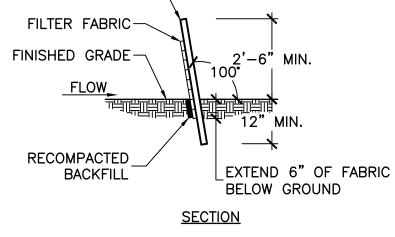
CONSTRUCTION SEQUENCE: THE GENERAL SEQUENCE OF CONSTRUCTION SHALL PROCEED AS FOLLOWS:

- 1. INSTALLATION OF PERIMETER EROSION/SILTATION CONTROL MEASURES AND ANTI-TRACKING PAD.
- 2. CLEARING AND GRUBBING: VEGETATION AND STUMPS ARE TO BE DISPOSED OF IN A LEGAL AND ENVIRONMENTALLY SAFE MANNER.
- 3. TOPSOIL REMOVAL AND STOCKPILING: STOCK PILE MATERIAL TO BE PLACED IN DESIGNATED AREAS DETERMINED AS PROJECT PROCEEDS. ALL STOCKPILES AREAS TO BE STABILIZED UPON COMPLETION OF WORK.
- 4. ESTABLISH ROUGH SUBGRADES FOR TRAIL AND OTHER ELEMENTS
- 5. IF NECESSARY, SITE STORMWATER RUNOFF FROM DISTURBED AREAS TO BE DIRECTED VIA TEMPORARY SWALES OR DIVERSION DIKES TO SEDIMENT BASINS.
- 6. MAINTAIN ANTI-TRACKING PAD AND INSPECT AND REPAIR EROSION CONTROL MEASURES.
- 7. STABILIZE ALL CUT OR DISTURBED AREAS WITH TOPSOIL, CONSERVATION SEED MIX.
- 8. CONSTRUCT STONE DUST TRAIL AND BOARDWALK SEGMENTS.
- 9. TOPSOIL AND FINAL SEEDING OF ALL DISTURBED AREAS AND OTHER AREAS WITHIN SITE AS DIRECTED BY OWNER'S REPRESENTATIVE
- 10. REMOVAL OF PERIMETER EROSION CONTROL MEASURES
- 11. FINAL CLEAN-UP

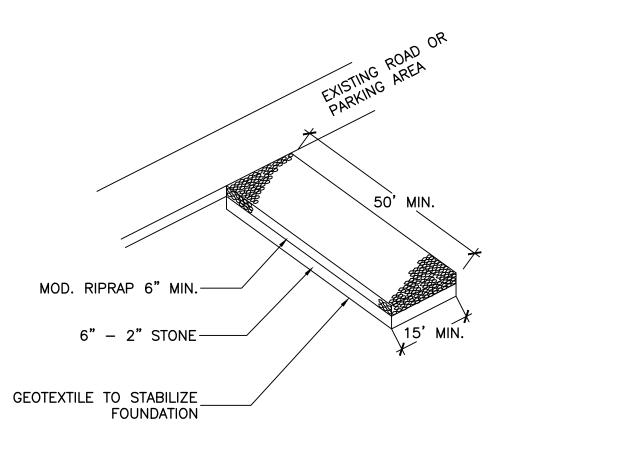
#### SEDIMENTATION AND EROSION CONTROL NOTES:

- 1. SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY PRIOR TO THE START OF GRADING AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED I.E. WITH TURF OR AS SPECIFIED, ETC., AND SHALL CONSIST OF SILT FENCING, MULCH AND TEMPORARY SEEDING. HAY BALES, STRAW WADDLES OR OTHER ADDITIONAL CONTROLS SHALL BE INSTALLED IF DEEMED NECESSARY DURING CONSTRUCTION.
- 2. THE OWNER HAS THE AUTHORITY TO CONTROL THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION OPERATIONS AND TO DIRECT THE CONTRACTOR TO IMMEDIATELY PROVIDE PERMANENT OR TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS, WATERCOURSES, OR OTHER AREAS OF WATER IMPOUNDMENT BY CONSTRUCTION OPERATIONS. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO PREVENT EROSION ON THE SITE AND/OR ONTO ABUTTING PROPERTY.
- 3. THE ENGINEER HAS THE AUTHORITY TO DIRECT THE CONTRACTOR TO DIVERT SURFACE WATER RUN-OFF AWAY FROM EXPOSED RAW EARTH SURFACES THROUGH THE USE OF TEMPORARY BERMS, DIKES, DIVERSION CHANNELS AND/OR OTHER DIVERSION TECHNIQUES APPROVED BY THE CITY'S REPRESENTATIVE AND THE ENGINEER.
- 4. THE EROSION CONTROL FEATURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR AND SHALL BE CHECKED DAILY AND AFTER EACH SEVERE RAIN STORM FOR DAMAGE, UNTIL SUCH FEATURES ARE, IN THE OPINION OF THE ENGINEER, NO LONGER NEEDED.
- 5. THE CONTRACTOR SHALL, AT ALL TIMES, HAVE ON HAND THE NECESSARY MATERIALS AND EQUIPMENT TO PROVIDE FOR EARLY SLOPE STABILIZATION AND CORRECTIVE MEASURES TO DAMAGED SLOPES. THE CONTRACTOR SHALL RESPOND TO MAINTENANCE OR ADDITIONAL MEASURES ORDERED BY THE ENGINEER WITHIN 24 HOURS.
- 6. THE CONTRACTOR SHALL OPERATE ALL EQUIPMENT AND PERFORM ALL CONSTRUCTION OPERATIONS SO AS TO MINIMIZE POLLUTION TO ADJACENT WATER COURSES OR WETLANDS AREAS. THE CONTRACTOR SHALL CEASE ANY OF HIS OPERATIONS WHICH WILL INCREASE POLLUTION DURING RAIN STORMS.
- 7. ALL SLOPES OF STOCKPILE MATERIAL AND OTHER DISTURBED AREAS SHALL BE STABILIZED AND PROTECTED BY SURROUNDING WITH SILT FENCING OR HAY BALES, OR OTHERWISE PROTECTED AS APPROVED BY THE ENGINEER. ANY DAMAGED AREAS SHALL BE REPAIRED AS SOON AS POSSIBLE. THE ENGINEER SHALL LIMIT THE SURFACE AREA OF EACH MATERIAL EXPOSED IF THE CONTRACTOR FAILS TO SUFFICIENTLY PROTECT THE SLOPES TO PREVENT POLLUTION.
- 8. <u>MULCHES</u>: SHALL BE HAY, STRAW, WOOD CELLULOSE, WOOD CHIPS, STONE, JUTE MESH, BURLAP OR OTHER SUITABLE MULCH MATERIAL AS APPROVED BY THE ENGINEER. MULCHES SHALL BE REASONABLY CLEAN AND FREE OF NOXIOUS WEEDS AND DELETERIOUS MATERIALS. ASPHALT SPRAYS WILL NOT BE ALLOWED. THE CONTRACTOR SHALL PREVENT STRAW, WOOD CHIPS, ETC., FROM ENTERING ANY CATCH BASINS, RESERVOIRS OR WATERCOURSES.
- 9. <u>HAY BALES</u>: IF DEEMED NECESSARY, SHALL BE PLACED AS DIRECTED BY THE ENGINEER. THEY SHALL BE HELD IN PLACE BY TWO WOODEN STAKES IN EACH BALE. BALES SHALL BE MAINTAINED OR REPLACED AS ORDERED BY THE ENGINEER UNTIL THEY ARE NO LONGER NECESSARY FOR THE PURPOSE INTENDED OR ARE ORDERED REMOVED BY THE ENGINEER. HAY BALES SHALL BE MADE OF HAY WITH 40 POUNDS MINIMUM WEIGHT AND 120 POUNDS MAXIMUM WEIGHT. WOOD STAKES SHALL BE A MINIMUM OF 1 INCH BY 1 INCH NOMINAL SIZE BY A MINIMUM OF 3 FEET LONG.
- 10. <u>SILT FENCE</u>: SHALL CONSIST OF 3-FOOT WIDE GEOSYNTHETIC FABRIC WITH PREFABRICATED WOOD POSTS. THE BOTTOM SIX INCHES OF FABRIC SHALL BE BURIED BY EITHER TRENCHING OR BY LAYING THE SIX INCH SECTION HORIZONTALLY ON THE GROUND AND BURYING BY RAMPING THE TOPSOIL UP TO THE CONTROL FENCE.
  - MINIMUM LENGTH OF SILT FENCE IS 15 L.F.
  - MAXIMUM POST SPACING IS 10 L.F.
  - JOINTS IN FILTER FABRIC SHALL BE ONLY AT SUPPORT POSTS WITH MINIMUM 6" OVERLAP, SECURELY SEALED
  - SILT FENCE SHALL NOT BE USED IN A WATER COURSE
     FABRIC SUSCEPTIBLE TO SUNLIGHT DAMAGE SHALL NOT BE USED
  - IN ANY INSTALLATIONS WHERE EXPOSURE TO LIGHT WILL EXCEED 30 DAYS, UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY THE ENGINEER.
  - FABRIC SUSCEPTIBLE TO SUNLIGHT DAMAGE SHALL NOT BE USED IN ANY INSTALLATIONS WHERE EXPOSURE TO LIGHT WILL EXCEED 30 DAYS, UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY THE ENGINEER.
  - TO THE EXTENT PRACTICAL, SILT FENCE SHALL BE INSTALLED PARALLEL WITH THE EXISTING CONTOURS.
  - SILT FENCE INSTALLED ACROSS LOW POINTS IN DRAINAGE AREAS WHERE RUNOFF MAY CONCENTRATE SHALL BE REINFORCED WITH STAKED HAY BALES, STRAW WADDLES, OR SIMILAR.
- 11. TEMPORARY SWALES AND SEDIMENTATION BASINS, IF REQUIRED, MAY BE CONSTRUCTED OF RIP-RAP, MULCH, HAY BALES OR JUTE MESH. PORTLAND CONCRETE OR BITUMINOUS CONCRETE WILL NOT BE ALLOWED.
- 12. TEMPORARY GRASS SEED SHALL BE PERENNIAL RYE-GRASS (LOLIUM PERENNE) OR AN IMPROVED VARIETY THEREOF, SUCH AS MANHATTAN, HAVING A MINIMUM PURITY OF 98 PERCENT AND A MINIMUM GERMINATION OF 90 PERCENT. THE SEEDING MAY BE ALTERED BY THE ENGINEER IF REQUESTED BY THE CONTRACTOR TO SUIT SPECIAL CONDITIONS OR AREAS.
- 13. AT THE COMPLETION OF THE PROJECT, AND AFTER ALL DISTURBED AREAS ARE STABILIZED REVIEWED AND APPROVED, THE CONTRACTOR SHALL COMPLETELY REMOVE ALL SEDIMENTATION AND EROSION CONTROL MEASURES. SILT FENCING SHALL BE CUT FLUSH WITH THE GROUND ANY ACCUMULATED SEDIMENTATION SHALL BE THINLY SPREAD UPON EXISTING GROUND COVER. ALL MULCH, HAY BALES AND RIP—RAP SHALL BE REMOVED FROM THE SITE, UNLESS SPECIFICALLY ORDERED BY THE ENGINEER TO REMAIN IN PLACE.

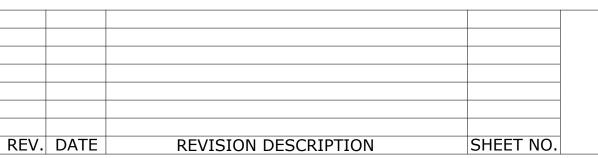




1 SILT FENCE SCALE: NTS



2 ANTI-TRACKING PAD SCALE: NTS





DESIGNER/DRAFTER:
M. PATE
CHECKED BY:
A. DICAMILLO
SCALE:

AS NOTED

Filename:

CITY OF NORWALK/ TOWN OF WILTON CONNECTICUT



Stantec Consulting Services Inc.
55 Church Street, Suite 601
New Haven, CT
06510
Tel. 203.495.1645

NORWALK RIVER VALLEY TRAIL
'WIL-WALK'

NORWALK & WILTON

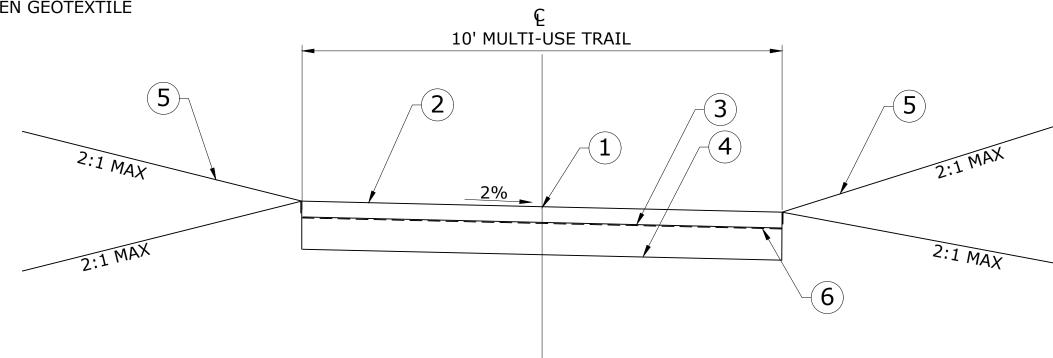
SEC DETAILS

SHEET NO. **D-01** 

PROJECT NO.

## **LEGEND:**

- (1) POINT OF APPLICATION OF GRADE
- 2 4" STONE SCREENINGS (STONEDUST PATHWAY)
- 6" GRANULAR FILL (CTDOT FORM 817 M.02.06, GRADING A)
- (4) EXISTING SUBGRADE
- 5 CONSERVATION SEED MIX
- 6 NON-WOVEN GEOTEXTILE



TYPICAL TRAIL SECTION

EXIST. TREE (TYP.)

CLEARING LIMIT (TYP.)

15-0'

10 WIDE TRAIL

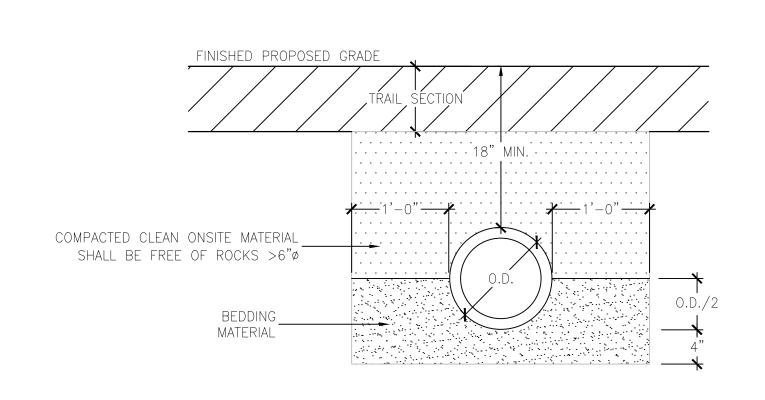
3' MIN.

NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR TRIMMING TREES TO PROVIDE A MINIMUM OF 15 FEET OF VERTICAL CLEARANCE FROM THE FINISHED GRADE OF THE GREENWAY.

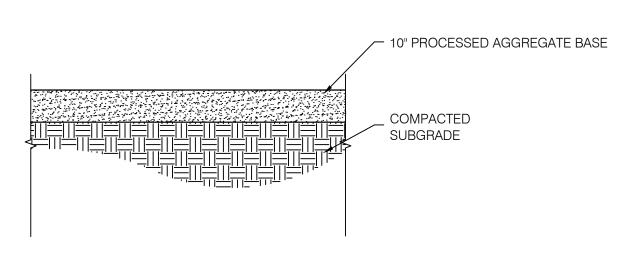
2. HORIZONTALLY THE CONTRACTOR SHALL REMOVE ALL VEGETATION WITHIN LIMIT OF WORK SHOWN ON THE PLANS.

3. CUT WOOD, VEGETATION & STUMPS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL & ENVIRONMENTALLY SAFE MANNER.

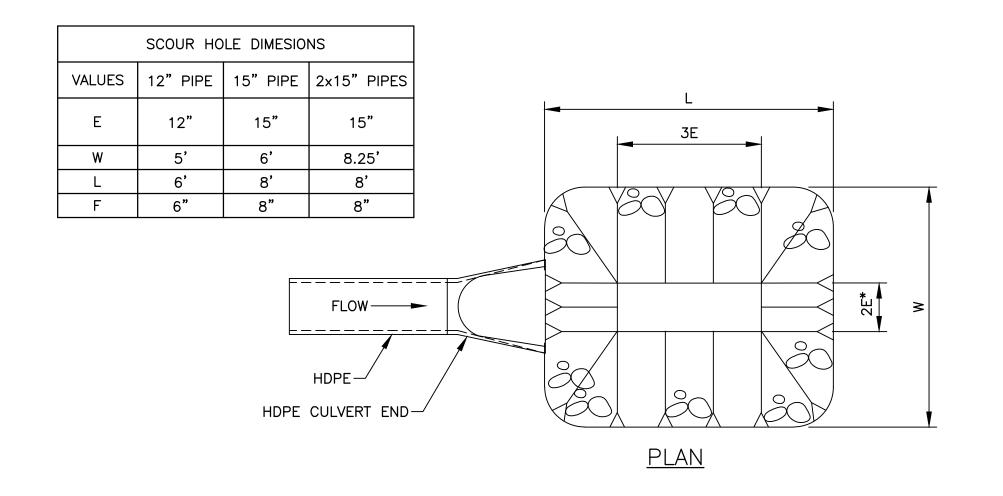
2 TYPICAL TRAIL CLEARING LIMITS
SCALE: NTS

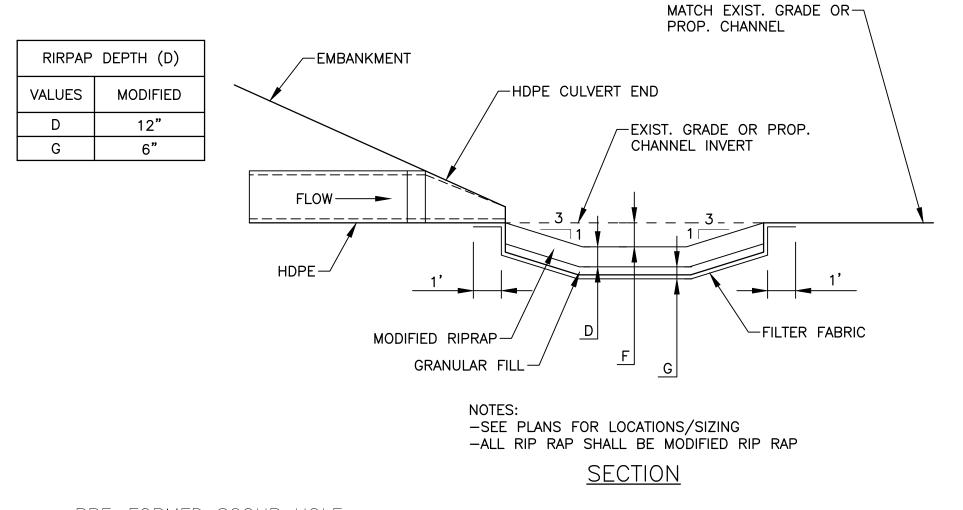


STORM PIPE TRENCH
SCALE: NTS



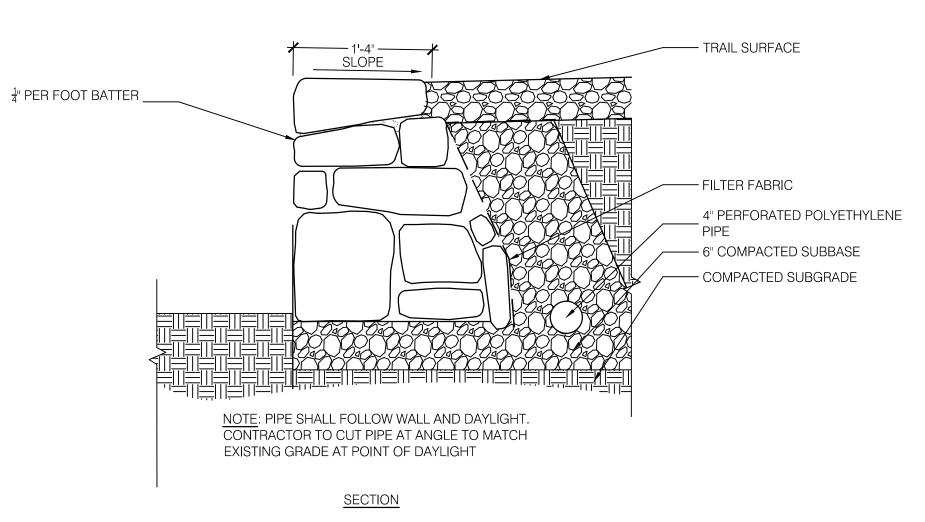
GRAVEL PARKING LOT SCALE: NTS

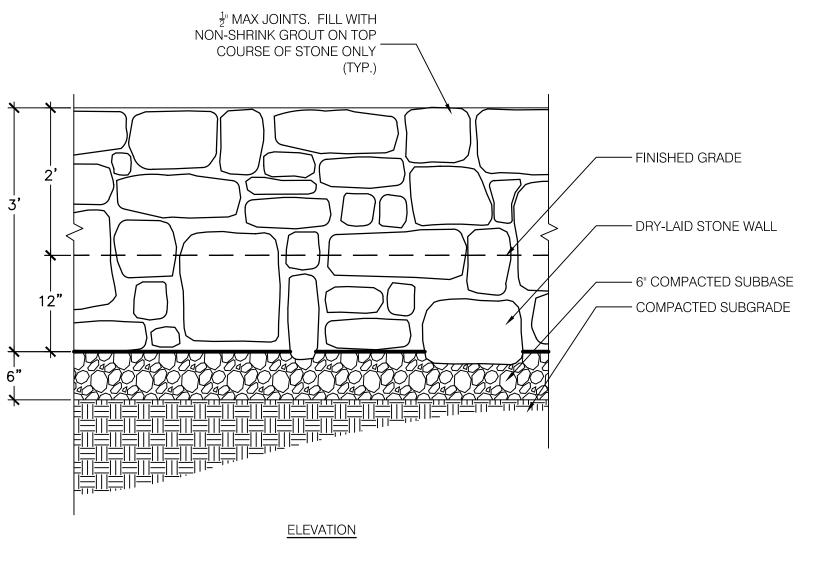




5 PRE-FORMED SCOUR HOLE scale: NTS

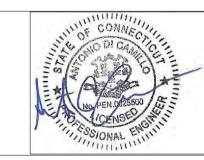
Filename:





6 CRIBBING STONE WALL

REV.	DATE	REVISION DESCRIPTION	SHEET NO.



DESIGNER/DRAFTER:
M. PATE
CHECKED BY:
A. DICAMILLO
SCALE:
AS NOTED

CITY OF NORWALK/ TOWN OF WILTON CONNECTICUT



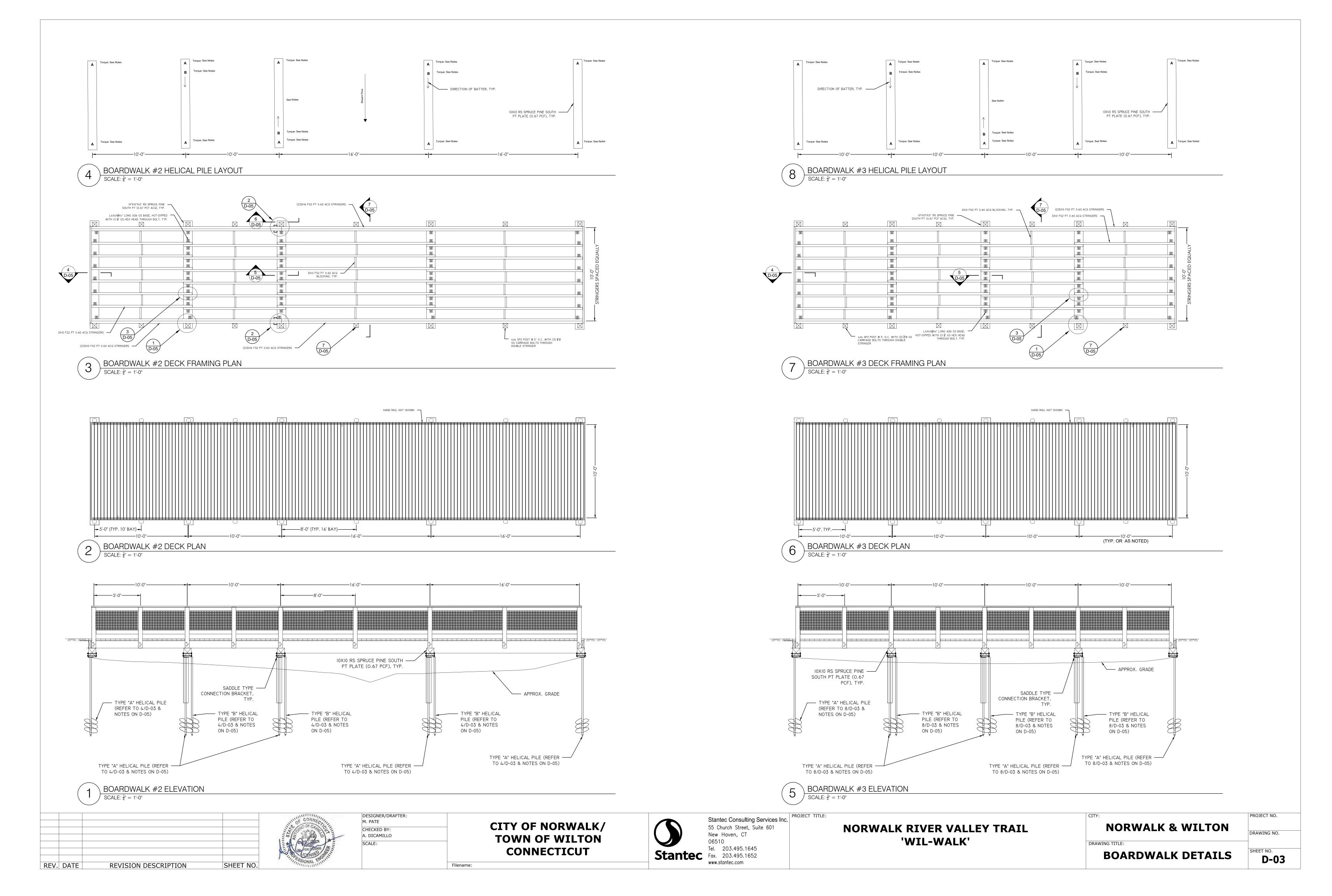
Stantec Consulting Services Inc.	PROJECT TITLE:
55 Church Street, Suite 601	
New Haven, CT	
06510	

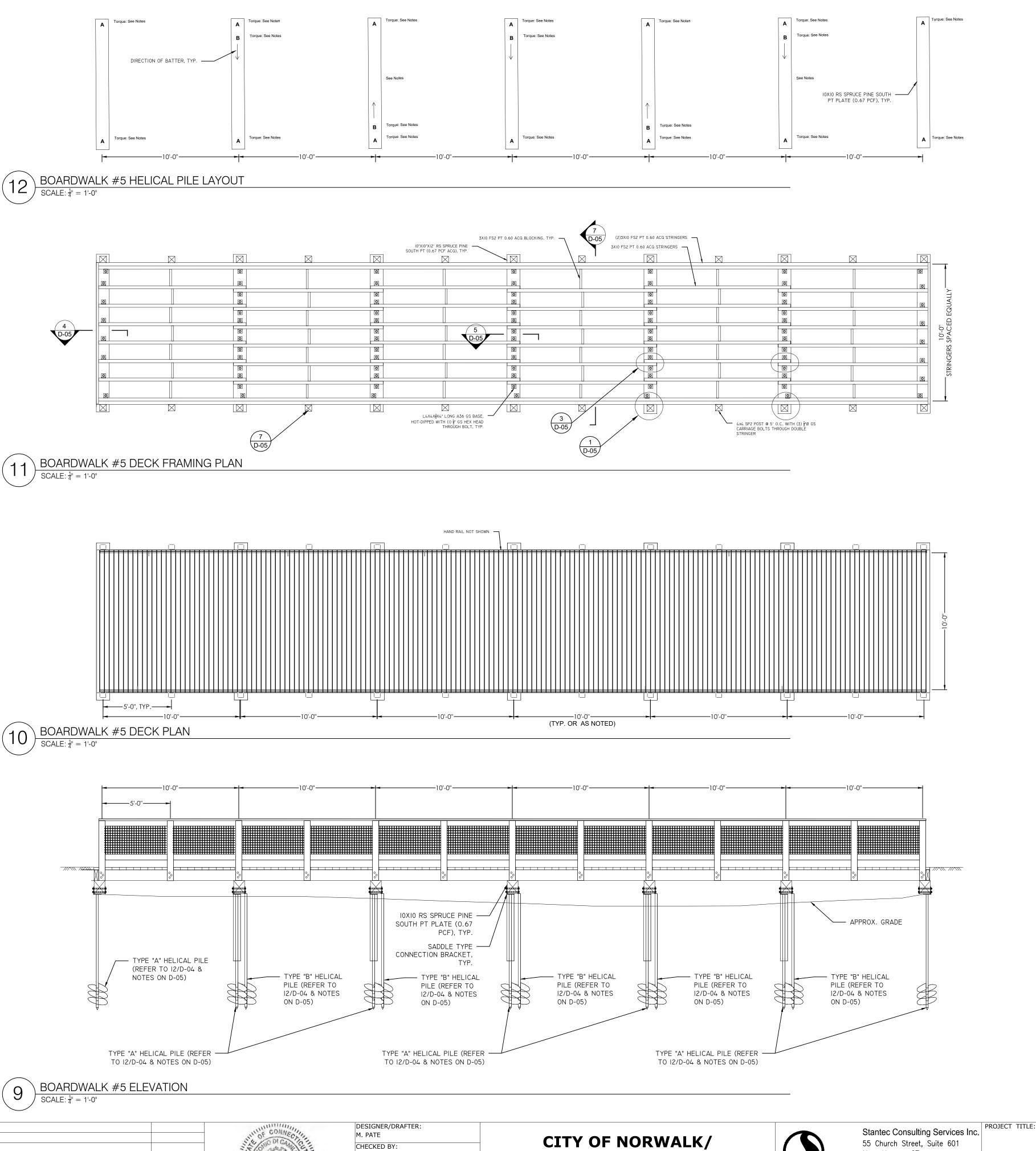
NORWALK RIVER VALLEY TRAIL
'WIL-WALK'

CITY:
NORWALK & WILTON
DRAWING TITLE:

DETAILS SHEET NO.	DETATIC SHEET NO.	DETAILS	D-02
		DETAILS	SHEET NO.

PROJECT NO.





Filename:

**TOWN OF WILTON** 

CONNECTICUT

A. DICAMILLO

REVISION DESCRIPTION

SHEET NO.

	Stantec Consulting Services Inc. 55 Church Street, Suite 601 New Haven, CT	NORWALK RIVER VALLEY TRAIL	NORWALK & WILTON
Stantec	06510 Tel. 203.495.1645 Fax. 203.495.1652 www.stantec.com	'WIL-WALK'	BOARDWALK DETAILS

PROJECT NO.

#### **GENERAL NOTES**

#### 1. SCOPE OF WORK

1.1 Establish sedimentation & erosion (S&E) controls in accordance with permit approvals and civil plans.

1.2 Construction of intermediary-span pedestrian bridge.

1.3 Stabilize site and remove S&E controls following 1-year of substantial completion and approval by Engineer of Record.

#### 2. SEQUENCE OF ACTIVITIES.

2.1 Call Before You Dig.

2.2 Establish sedimentation and erosion controls.

#### 2.3 Shakeout, layout and install helical piles.

2.4 Frame girders, stringers and posts, and call for Engineering inspection 2.5 Frame, trim and finish deck, rails and panels, and call for final Engineering inspection. Substantial completion.

2.6 Final clean-up, restorations of site, removal of sedimentation and erosion controls, and Owner's sign-off on work. Final completion.

2.7 TIME IS OF THE ESSENCE. All Work under this agreement shall be performed during dry, stable soil season.

3. EXISTING UTILITIES. Call Before You Dig (800) 922-4455 for start-of-work date. Locate, identify, disconnect, and seal or cap utilities ed to be removed or abandoned in place. Arrange with utility companies to shut off indicated utilities. Owner will arrange to shut off indicated utilities when requested by Contractor. Locate, identify, and disconnect utilities indicated to be abandoned in place. Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated. Notify Engineer not less than five days in advance of proposed utility interruptions. Do not proceed with utility interruptions without Engineer's written permission. Excavate for and remove underground utilities indicated to be removed.

#### 4. SOILS MATERIALS.

4.1 Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations on site.

4.1.1 Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious

4.1.2 Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.

4.2 Base Material: Unless otherwise specified as Processed Aggregate Base Course, naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand. Sub-base material shall meet the requirements set forth in ConnDOT Form 816. Section M.02.02.

4.3 Processed Aggregate Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, natural or crushed sand. Processed aggregate shall meet the requirements set forth in ConnDOT Form 816, Sections M.05.01 through M.05.03.

4.4 Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; with 100 percent passing a 3/8-inch sieve and not more than 10 percent passing a No. 200 sieve. Bedding shall meet the requirements set forth in Connecticut DOT Form 816, Section M.08.01--21. G.Sand: ASTM C 33; fine aggregate. 4.5 Utility Company Trenches: in accordance with utility company requirements.

5. SUBBASE AND BASE COURSES UNDER WALKWAYS. Place sub-base course and base course on sub-grades free of mud, frost, now, or ice. On prepared sub-grade, place sub-base course and base course under pavements and walks as follows:

5.1.1 Install geotextile on prepared sub-grade according to manufacturer's written instructions, overlapping edges.

5.1.2 Place base course material over sub-base course wearing surface. 5.1.3 Shape sub-base course and base course to required crown elevations and cross-slope grades.

5.1.4 Place sub-base and base course 6" or less in compacted thickness in a single layer. 5.1.5 Place sub-base and base that exceeds 6" in compacted thickness

5.2 Compact sub-base course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

6. TEMPORARY EROSION AND SEDIMENTATION CONTROL. At a minimum comply with these plans, CT-DEEP guidelines, and quide specifications. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent areas.

6.1 Inspect, maintain, and repair erosion and sedimentation control measures during construction until permanent vegetation has been established.

6.2 Remove erosion and sedimentation controls to restored and stabilized areas in accordance with permit requirements or a minimum of 1-year from the date of substantial completion, whichever is earlier.

6.3 Material Standards and Workmanship: Equivalent to State of Connecticut "Guidelines for Soil Erosion and Sediment Control" 2002 edition as amended.

6.4 Install sediment and erosion controls, such as silt fences and filter socks, prior to commencing soil disturbance activities. All sediment and erosion controls must be maintained in good condition until all excavations in the vicinity have been backfilled and paved or vegetated.

6.5 Contractor is to provide emergency response hay bails and filter socks at arms-reach during all times of construction.

6.6 Before anticipated storm events of 0.1 inches rainfall or more, and at least once per four calendar days, all sediment and erosion controls are to be inspected by the Contractor. Any corrective action to mitigate environmental concerns must be completed at that time

### **CARPENTRY NOTES**

1. GENERAL. Contractor shall provide a full-time, on-site General Superintendent throughout framing of the bridge. General Superintendent shall be approved by the Owner. Contractor shall coordinate two Engineer inspections of framing: 1) rough framing of girders, stringers, and posts; and 2) final inspection of framing and sign-off on corrected punchlist items. Provide Engineer with three working days notice of each inspection.

#### **Boise Cascade Corporation** Georgia-Pacific Corporation.

Louisiana-Pacific Corporation.

2. LUMBER MANUFACTURERS.

## 3. METAL FRAMING ANCHOR MANUFACTURERS.

Cleveland Steel Specialty Co. Harlen Metal Products, Inc. KC Metals Products, Inc.

Silver Metal Products. Inc Simpson Strong-Tie Company, Inc. Southeastern Metals Manufacturing Co., Inc. United Steel Products Company, Inc.

4. LUMBER GRADE. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings. Conform to DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standard Committee.

4.1 Lumber Standards Committee Board of Review. Factory mark each piece of lumber with grade stamp of grading agency. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber. Provide dressed lumber, S4S, unless otherwise indicated. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.

5. PRESERVATIVE TREATMENT BY PRESSURE PROCESS. Comply with AWPA C2 except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX). Preservative Chemicals: Acceptable to authorities having jurisdiction and one of

## 5.1 Ammoniacal copper zinc arsenate (ACZA).

5.2 Ammoniacal, or amine, copper quat (ACQ).

5.3 Contractor may submit alternate species and treatments to Engineer for approval.

5.4 All fasteners shall have a hot-dip zinc coating complying with ASTM A 153/A 153M.

## 6. FASTENERS.

the following:

6.1 Deck screws: (2) black TXB biscuit style hidden deck fastener w/SS screws per runner to diaphragm-board connection. Contractor may submit alternate deck face-screw assembly to Engineer for Approval.

6.2 Rim to stringers: (3) HeadLOK 8" FMHLGM012-xxx per stringer to rim connection.

6.3 Posts: (3) 5/8" GS carriage bolts. Steel bolts complying with ASTM A 325, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

7. GUARD RAIL AND PANELS. Contractor to provide proposed hand-rail and panel submittal to Engineer for

8, FINISH. Bevel or rooundover all exposed corners and edges smooth, sanded, and free of splinters. Apply Sikkens CETOL SRD Natural deck stain to deck, panels, rails, and posts. Contractor may submit alternate stains to Owner for approval.

9. WARRANTY. Contractor shall furnish 1-year warranty on all materials and workmanship.

#### HELICAL PILE NOTES

1. GENERAL. All piles shall be helical Maclean-Dixie or Chance Helical Products or equivalent as approved by the Engineer. Contractor shall ubmit performance specifications for alternate piles. All helical piles are to be installed by a factory certified installer, otherwise a certified technician from premium technical services must be on site at all times to witness pile installation. All helical piles shall be ICC

1.1. Manufacturer to have in effect industry recognized written quality control for all materials and manufacturing.

1.2. All welding to be performed by welders certified under section 5 of the AWS Code D1.1.

2. TYPE A PILES. For type "A" piles (vertical): helical pile lead sections shall be 1-3/4" round corner square shaft (SS175I) ASTM 193-GR B7 1045 fy 60 ksi and a 8", 10" and 12" diameter helix. Lead sections shall be 7' long. Piles shall be installed to a minimum depth of 8' and a minimum torque of 6,000 ft-lbs. Pile shall be terminated with a walkway support bracket. Maximum torque shall not exceed 8,000 ft-lb unless otherwise permitted by the Engineer

3. **TYPE B PILES**. For type "B" piles (battered): helical pile lead sections shall be model 1.75-81012-S7 with a 1.75" round corner squared shaft and a 8", 10" and 12" diameter helix. Lead sections shall be 7' long. Helix pile extension shall be 1.75" RCS shaft 5, 7 or 10' long depending on vertical clearance. Piles shall be installed on a 30-deg angle to a minimum length of 8' and a minimum torque of 4,000 ft-lb. Type-BP designates the 30-deg batter oriented perpendicular to structural member to which it is fastened and in the direction shown by the adjoining arrow. Type-BII designates the 30-deg batter oriented parallel to structural member to which it is fastened and in the direction shown by the adjoining arrow. Pile shall be terminated with a Williams bar adapter. Maximum torque

4. GALVANIZATION. Helical piles, extensions and appurtenances shall be hot-dipped galvanized steel in accordance with ASTM A153 (latest revision) and ESR-3032.

5. PILE CERTIFICATION. All pile installation operations shall be supervised by a licensed Engineer. The inspector shall keep a complete record of the pile installation operation.

5.1 If the minimum torque requirement has not been satisfied at the minimum depth level, the Contractor shall have the following

5.1.1 Install the pile deeper using additional extensions until the specified torque level is obtained. 5.1.2 Remove the existing pile and install a pile with larger and/or more helices. The revised pile shall be installed beyond the termination depth of the original pile, as directed Engineer.

5.1.3 Add additional piles as required by the Engineer of record. 5.1.4 Under the direction of the Engineer, reduce the size of the helix as required to achieve the minimum depth while still achieving

6. FASTENERS, SADDLES, SEATS, AND ASSEMBLIES. Contractor shall submit brackets and assemblies to Engineer for approval. All brackets and assemblies shall meet or exceed pile rating. 6.1 Contractor shall submit fastening plan and details to Engineer for review and approval. Fasteners may be fabricated of A36 steel and shall be hot-dipped galvanized in accordance with the provisions of the helical piles. All changes in pile location must be

6.2 The helical pile shall be connected to the structure using a Engineer approved steel bracket or slab-supporting channel. These connection devices shall be capable of safely transferring the structural loads to the helical pile.

7. **UNDERGROUND OBSTRUCTIONS**. If underground obstructions are encountered during installation, the Contractor shall have the option of removing the obstruction if possible or relocating the pile with the Engineer's approval. The latter option may require the relocation of adjacent piles.

#### 8. RECORD KEEPING These records shall include, but are not limited to the following:

8.1. Project name and location. 8.2. Contractor's corporate contact information and job foreman.

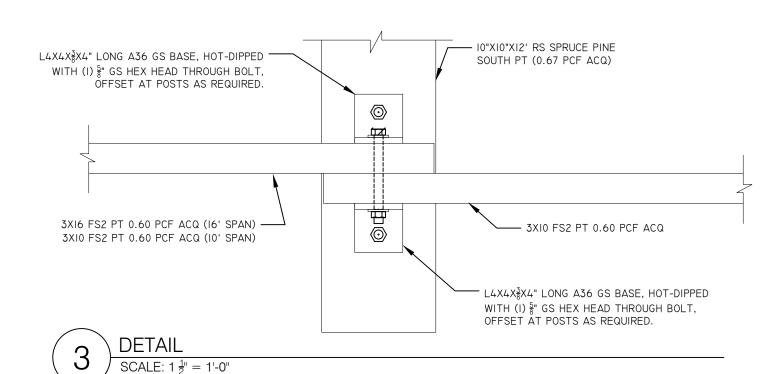
3.3. Date and time of installation(s).

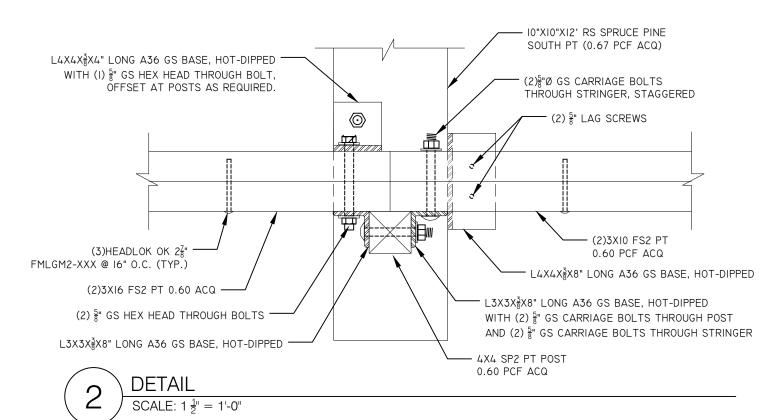
8.4. Make and model of the equipment used for installation. 8.5. In tabular form: . Contractor is responsible for keeping written installation records shall be obtained for each helical pile.

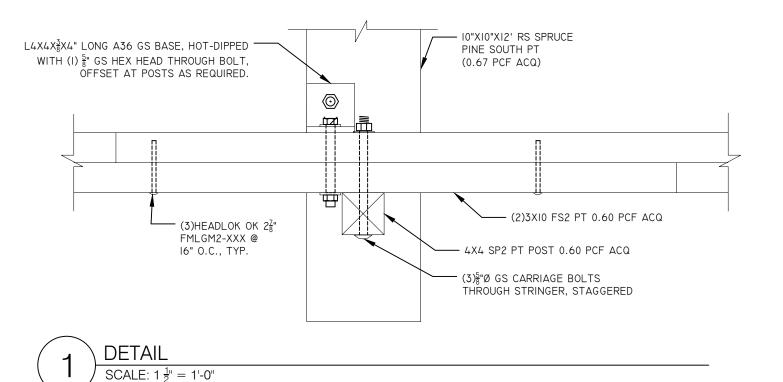
8.5.1 location reference number: 8.5.2. description of lead section and extensions for each pile; 8.5.3. overall depth of installations referenced from bottom of grade beam or footing;

8.5.4. installation speed (rpm) of the helical pile; 8.5.5. abrupt changes in installation torque; and

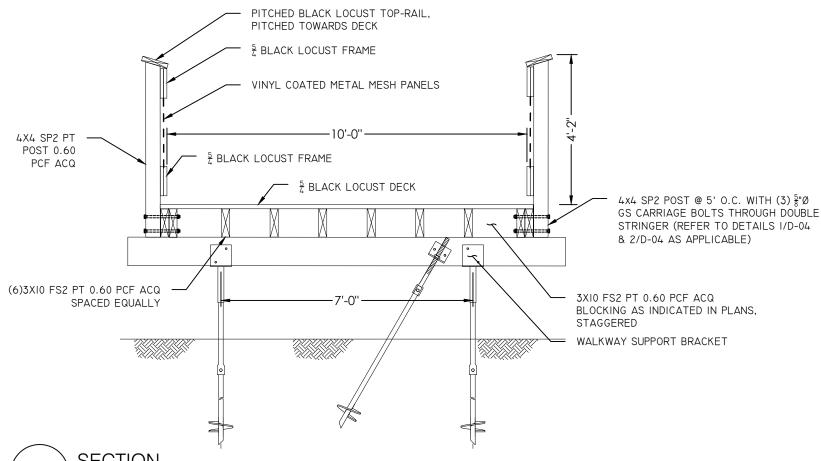
8.5.6. torque reading for the last 3-feet of installation if practical or terminal torque shall be recorded as a minimum. 8.5.7 Other relevant information pertinent to the physical condition, position respect to plan and depth, and rating of the as-built pile.

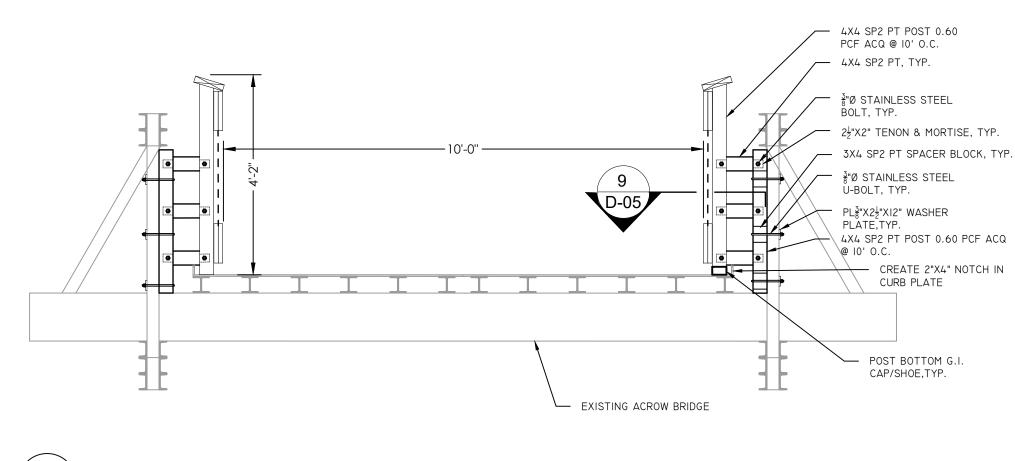




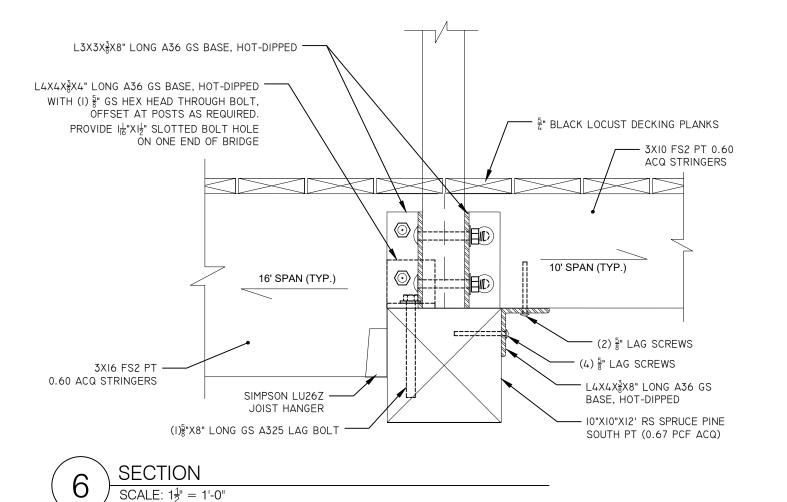


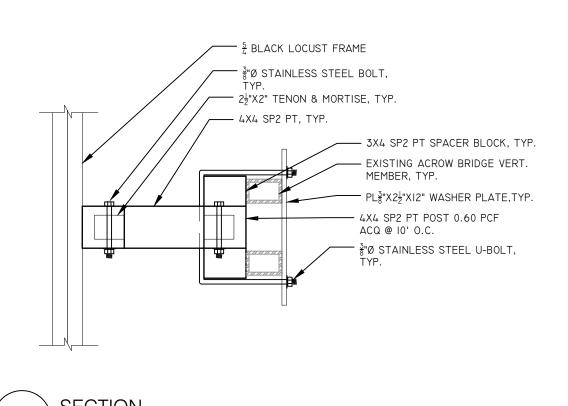
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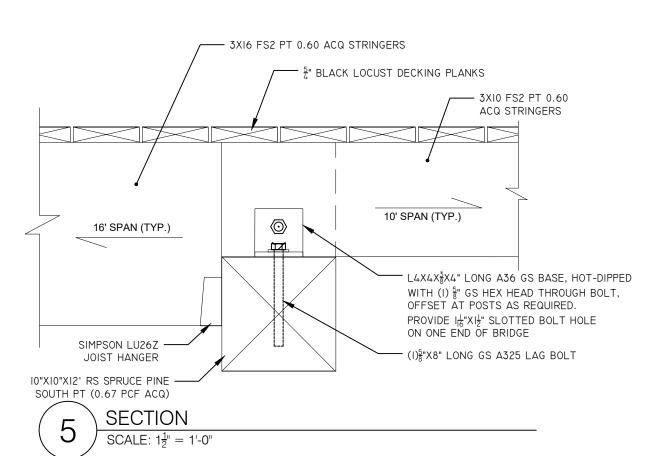


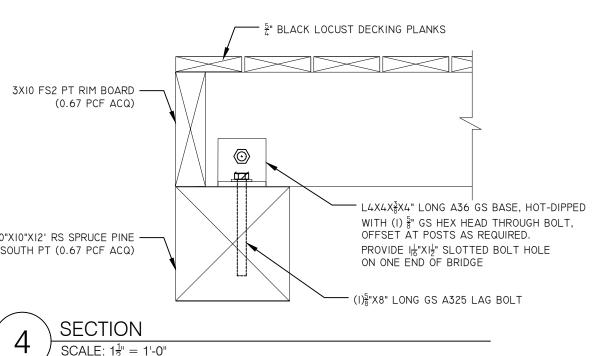
SECTION @ ACROW BRIDGE

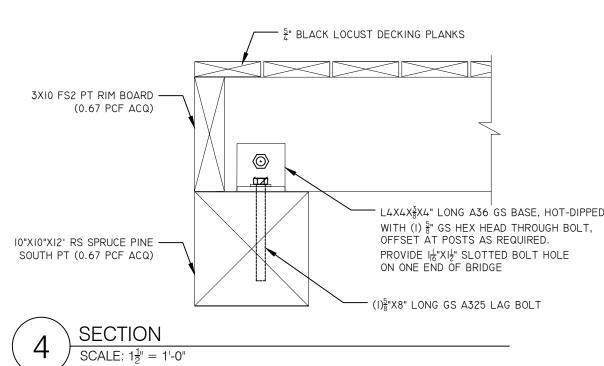




SCALE:  $1\frac{1}{2}$ " = 1'-0"



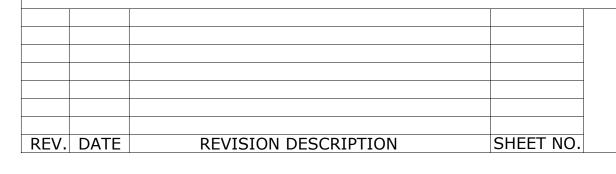




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**NORWALK RIVER VALLEY TRAIL** 'WIL-WALK' DRAWING TITLE:

PROJECT NO. **NORWALK & WILTON** DRAWING NO. **BOARDWALK DETAILS D-05** 





DESIGNER/DRAFTER M. PATE CHECKED BY: A. DICAMILLO

CITY OF NORWALK/ **TOWN OF WILTON CONNECTICUT** 

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