TOWN OF LEDYARD
CONNECTICUT

Water Pollution Control Authority

~ AGENDA ~

741 Colonel Ledyard Highway
Ledyard, Connecticut 06339

Chairman
Ed Lynch

Regular Meeting

Tuesday, July 25, 2023 **7:00 PM** **Council Chambers - Hybrid**

REMOTE MEETING INFORMATION

Meeting ID: 817 0919 0586
Passcode: 299469
Zoom Meeting Link:
https://us06web.zoom.us/j/81709190586?pwd=VWxQd0NlNUJieS9CbHF6UEhNb3BaQT09
Dial by your location:
+1 646 558 8656 US (New York)

I. CALL TO ORDER

II. ROLL CALL

III. APPOINTMENTS OF ALTERNATES

IV. PLEDGE OF ALLEGIANCE

V. RESIDENTS & PROPERTY OWNERS COMMENTS

VI. APPROVAL OF MINUTES

1. Motion to APPROVE Regular Meeting Minutes from June 27, 2023.

Attachments: WPCA minutes 6-27-23

VII. COMMUNICATIONS AND CORRESPONDENCE.

1. Operations Report.

- GU monthly report.

- GU Communication from July 20, 2023, regarding the Holmberg tank, Ledyard Center tank and Seabury Ave.

- SCWA Service area Map.

- CorrTech proposal for washout, spot cleaning and ROV inspection of the Fairway Drive Hydropillar.

- Ledyard PWS ID: CT0727091 response.

Attachments: 6 - Ledyard Water Systems Monthly Report - June 2023
Homberg -Ledyard Center tank-Seabury Ave GU communication
Southeastern Water Authority Service Area
16377 Groton Sed removal 4-18-23 (4)
Ledyard WPCA_ PWS ID CT0727091_ Response

2. Service Correspondence.

3. Aged Reports/Finance.

Attachments: WPCA AGED A-R SUMMARY TREND JANUARY 2023 - JUNE 2023

4. Year to Date Water/Sewer Report.

Attachments: YTD Water
YTD Sewer

5. PSR - Steve Banks.

Attachments: July 2023 PSR

VIII. OLD BUSINESS

1. Ledyard Center Trail and Sewer Line Project status proceeding to a spring construction start continued.

Attachments: Col. Ledyard Highway_Multi-Use Pathway_APPROVED w CONDITIONS_GU Comments_05-12-23 (1)
L171-0001-Ledyard MUP_Bid Plans_2023-05

2. Rules and Regulation review and possible changes continued.

Attachments: Complete Policy Manual
WPCA Relief policy

3. Route 12/Baldwin Hill Road hydrant relocation.
Status on recent public hearing held on July 13, 2023.

Attachments: public_hearing_special_permit_blasting
P&Z Minutes 7-13-23

4. Cost of Service quote review and discussion.

Attachments: Ian Stammel_discussion
Ledyard WPCA - Cost of Service Quote & General Information Request

5. Any Other Old Business to come before the Authority.

IX. NEW BUSINESS

1. Motion to APPROVE Groton Utilities invoice #23512 dated June 30, 2023, in the amount of $1065.43, for labor from May 25, 2023 through June 30, 2023.

Attachments: GU Inv 23512

2. Motion to APPROVE Groton Utilities invoice #23339 dated March 31, 2023, in the amount of $235.00, for materials and services billed on March 17, 2023.

   Attachments: GU Inv 23339

3. Any Other New Business to come before the Authority.

X. ADJOURNMENT

DISCLAIMER: Although we try to be timely and accurate these are not official records of the Town.

File #: 23-1834 **Agenda Date:** 7/25/2023 **Agenda #:** 1.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Motion to APPROVE Regular Meeting Minutes from June 27, 2023.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)

TOWN OF LEDYARD

Water Pollution Control Authority

Meeting Minutes

741 Colonel Ledyard Highway
Ledyard, Connecticut 06339

Chairman
Ed Lynch

Regular Meeting

Tuesday, June 27, 2023 **7:00 PM** **Council Chambers - Hybrid**

I. CALL TO ORDER

Chairman Lynch called the Regular Meeting to order at 7:00 p.m.

II. ROLL CALL

Present	Board Member Monir Twefik
	Board Member Terry Jones
	Board Member Stanley Juber
	Board Member Edmond Lynch
	Alternate Member James A. Ball
Excused	Board Member Sharon Wadecki
Non-voting	Alternate Member Tony Capon
	Alternate Member Jeremy Norris

Also present:
Bill Saums, Town Council Liaison
Maurice Duarte, Groton Utilities

III. APPOINTMENT OF ALTERNATES

Jim Ball was appointed as a voting member in place of Sharon Wadecki.

IV. PLEDGE OF ALLEGIANCE

V. RESIDENTS AND PROPERTY OWNERS

None.

VI. REVIEW AND APPROVAL OF MINUTES

1. Motion to APPROVE the Regular Meeting Minutes from May 23, 2023, as written.

RESULT: APPROVED AND SO DECLARED
MOVER: Edmond Lynch
SECONDER: Terry Jones

AYE 5 Twefik Jones Juber Lynch Ball

EXCUSED 1 Wadecki

VII. COMMUNICATIONS AND CORRESPENENCE

1. Operations Report.

Mr. Jones asked if this was the transitional 6-week report. Mr. Duarte said no but they're working on it for next month.

The contractor painting the Ledyard Center tank has not begun the work. In addition, the painter has not responded to repeated attempts to contact them. Mr. Duarte would like to look for another contractor. Councilor Saums suggested that Mr. Duarte notify the original contractor that he is in default. Mr. Juber asked if there was a specified time period in the contract, it was answered no.

ACTION ITEM - During the July meeting WPCA will discuss the proposal to inspect the Holmberg tank per DPH. Mr. Duarte will send the proposal to the Authority.

Groton Utilities will be replacing the meter on the Thames River interconnection at no cost to Ledyard.

RESULT: DISCUSSED

2. Service Correspondence.

WPCA discussed assessing a connection fee and credit check. Chairman Lynch asked if charging a connection fee would have to go to Town Council since it is not a rate increase. Mr. Jones said that in the WPCA manual there are provisions that allow for a connection fee.

Mr. Jones read the Customer Rules and regulations policy:
Section 2.2
A new account fee may be charged to each customer collecting water or sewer services this charge applies all rate classifications and helps to pay the cost of setting up a new account, reading the meter and/or connecting to water services, possibly turning on the meter.

Mr. Jones added that he believes that relating the fee to the efforts required in setting up a new account (ex - 1 or 2 labor hours) collections is better than just having an arbitrary fee.

Councilor Saums said since adding a new account fee would not be a change to the existing policy it would not be necessary to go to the Town Council.

ACTION ITEM - Ms. Juber asked Chairman Lynch to find out what the cost for a credit check and what the actual cost to the Authority would be for the efforts of opening a new account. Chairman Lynch said he would ask Ms. Daniels for a copy of GU's policy and cost for new accounts.

It was stated that standard practice for utility companies is to run a credit check and require a security deposit if the customer's credit score is low.

Mr. Jones asked Mr. Duarte if the Authority could receive a copy of Groton Utilities' current practices on opening a new account.

RESULT: DISCUSSED

3. Aged Reports/Finance.

No report this month.

4. Year to Date Water/Sewer Report.

It appears that more water is being used.

More tie-ins are being put in than budgeted for, which is a positive impact on the budget.

Nothing to note in the sewer budget.

Chairman Lynch said Peter Gardner is thinking of putting up a large subdivision (thirty homes) at the end of Seabury Avenue. Chairman Lynch said he wants to find out if a water connection would fall under SCWA or the WPCA responsibility. Mr. Jones researched and answered that it is not a SCWA service area.

RESULT: DISCUSSED

5. PSR - Steve Banks.

The Smith & Loveless skid mounted sewer pump system is up and running. Chairman Lynch said it was successful cost savings project. If the WPCA hired an Engineering firm, it would have cost $400,000.00. Although it was a bit over budget due to extra electrical work (final cost will be approximately $175,000), it still will save the Town around $225,000.

The Solar company went to the facility on June 16, 2023.They inspected the equipment, mowed the lawn, and ordered new panels. There is a long lead time on solar panels and other related parts.

RESULT: DISCUSSED

VIII. OLD BUSINESS

1. Rules and Regulation review and possible changes.

Recommendation to name the updated policy manual the "Customer handbook" and to combine the rules and regulations and the policies into one handbook.

RESULT: CONTINUE

2. Ledyard Center Trail and Sewer Line Project status proceeding to a spring construction start continued.

All parties agree on the final drawings. The district gave approval. Weston & Samson is working on paperwork and going out for bids shortly.

RESULT: DISCUSSED

3. Residents and Property owners (1 Rosemarie Court).

The Authority estimated that the new billing invoice would be approximately $400.00 but it was only $236.90. Chairman Lynch asked for a vote to approve this amount for the final bill.

Mr. Juber noticed a typo in the billing invoice and asked Groton Utilities to change:
Usage from 12/13 @ 13:01 p.m. to 12/21/2023
to
Usage from 12/13 @ 13:01 p.m. to 12/21/2022

Motion to APPROVE the Groton Utilities calculation of the charges for the water usage at 1 Rosemarie Court in the amount of $236.90.

RESULT: APPROVED AND SO DECLARED
MOVER: Terry Jones
SECONDER: Stanley Juber

AYE 5 Twefik Jones Juber Lynch Ball

EXCUSED 1 Wadecki

4. Waste Treatment pump installation update.

The pump is operating as expected.

RESULT: DISCUSSED

5. Route 12/Baldwin Hill Road hydrant relocation.

The owner of the Baldwin Hill Road property has been able to get water from a neighbor. The owner of the earth materials operation at 1340 Baldwin Hill Road is willing to run a road so that a drilling rig can get in. He is also willing to pay for the fracking of the well. There is still an issue with what would happen if other wells fail.

The WPCA is continuing to evaluate options. One option is a new water main from Route 12 to supply the homes along that road. The Town Planner is also involved in connection with a blasting permit requested for a nearby property.

RESULT: DISCUSSED

6. Retirement of Chlorination Station on Route 12.

A formal request has been made and approved by DPH to inactivate the chlorination station on Route 12 since more water passes through the system now than when it was built, making the station unnecessary to current or future operation.

Chairman Lynch asked if the station needs to be torn down. Mr. Duarte answered no, because it is still being used as a sample site for GU to monitor chlorine.

RESULT: DISCUSSED

7. Any Other Old Business to come before the Authority.

ACTION ITEM - Councilor Saums asked about the quote cost of service re-design. Mr. Daurte said it was sent. Chairman Lynch said he will put it on next month's agenda.

RESULT: DISCUSSED

IX. NEW BUSINESS

1. Motion to APPROVE Groton Utilities invoice #23451, dated May 31, 2023, in the amount of $468.08, for LS/LR Inventory Labor.

RESULT: APPROVED AND SO DECLARED
MOVER: Terry Jones
SECONDER: Stanley Juber

AYE 5 Twefik Jones Juber Lynch Ball

EXCUSED 1 Wadecki

2. Proposal from Groton Utilities - service charge and background check discussion.

Discussed above under Service Correspondence.

RESULT: DISCUSSED

3. Any Other New Business to come before the Authority.

Motion to APPROVE Hach quote #100897536v1, dated March 30, 2023, for replacement sensor for CLF10 sc, SS tip/pHD, PPS for C/10sc, for a total amount of $3,290.00 and $453.00 for recommended accessories and services making the grand total $3,743.00.

Mr. Duarte explained that this quote is for the Ledyard Center tank to enable monitoring of the pH and chlorine in the water. Chairman Lynch said he will tell Ian Stammel, Finance Assistant that this will need to be taken out of capital.

It was asked why it is referred to as a "replacement sensor" on the quote. Note to state the sensor is new not a replacement.

RESULT: APPROVED AND SO DECLARED

MOVER: Edmond Lynch
SECONDER: Stanley Juber

AYE 5 Twefik Jones Juber Lynch Ball

EXCUSED 1 Wadecki

Motion to APPROVE Ti-Sales quote #QTE0063368, dated June 14, 2023, for a total amount of $6,660.00, for Neptune T-10 Meter and Neptune RF R900 Endpoint.

Mr. Duarte asked if the Authority wants to approve quotes or just the invoices. Chairman Lynch said just the invoices would do.

RESULT: APPROVED AND SO DECLARED
MOVER: Edmond Lynch
SECONDER: Stanley Juber

AYE 5 Twefik Jones Juber Lynch Ball

EXCUSED 1 Wadecki

X. ADJOURNMENT

Motion to ADJOURN the Regular Meeting at 8:17 p.m.

RESULT: APPROVED AND SO DECLARED
MOVER: Edmond Lynch
SECONDER: Stanley Juber

AYE 5 Twefik Jones Juber Lynch Ball

EXCUSED 1 Wadecki

DISCLAIMER: Although we try to be timely and accurate these are not official records of the Town.

File #: 23-1835 **Agenda Date:** 7/25/2023 **Agenda #:** 1.

REPORT

Staff/Committee Report:
Operations Report.

- GU monthly report.
- GU Communication from July 20, 2023, regarding the Holmberg tank, Ledyard Center tank and Seabury Ave.
- SCWA Service area Map.
- CorrTech proposal for washout, spot cleaning and ROV inspection of the Fairway Drive Hydropillar.
- Ledyard PWS ID: CT0727091 response.

GROTON UTILITIES

Subject: **Ledyard Water Systems**
Monthly Report: June 2023

To: Ed Lynch, WPCA Chairman
Cc: Mark Biron, GM Operations
Joseph Pratt, Manager Water & Wastewater

From: Mauricio Duarte

Date: July 14, 2023

Water Operations and Maintenance Monthly Report and Updates for June 2023.

Operations:

- Daily rounds of all systems
- Operation and maintenance
- Manage water storage tanks

Laboratory:

- Distribution system sample testing per CTDPH schedule (microbiological & physical analyses). All results met CTDPH standards.

- Submitted results of monthly microbiological & physical analyses to CTDPH via CMDP as required.

- Completed data entry and e-mailed all required monthly forms to CTDPH.

- Compiled data and composed annual water quality reports (aka CCRs) for Ledyard Center and Gales Ferry (for 2022); e-mailed PDF versions to Justin Dube for posting on Town of Ledyard website, and they were posted prior to June 20, as required.

- LWPCA Ledyard Center and Gales Ferry lead and copper sampling: samples were dropped off and picked up, customers who still hadn't sampled were contacted, all samples were collected and sent to subcontract lab, testing is completed for spring 2023, results sent to DPH via CMDP. In both systems, the 90th percentile values for lead and copper continue to be below the Action Level, so Ledyard Center and Gales Ferry continue to be in compliance with the Lead and Copper Rule.

- Routine flushing of specific hydrants and blow-offs is being conducted to lower water age in both the Ledyard Center and Gales Ferry systems, as part of our efforts to maintain the lowest THM levels possible in both systems. In addition, Groton Utilities is blending raw water sources to lower THMs leaving the water treatment plant. All THM and HAA5 calculations for the Running Annual Average continue to be below the MCL limits of 80 ppb and 60 ppb for both Ledyard Center and Gales Ferry, and no OEL reports have been required in 2023.

Distribution:

- Daily call before you dig.

- Relocated fire hydrant at front of 1506 Route 12, which was repeatedly hit by traffic pulling into the store.

- Gate valve inspection at Long Cove Road.

- Hydrant flushing/testing was completed.

- Hydrant repair in both Gales Ferry and Ledyard Center.

Good morning Ed,

I will start working on getting two more quotes to inspect the Holmberg Tank. And yes you are correct the extension of Seabury is not.

Best,
Mo

From: water pollution control authority <wpca.ledyard@ledyardct.org>
Sent: Friday, July 21, 2023 2:52 PM
To: Duarte, Mauricio <duartem@grotonutilities.com>
Subject: Re: Holmberg Tank_Ledyard Center Tank and Seabury Ave

Thanks Mo - we should prepare quotes to have the Holmberg tank inspected. Good news on Ledyard center tank. I understand Seabury was under SCWA but it looks like the extension of Seabury is not. Peter Gardener wants to bulid a new subdivision beyond the present Seabury road...?

Ed

Ed Lynch, WPCA
Mobile 646-732-9224

From: Duarte, Mauricio <duartem@grotonutilities.com>
Sent: Thursday, July 20, 2023 4:40 PM
To: water pollution control authority <wpca.ledyard@ledyardct.org>
Subject: Holmberg Tank_Ledyard Center Tank and Seabury Ave

Greetings, Ed,

I've included a quote for the examination of the Gales Ferry Tank (also known as the Holmberg Tank), which was brought up during the DPH sanitary survey last year. It has been five years since the last inspection, which is about when DPH advises having tanks evaluated. The last examination was completed in 2018.

A map of the service region for the Southeastern Water Authority is also included. It appears that Seabury Ave is in their service area and not Ledyard's.

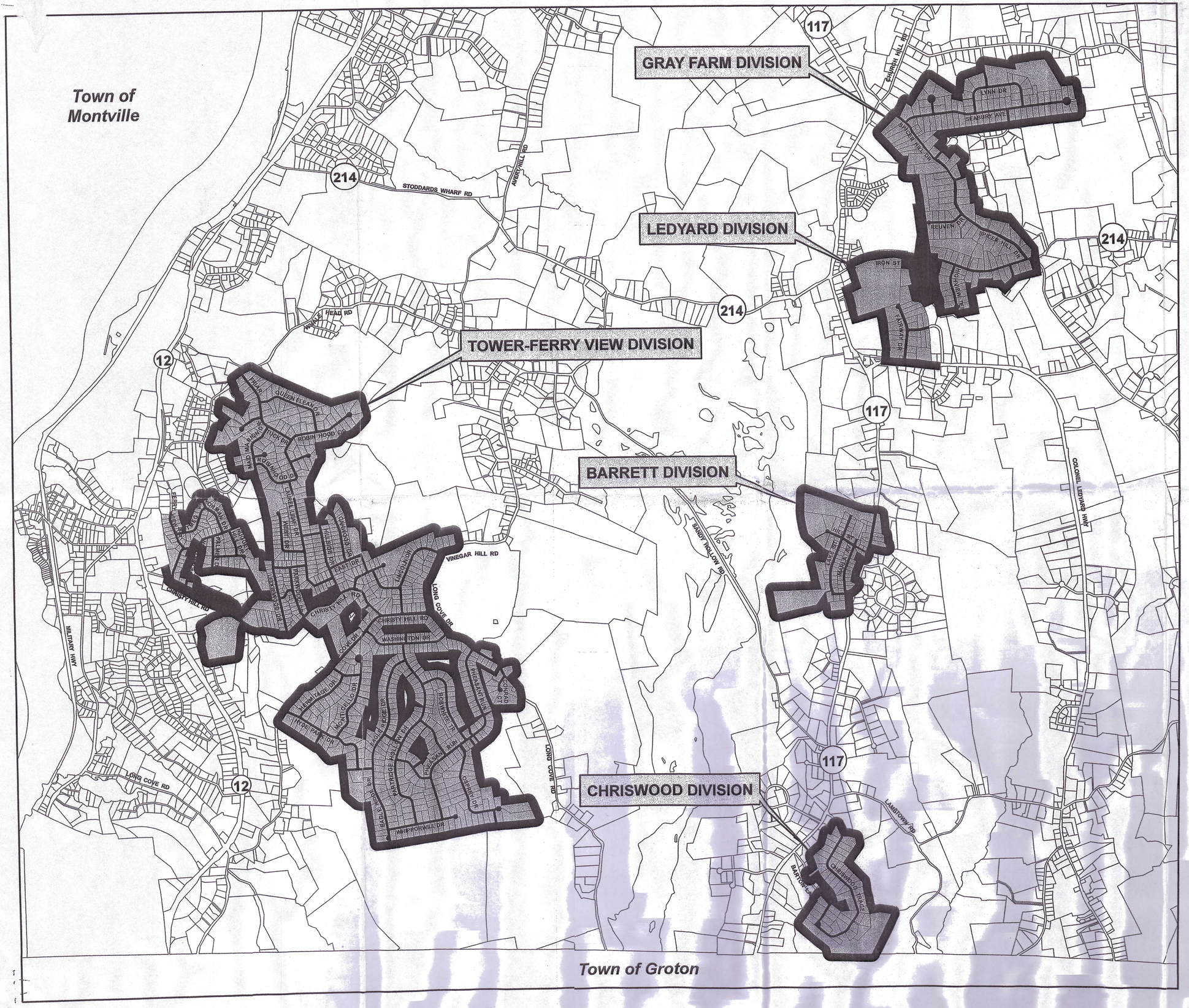
Finally, I was able to make contact with the company that will be painting the Ledyard Center Tank's top, Goliath Structural Steel Maintenance. They stated they would call me back this week to give me an exact date but that they anticipated to begin the job in August.

If you have any questions please let me know.

Best,

Mo

LEDYARD
WATER SERVICE AREAS



Notes:
1) Parcel Base Received from Town of Ledyard 01/29/2007.
2) Ledyard Division Service Area Mapping Data Layer from Town of Ledyard 02/06/2007.
3) Water Service Area Verified by SCWA February 2007.

Water Service Area

200 ft Expansion Area

SOUTHEASTERN CONNECTICUT WATER AUTHORITY

2,000 0 2,000 4,000

Feet

FEBRUARY 2007

N W E S

FUSS & O'NEILL

Disciplines to Deliver

K:\GIS\P2005\0653\A10\MXD\SCWA_Ledyard_24x36.mxd

April 18, 2023

Mauricio Duarte
Groton Utilities
295 Meridian Street
Groton, CT 06340

Re: Washout Fairway Drive Tank
ROV Inspection of Gales Ferry
Groton, Connecticut
CorrTech Proposal No. 16377

Dear Mauricio:

CorrTech, Inc. is pleased to provide this proposal for washout, spot coating, and ROV inspection the following structures;

Fairway Drive Hydropillar

The focus of this portion of the project is to remove the sediment deposits in the lower section of the interior water cavity and repair the large coating delaminations in the interior of the water cavity. It is the tank owner's responsibility to have the tank opened and emptied and ready for cleaning when the CorrTech crew arrives on-site.

PROJECT SCOPE

Tank Cleaning

It will be the tank owner's responsibility to open the tank hatch, empty the tank as low as possible down to the sediment ring. CorrTech will pressure wash the bowl and loser riser sections. CorrTech will then remove the sediment deposits that have accumulated on the floor. All waste material will be deposited on site within 100-ft of the tank location.

Water Cavity Spot Coating Repairs

CorrTech will repair areas of corrosion below the high-water line on the interior shell, bowl, and riser with an NSF-61 approved epoxy. CorrTech will power tool clean the areas of active corrosion larger than one square inch and apply the epoxy coating system in accordance with SSPC-SP11 Power tool cleaning and the manufacturers data sheet for application.

For the areas of topcoat delamination where the primer remains intact CorrTech will sand the areas of topcoat delamination larger than one square inch below the high-water line on the interior shell, bowl, and riser. CorrTech will feather back the coating system until areas of loose coating are removed and will spot coat with an NSF-61 approved epoxy.

This project is based on the assumption of no more than 500 sq ft of spot coating. If, during the cleaning process it is determined that there are more than 500 sq ft of spot coating required CorrTech will consult with the tank owner to determine the course of action.

After work is completed CorrTech will disinfect the water cavity in accordance with AWWA C652 method II.

Report

Upon completion of the washout and spot coating CorrTech will provide a brief field report detailing the work and will include before and after pictures.

Our price includes one electronic (PDF) copy of the report with digital photos.

Gales Ferry Tank

The main focus of this project is to evaluate the condition of the tanks and provide specific recommendations that will allow the owner to maximize the serviceable life and provide information for possible modifications and rehabilitation to improve operational effectiveness or replacement.

PROJECT SCOPE

Comprehensive Tank Evaluations by ROV (Remotely Operated Vehicle)

CorrTech proposes a thorough inspection of the tank(s) in accordance with AWWA D101-53 (R1986) “Inspecting and Repairing Steel Water Tanks, Standpipes, Reservoirs and Elevated Tanks for Water Storage” Part A, NFPA, EPA and OSHA standards as applicable. This inspection would be conducted by a two-man crew consisting of a NACE Trained Coatings Inspector and a qualified assistant. The interior underwater evaluations will be conducted using a Remote Operated Vehicle, (ROV), named “TankRover”. This specially designed underwater vehicle completely replaces the need for diving or taking tanks off line.

TankRover provides high quality video inspection of 100% of all internal surfaces, including the roof, through closed circuit TV. The video from the underwater camera is directly viewed on the ground by the inspector/operator.

A TankRover evaluation requires no preparation by the client as the tank can be left completely on line during the inspection. Strict disinfecting procedures in accordance with AWWA C652-02 Section 4.4, for the ROV and umbilical cable will be implemented on site by the inspection team We would also supply the necessary inspection and safety equipment required for the external inspections.

All observations would be recorded by means of high quality digital photographs and video recording (USB) and written field notes.

CorrTech will perform the inspection, sampling and testing to gather the required information. Each structure will be evaluated by the coatings and corrosion control team using non-destructive testing methods. The actual analysis and sampling/testing scheme to be followed for the specific tank will be determined in the field. The inspections will satisfy OSHA Requirements

The following methods are available for use in assessing the condition of each tank. CorrTech will employ destructive test methods, such as the cross-cut tape test, only when necessary and with the express permission of the tank owner.

1. Dry film thickness measurements of the exterior coating.

2. ASTM D3359 adhesion test methods A and B on the exterior coatings.

3. Visual examination from available ladders and scaffolding.

4. Upon request of client CorrTech will collect interior and exterior coating samples sufficient for laboratory testing; Samples would tested for total lead and chromium using the atomic absorption method, a separate fee will be charged.

5. Condition of paint on the interior and exterior including; approximate percent of rusting, type of paint failure and locations of concentrated paint failure.

6. Metal loss due to corrosion such as pitting, layered corrosion or physical damage. Special attention is paid to joints, seams, rivets and roof members.

7. Cathodic protection systems are inspected to assess the number of anode strings, presence or absence of reference cells and operation of a rectifier.

8. Foundation pads or ring walls are inspected for cracking and other deterioration. The floor plate flange and grouting are inspected as well.

9 Elevated tanks are inspected for signs of instability or shifting by observing the tower posts, tension rods and riser pipe.

10. All fasteners such as cotter pins, anchor bolts and turnbuckles are inspected for corrosion or failure.

11. Safety appurtenances such as ladders, anti-climb devices, anti-fall devices, painter's rails and balconies are inspected. their condition and OSHA compliance noted.

12. Adhesion would be measured on the exterior paint systems to determine if the system can be top coated, and how long it may last. This information is useful because it tells us whether we can recommend top coating instead of total removal.

13. Sanitary and security items such as lights, bug screens, hatches and padlocks will also be included in our written observations.

Report

Upon completion of the inspection, the data would be reviewed by our corrosion team for the preparation of the report and recommendations. The team would evaluate the results and determine if the tank is adequately protected against future corrosion and meets today's OSHA safety and sanitary standards. Any deficiencies would be discussed in the report with appropriate recommendations accompanied by estimates of cost. The report would be reviewed by a NACE

Certified Coating Inspector for completeness and quality. The final report will contain color photographs from both interior and exterior surfaces. Our price includes one electronic (PDF) inspection report by email per tank and one (1) USB of each internal inspection.

FEE SCHEDULE

Based on the project requirements the following fee schedule is presented:

Washout of Fairway Dr. Tank with Report	$13,622.00 Lump Sum
Coating Repairs to Fairway Dr. Interior Water Cavity	$16,146.75 Lump Sum
ROV inspection of Gales Ferry Tank	$2,576.00 Lump Sum
(1) Condition Assessment Report	$760.00 Lump Sum
Project Total	**$33,104.75**
Standby Rate	$385.00/Hr
Cancelation Fee	$2,000.00

This fee schedule assumes all work will be done at the Fairway Drive Tank in one period.

Qualifications and Limitations

The proposal is based on the following conditions and assumptions:

Prior to CorrTech arrival on-site, the tanks will be opened and drained of water, to the sediment level.

All waste material will be deposited on site within 100-ft of the tank location.

1. Scheduling work will be subject to personnel and equipment availability.

2. Project pricing is valid for 60 days.

3. Scope to be performed during regular work hours Monday-Friday allowing for scheduling and coordination.

4. Prior to CorrTech arrival on-site, the tank will be opened and drained of water, to the sediment level for the Fairway Dr tank.

5. All waste material will be deposited on site within 100-ft of the tank location.

6. CorrTech assumes that the hatch locations are accessible as communicated by the tank owner or owner's representative. A minimum hatch size of 18 x 16 inches inside diameter

is required in order to perform safe confined space entry.

7. The owner is required to replace the hatch and gasket, refill, and test the tank for its return to service.

8. 110 Power and water supply are available on site.

9. Delays outside of CorrTech's control would be billed at a standby rate of $385.00 per hour.

10. Covid 19 impact may require scheduling flexibility. The health and safety of CorrTech's staff and customers is of prime importance, all CorrTech personnel follow and conform to our Covid-19 safety policies and protocols. Due to that, there is the possibility that some adjustments and alterations to planned travel and work schedules may occur that are beyond the control of CorrTech.

11. Applicable sales taxes will be charged on materials and services which are purchased as part of this proposal. If you are an exempt organization or reseller, a valid tax exemption or resale certificate must be presented to CorrTech prior to the material order in order to avoid this charge.

12. Tank inspections can only be conducted on tanks with roof access hatches that are a minimum 22-inches in diameter, the hatch opening must be unobstructed by piping, ladders or other interior structures. Bolted roof hatches must be opened and replaced by tank owner Where the owner has represented that the hatch is 22-inches and it is found to be smaller, CorrTech reserves the right to charge the cancellation fee quoted.

13. If a tank has no roof ladder, railing or secure anchor point to attach to then a direct inspection of the entire roof and roof vent screen cannot be completed. The inspectors will utilize a zoom digital camera to document conditions from the tank shell ladder.

14. This proposal is based on the presumption that the shell and roof ladder of the tank are in sound condition and are safe for climbing the tank. Cancellation fee will apply if CorrTech mobilizes inspection crew to the site and are unable to safely climb the tank.

15. Shell ladder must be within 24-ft of the ground. If CorrTech crew arrives on site and shell access ladder is more that 24-ft off the ground, delay costs of $300/hour or stated cancellation fee will be charged.

16. It is the responsibility of the tank owner to insure that the roof hatch lock is operable with key provided by owner. If the roof hatch lock is not operable, CorrTech will cut and remove the lock and charge the owner an additional $350 fee. It is the responsibility of the Owner to have a replacement lock available during the time of the inspection. CorrTech would not re-climb the tank to install the replacement lock.

17. It is recommended that the tank water level be as high as the overflow level in order for best ROV inspection coverage of underwater surfaces and ceiling condition. Water level at the time of inspection is the responsibility of tank owner. CorrTech will utilize digital camera from roof hatch location to document above water surface conditions. CorrTech's fees remain the same as quoted regardless of water level at time of inspection.

This proposal is valid for sixty (60) days from the date set forth above. CorrTech payment terms are upon receipt of invoice.

CorrTech's attached Standard Terms and Conditions will apply to this project. By providing your duly authorized signature below, you agree that the parties relationship, and the services to be provided, under this proposal shall be subject solely to CorrTech's Standard Terms and Conditions, and that any terms and conditions on your purchase order or other form that may vary from, conflict with, or purport to add to or modify, CorrTech's Standard Terms and Conditions shall not apply, even though such form may state otherwise. CorrTech hereby objects in advance to all such competing terms and conditions.

Please review the attached Standard Terms and Conditions carefully, and let us know if you have any questions about them. If the scope of services, terms and conditions, and fee described herein is acceptable, then please indicate your acceptance by signing below and returning one original to our office.

Respectfully submitted,

Ben Palmer
Project Manager

CONTRACT AUTHORIZATION

I, the undersigned, hereby represent that I am authorized to sign this proposal on behalf of Groton Utilities and that my signature constitutes a binding acceptance of this proposal No. 16377, inclusive of the standard terms and conditions, as a valid and enforceable agreement between CorrTech, Inc. and Groton Utilities.

Date:	By: Authorized Representative
Print Name:	

FOR ACCOUNTING PURPOSES, PLEASE COMPLETE THE INFORMATION BELOW:

PO# Assigned (if any)	Billing Contact Name
Address:	2nd Line or PO Box
City:	State/ Zip:
Phone:	E-Mail

Any Special Billing instructions should be listed below:

STANDARD TERMS AND CONDITIONS

1. CorrTech, Inc.

   a) CorrTech, Inc. (“CorrTech”) agrees to provide Client with the services set forth in the proposal pursuant to the terms and conditions (“Terms and Conditions”) set forth herein. Together, the proposal and the Terms and Conditions shall constitute the complete agreement between CorrTech and the Client (“Agreement”) for the services described in the proposal. If there is a conflict between the proposal and these Terms and Conditions, these Terms and Conditions shall control.

   b) Client shall designate in writing a person to acts as its Authorized Representative with respect to this Agreement.

   c) Client shall provide all information and criteria as to Client’s requirements, objectives, and expectations for CorrTech’s services including all numerical criteria that are to be met and all standards for development, design, or construction.

2. Billing and Payment

   a) Client agrees to pay CorrTech in accordance with the rates, charges, and/or amount set forth in the attached proposal. Invoices for CorrTech's services will be submitted either periodically or upon completion of such services, at the election of CorrTech. All such invoices shall be due and payable upon receipt unless both parties agree in writing to different terms.

   b) In the event payment is not timely made, the overdue balance shall bear interest at 1.5 percent per month or the maximum lawful allowable rate, whichever is higher.

   c) Client’s failure to pay any invoice due to CorrTech within agreed upon terms will constitute a breach of this Agreement. Without waiving any other claim or right against Client, CorrTech may elect to terminate its performance of services upon failure by Client to pay amounts owed CorrTech when due by providing Client with ten (10) days written notice of CorrTech's intent to terminate. In the event of a termination by CorrTech, Client shall pay CorrTech for all services performed as of the date of termination, as well as all reasonable costs incurred as a result of such termination, including, but not limited to, interest, lost profits, and reasonable legal fees. The waiver by CorrTech of any of its rights under this Agreement in any one or more instance shall not constitute a waiver of any other rights hereunder or of such rights on any future occasion.

3. Right of Entry

a) Client hereby grants to CorrTech and its agents, staff, consultants, and contractors or subcontractors permission and the right to enter upon the subject worksite for the purpose of performing all acts, studies, and research in accordance with the proposal ("Right of Entry"). Should Client not own the site, Client warrants and represents by acceptance of the proposal that it has authority and permission of site owner and any site occupant to grant CorrTech this Right of Entry.

b) Client represents and acknowledges that it is now and shall remain in control of the site at all times. CorrTech shall have no responsibility or liability for any aspect or condition of the site, now existing or hereafter arising or discovered. CorrTech does not, by this Agreement, assume any responsibilities or liability with respect to the site.

4. Site Disturbance Resulting from Work

a) Client hereby recognizes that the use of equipment necessary to perform CorrTech's services may affect, alter, or damage the terrain, vegetation, buildings, structures, and equipment in, at, or upon the site. CorrTech shall not be liable to Client for such effect, alteration, or damage. CorrTech will take reasonable precautions to limit such effects, alterations and damage.

b) Client shall provide CorrTech with all previous studies, plans, or other documents pertaining to the work in Client's possession or reasonably obtainable by Client, in support of CorrTech's services. CorrTech will use reasonable care, to locate subsurface structures in the vicinity of CorrTech's subsurface explorations. Client recognizes that it is impossible for CorrTech to assure the sufficiency of such information. Accordingly, Client waives any claim against CorrTech, and agrees to defend, indemnify and hold CorrTech harmless from any claim or liability for injury or loss allegedly arising from errors, omissions, or inaccuracies in documents or other information provided to CorrTech from Client, or from CorrTech's reasonable reliance on such documents or information.

5. Standard of Care

CorrTech shall perform its services in a professional manner consistent with the standard of care applicable to similar services in the jurisdiction where the project is located ("Standard of Care"). Client agrees that CorrTech is providing no warranty or guarantee, either expressed or implied, in connection with its services, unless expressly contained in these Terms and Conditions.

6. Insurance

CorrTech represents and warrants that its staff is protected by Worker's Public Liability and Property Damage insurance policies. Client agrees that CorrTech will not be liable or responsible to Client for any loss, damage, or liability beyond the amounts, limits, exclusions, and conditions of such insurance.

7. Construction Observation Services

a) Client agrees that any and all construction services related to CorrTech's services will be performed by a contractor retained by Client ("Contractor"), and that CorrTech shall have no responsibility or obligation for the performance of Contractor.

b) The purpose of CorrTech's site visits will be to enable CorrTech to better carry out the duties and responsibilities specifically assigned to CorrTech in this Agreement. CorrTech shall not, during such visits, or at any time, or as a result of CorrTech's observations of Contractor's work, supervise, direct, or have control over Contractor's work, nor shall CorrTech have authority over or responsibility for the means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's work, nor for any failure of Contractor to comply with laws and regulations applicable to Contractor's furnishing and performing its work, including, but not limited to, those under the Occupational Safety and Health Act of 1970. Accordingly, CorrTech neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform its work in accordance with the Contract Documents.

c) It shall be Client's responsibility to notify the appropriate federal, state, or local public authorities or agencies, as required by law or otherwise of any condition that could in any way constitute a danger or threat to public health, safety, or the environment, arising out of, or in any way related to work performed in accordance with CorrTech's services.

8. Documents

All logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by CorrTech shall constitute CorrTech's instruments of service, and shall remain the property of CorrTech. CorrTech will retain all pertinent records relating to the services performed for a period of five (5) years following submission, during which period, the records will be made available to Client at CorrTech's office at all reasonable times. Copies will be prepared by CorrTech for Client for reasonable cost of reproduction.

9. Governing Law and Severability

a) This Agreement shall be governed by the laws of the State or jurisdiction in which the CorrTech office that issued the proposal is located, excluding any rule or principle that would refer to and apply the substantive law of another State or jurisdiction.

b) Each provision of this Agreement is severable and distinct from and independent of every other provision hereof. If one provision is declared void or unenforceable, the remaining provisions shall remain in effect. The terms contained in Section 9 shall survive the termination or expiration of this Agreement.

10. Indemnification

To the fullest extent allowed by law, Client shall indemnify and hold CorrTech, its affiliates, directors, officers, employees and agents harmless from and against all claims, losses, damages, liabilities, costs, attorney fees and expenses sustained or incurred, directly or indirectly, to the extent arising out of or relating to this Agreement, including, but not limited to, the negligent acts, errors, omissions, the treatment, storage, disposal or transportation of toxic or hazardous waste or contaminating substance, violation of any federal, state, or local statute, regulation, or ordinance relating to hazardous waste and environmental contamination by Client, its affiliates, directors, officers, employees, contractors and agents in the performance of professional Services by Engineer and its Sub-consultants.

11. Confidentiality

As a result of the performance of CorrTech's services, CorrTech may have access to information and materials of a highly sensitive nature belonging to Client, including confidential information. CorrTech agrees that CorrTech shall not, without Client's prior written consent, disclose, make commercial or other use of, or give or sell to any person, firm, or corporation, any confidential information received directly or indirectly from Client or acquired or developed in the course of the performance of this Agreement unless: (1) required to do so pursuant to applicable law; or (2) it is rightfully in the possession of CorrTech from a source other than Client prior to the time of disclosure of the information to CorrTech under this Agreement; or (3) it was in the public domain prior to the time of the CorrTech's receipt; or (4) it was independently developed by CorrTech prior to the time of receipt.

12. Claims and Disputes

a) Any and all claims, disputes or other matter in question arising out of or related to the services provided by CorrTech shall be subject to mediation as a condition precedent to binding dispute resolution. If such matter relates to or is the subject of a lien arising out of the Architect's services, the Architect may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or by binding dispute resolution. Unless the parties mutually agree otherwise, mediation shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. The

parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in a place mutually agreed upon.

b) If the parties do not resolve a dispute through mediation, the dispute shall be subject to [arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement] [or] [litigation in a court of appropriate jurisdiction in the state or jurisdiction in which the CorrTech office that issued the proposal is located.

13. Limitation of Liability

a) CorrTech and Client waive consequential damages for claims, disputes or other matters in question arising out of or relating to CorrTech's services.

b) To the fullest extent permitted by law, the total liability of CorrTech, its officers, directors, employees, agents, and contractors to Client, for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to CorrTech's services, the project or this Agreement shall not exceed the total compensation received from CorrTech under this Agreement.

14. Delays

In the event that CorrTech's services are interrupted due to causes beyond its control, CorrTech shall be compensated by Client for the labor, equipment and other costs CorrTech incurs in order to maintain his or her workforce for Client's benefit during the interruption. Notwithstanding the foregoing, CorrTech shall not hold Client responsible for damages or delays caused by acts of God or other circumstances beyond Client's control, and which could not reasonably be anticipated or prevented.

Ledyard WPCA – Ledyard Center

PWS ID: CT0727091

A. 2021 Inspection for Cross Connections Requirements

Ledyard WPCA - Ledyard Center's 2021 CCSR indicates the following:

a. Annual Inspections:

19 inspections for cross connections were conducted of the 19 required to be inspected annually, which took into account locations prohibited from inspections due to the COVID-19 Pandemic and/or consumer premises that were documented "not in service".

b. Identified cross connection violations:

8 cross connection violations were identified during these inspections,

8 of these violations were not corrected by 12/31/2021.

a) Ledyard High school (24 Gallup Hill Road)
- We had two RPZ failed but had them repaired in the first quarter of 2022.

b) 740 Colonel Ledyard Highway
- The building was repurposed and the new owners removed the backflow without G.U's knowledge. The building later had a leak and the water was off for a while. The leak was fix and the new backflow was installed in the second quarter of 2022.

c) 1949 Route 12
- Mop sinks and water fixtures were missing the proper protection, they were corrected in the first quarter of 2022.

2022 Inspection for Cross Connections Requirements

Ledyard WPCA - Ledyard Center's 2022 CCSR indicates the following:

a) Annual Inspections: 19 inspections for cross connections were conducted of the 19 required to be inspected annually, which took into account locations prohibited from inspections due to consumer premises that were documented "not in service".

b) Identified cross connection violations:
8 cross connection violations were identified during these inspections,
2 of these violations were not corrected by 12/31/2022.

- A mistake was made when filling out the form, those 2 violations were fixed by Dec. 31.
The violations were at the same address which was (24 Gallup hill Rd) - Ledyard high school

B. 2021 Tests of Backflow Prevention Devices Requirements

Ledyard WPCA - Ledyard Center's 2021 CCSR indicates the following:

a. Annual backflow prevention device testing:
31 tests of the testable backflow prevention devices were conducted of the **32** required to be tested on an annual basis, which took into account devices prohibited from testing due to the COVID-19 Pandemic and/or consumer premises that were documented "not in service".

An evaluation of the report finds 1 or more devices were not tested as required.

6 devices failed testing in 2021,

1 of the failed devices were repaired by 12/31/2021.

a) Ledyard High school (24 Gallup Hill Road)
- We had two RPZ failed but had them repaired in the first quarter of 2022.

b) 740 Colonel Ledyard Highway
- The building was repurposed and the new owners removed the backflow without G.U's knowledge. The building later had a leak and the water was off for a while. The leak was fix and the new backflow was installed in the second quarter of 2022.

c) 737 Col. Ledyard Highway
- 2- RPZ were failed, the issue was corrected in the first quarter of 2022.

2022 Tests of Backflow Prevention Devices Requirements

Ledyard WPCA - Ledyard Center's 2022 CCSR indicates the following:

a. Annual backflow prevention device testing:
32 tests of the testable backflow prevention devices were conducted of the **32** required to be tested on an annual basis, which took into account devices prohibited from testing due to the consumer premises that were documented "not in service".

8 devices failed testing in 2022,

2 of the failed devices were repaired by 12/31/2022.

- A mistake was made when filling out the form, those 2 violations were fixed by Dec. 31.
The violations were at the same address which was (24 Gallup hill Rd) - Ledyard high school

File #: 23-1836 **Agenda Date:** 7/25/2023 **Agenda #:** 2.

APPLICATION

Subject/Application:
Service Correspondence.

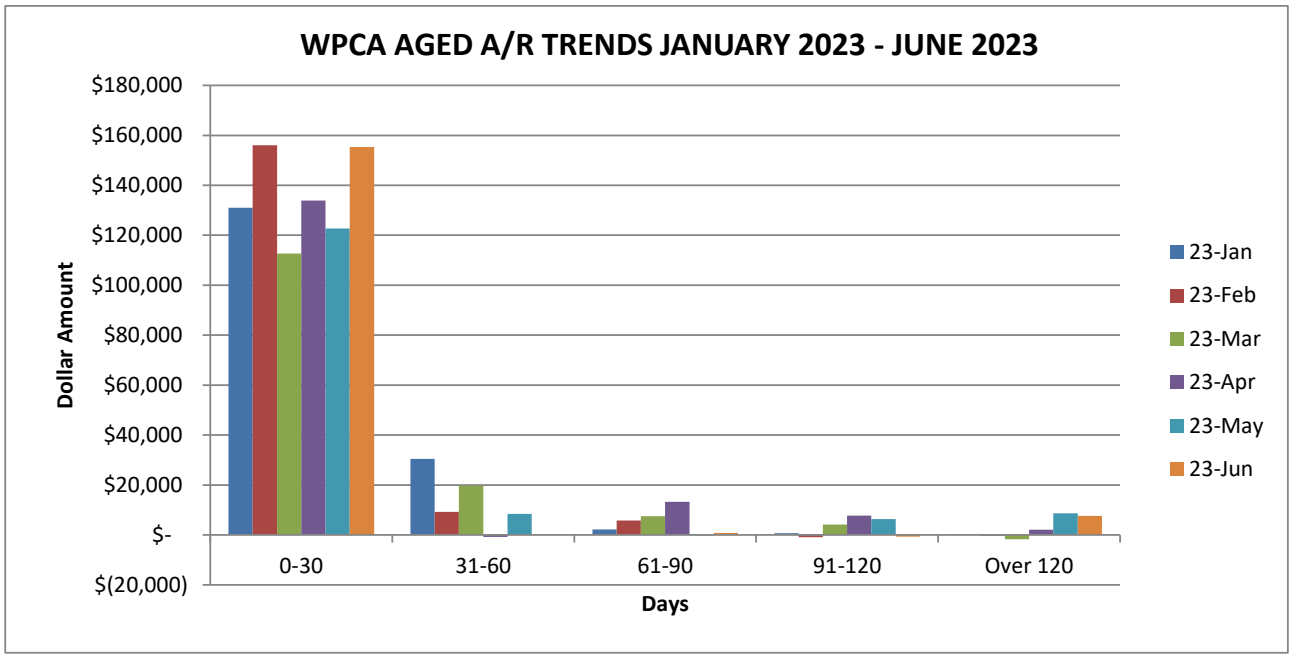
Background:
(type text here)

Staff Comments:
(type text here)

File #: 23-1837 **Agenda Date:** 7/25/2023 **Agenda #:** 3.

REPORT

Staff/Committee Report:
Aged Reports/Finance.



JAN 0-30	JAN 31-60	JAN 61-90	JAN 91-120	JAN OVER 120	
$ 131,005	$ 30,454	$ 2,161	$ 744	$ 74	$ 164,438

FEB 0-30	FEB 31-60	FEB 61-90	FEB 91-120	FEB OVER 120	
$ 156,025	$ 9,207	$ 5,770	$ (922)	$ (335)	$ 169,745

MAR 0-30	MAR 31-60	MAR 61-90	MAR 91-120	MAR OVER 120	
$ 112,673	$ 19,744	$ 7,490	$ 4,153	$ (1,758)	$ 142,302

APR 0-30	APR 31-60	APR 61-90	APR 91-120	APR OVER 120	
$ 133,836	$ (832)	$ 13,287	$ 7,692	$ 2,071	$ 156,055

MAY 0-30	MAY 31-60	MAY 61-90	MAY 91-120	MAY OVER 120	
$ 122,754	$ 8,431	$ (171)	$ 6,326	$ 8,634	$ 145,973

APR 0-30	APR 31-60	APR 61-90	APR 91-120	APR OVER 120	
$ 155,351	$ (109)	$ 857	$ (693)	$ 7,656	$ 163,061

Foot Notes:
Cash Collected in the month of June 2023: $134,734.14

TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1841 **Agenda Date:** 7/25/2023 **Agenda #:** 4.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Year to Date Water/Sewer Report.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
5059001 OTHER-GEN - GRANTS/CONTR							
5059001 49002 TRANS IN	-392,089	0	-392,089	.00	.00	-392,089.26	.0%*
TOTAL OTHER-GEN - GRANTS/CONTR	-392,089	0	-392,089	.00	.00	-392,089.26	.0%
TOTAL REVENUES	-392,089	0	-392,089	.00	.00	-392,089.26	
50590991 CONTRIBUTION TO CNR							
50590991 59305 CONT CNR	130,000	0	130,000	.00	.00	130,000.00	.0%
TOTAL CONTRIBUTION TO CNR	130,000	0	130,000	.00	.00	130,000.00	.0%
TOTAL EXPENSES	130,000	0	130,000	.00	.00	130,000.00	
50591603 SOURCE OF SUPPLY							
50591603 58100 DUES FEES	3,100	0	3,100	637.50	.00	2,462.50	20.6%
TOTAL SOURCE OF SUPPLY	3,100	0	3,100	637.50	.00	2,462.50	20.6%
TOTAL EXPENSES	3,100	0	3,100	637.50	.00	2,462.50	
50591623 POWER PURCHASED							
50591623 56225 POWER PURC	10,000	0	10,000	13,907.31	92.69	-4,000.00	140.0%*
TOTAL POWER PURCHASED	10,000	0	10,000	13,907.31	92.69	-4,000.00	140.0%
TOTAL EXPENSES	10,000	0	10,000	13,907.31	92.69	-4,000.00	
50591626 GU OPERATION-EMERGENCY							
50591626 53720 GU OP EMER	9,000	0	9,000	10,325.15	1,174.85	-2,500.00	127.8%*
TOTAL GU OPERATION-EMERGENCY	9,000	0	9,000	10,325.15	1,174.85	-2,500.00	127.8%
TOTAL EXPENSES	9,000	0	9,000	10,325.15	1,174.85	-2,500.00	
50591627 GU OPERATING AGREEMENT ANNUAL							

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

50591627 GU OPERATING AGREEMENT ANNUAL	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
50591627 53725 GU OPS ANN	308,988	0	308,988	266,611.40	24,237.40	18,138.78	94.1%
50591627 53726 GU CUST SE	94,375	0	94,375	113,081.64	7,318.36	-26,025.16	127.6%*
TOTAL GU OPERATING AGREEMENT ANNUAL	403,362	0	403,362	379,693.04	31,555.76	-7,886.38	102.0%
TOTAL EXPENSES	403,362	0	403,362	379,693.04	31,555.76	-7,886.38	
50591663 METER/SYSTEMS EXPENSE							
50591663 54110 RTE 12 MET	257,576	0	257,576	282,471.39	51,976.77	-76,872.11	129.8%*
50591663 54115 RTE 117 WT	252,515	0	252,515	335,506.67	51,976.78	-134,968.94	153.4%*
50591663 54120 METERS	16,000	0	16,000	13,763.92	236.08	2,000.00	87.5%
TOTAL METER/SYSTEMS EXPENSE	526,091	0	526,091	631,741.98	104,189.63	-209,841.05	139.9%
TOTAL EXPENSES	526,091	0	526,091	631,741.98	104,189.63	-209,841.05	
50591921 MISC							
50591921 54420 FIN SERV	26,000	0	26,000	26,000.00	.00	.00	100.0%
50591921 54506 FIRE HYDRA	5,000	0	5,000	-8,175.00	.00	13,175.00	-163.5%
50591921 58810 GOBONDPR	85,275	0	85,275	.00	.00	85,274.54	.0%
50591921 58811 GOBONDINT	9,193	0	9,193	3,743.76	.00	5,449.25	40.7%
50591921 58820 CWF PRIN	245,659	0	245,659	.00	.00	245,658.52	.0%
50591921 58821 CWF INT	51,963	0	51,963	47,821.91	.00	4,141.28	92.0%
50591921 58822 LOAN PMT	12,500	0	12,500	.00	.00	12,500.00	.0%
50591921 59300 TRANS FDS	0	0	0	187,500.00	.00	-187,500.00	100.0%*
TOTAL MISC	435,589	0	435,589	256,890.67	.00	178,698.59	59.0%
TOTAL EXPENSES	435,589	0	435,589	256,890.67	.00	178,698.59	
50591923 PROFESSIONAL FEES							
50591923 53600 ACCTG SERV	9,738	0	9,738	8,670.00	.00	1,068.00	89.0%
TOTAL PROFESSIONAL FEES	9,738	0	9,738	8,670.00	.00	1,068.00	89.0%
TOTAL EXPENSES	9,738	0	9,738	8,670.00	.00	1,068.00	
50591926 BENEFITS							
50591926 52300 RETIREMENT	3,681	0	3,681	.00	.00	3,681.25	.0%

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

50591926 BENEFITS		ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
TOTAL BENEFITS		3,681	0	3,681	.00	.00	3,681.25	.0%
	TOTAL EXPENSES	3,681	0	3,681	.00	.00	3,681.25	
5059801 WATER-CHARGE / SERVICE								
5059801 46045	NEW METER	-5,000	0	-5,000	.00	.00	-5,000.00	.0%*
5059801 46046	WATER MISC	-3,000	0	-3,000	-2,964.53	.00	-35.47	98.8%*
5059801 46048	TIE IN	-5,000	0	-5,000	-20,640.00	.00	15,640.00	412.8%
5059801 46049	TRANS FEE	-21,000	0	-21,000	-10,070.58	.00	-10,929.42	48.0%*
5059801 46050	WATER USE	-1,090,072	0	-1,090,072	-1,143,379.22	.00	53,306.99	104.9%
5059801 46051	WATER LATE	0	0	0	-1,235.88	.00	1,235.88	100.0%
5059801 46053	WATER ASSE	0	0	0	-12,306.84	.00	12,306.84	100.0%
5059801 46054	HYDRANT	-14,400	0	-14,400	.00	.00	-14,400.00	.0%*
5059801 48001	INT DEPOS	0	0	0	-393.24	.00	393.24	100.0%
TOTAL WATER-CHARGE / SERVICE		-1,138,472	0	-1,138,472	-1,190,990.29	.00	52,518.06	104.6%
	TOTAL REVENUES	-1,138,472	0	-1,138,472	-1,190,990.29	.00	52,518.06	
	GRAND TOTAL	0	0	0	110,875.36	137,012.93	-247,888.29	100.0%

** END OF REPORT - Generated by Ian Stammel **

YEAR-TO-DATE BUDGET REPORT

REPORT OPTIONS

	Field #	Total	Page Break
Sequence 1	9	Y	N
Sequence 2	0	N	N
Sequence 3	0	N	N
Sequence 4	0	N	N

Report title:
YEAR-TO-DATE BUDGET REPORT

Includes accounts exceeding 0% of budget.
Print totals only: N
Year/Period: 2023/12
Print Full or Short description: S
Print MTD Version: N
Print full GL account: N
Format type: 1
Roll projects to object: N
Double space: N
Carry forward code: 1
Suppress zero bal accts: Y
Include requisition amount: N
Print Revenues-Version headings: N
Print revenue as credit: Y
Print revenue budgets as zero: N
Include Fund Balance: N
Print journal detail: N
From Yr/Per: 2022/ 1
To Yr/Per: 2022/12
Include budget entries: Y
Incl encumb/liq entries: Y
Sort by JE # or PO #: J
Detail format option: 1
Include additional JE comments: N
Multiyear view: D
Amounts/totals exceed 999 million dollars: N

Find Criteria

Field Name	Field Value
Fund	0505
TWN FUNCTION	
DEPT / LOCAT	
SDEP/BOEFUNC	
Character Code	
Org	
Object	
Project	
Account type	
Account status	
Rollup Code	

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
5019001 OTHER-GEN - GRANTS/CONTR							
5019001 47009 MISC	0	0	0	-654.61	.00	654.61	100.0%
5019001 49002 TRANS IN	-158,176	0	-158,176	.00	.00	-158,176.44	.0%*
TOTAL OTHER-GEN - GRANTS/CONTR	-158,176	0	-158,176	-654.61	.00	-157,521.83	.4%
TOTAL REVENUES	-158,176	0	-158,176	-654.61	.00	-157,521.83	
50190603 SOURCE OF SUPPLY							
50190603 54225 SLUDGE HAU	17,300	-4,707	12,594	12,017.71	414.79	161.00	98.7%
50190603 58100 DUES FEES	3,100	0	3,100	1,962.50	20.00	1,117.50	64.0%
TOTAL SOURCE OF SUPPLY	20,400	-4,707	15,694	13,980.21	434.79	1,278.50	91.9%
TOTAL EXPENSES	20,400	-4,707	15,694	13,980.21	434.79	1,278.50	
50190611 MAINTENANCE OF STRUCTURE							
50190611 54510 ELECTRICIA	3,000	6,000	9,000	8,063.91	.00	936.09	89.6%
TOTAL MAINTENANCE OF STRUCTURE	3,000	6,000	9,000	8,063.91	.00	936.09	89.6%
TOTAL EXPENSES	3,000	6,000	9,000	8,063.91	.00	936.09	
50190620 WAGES (SEWER)							
50190620 51305 OT/SEASON	15,000	0	15,000	10,091.73	.00	4,908.27	67.3%
50190620 51705 LONGEVITY	500	0	500	.00	.00	500.00	.0%
TOTAL WAGES (SEWER)	15,500	0	15,500	10,091.73	.00	5,408.27	65.1%
TOTAL EXPENSES	15,500	0	15,500	10,091.73	.00	5,408.27	
50190621 EMPLOYEE UNIFORMS							
50190621 52160 EE UNIFORM	1,000	0	1,000	541.00	.00	459.00	54.1%

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

50190621 EMPLOYEE UNIFORMS	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
TOTAL EMPLOYEE UNIFORMS	1,000	0	1,000	541.00	.00	459.00	54.1%
TOTAL EXPENSES	1,000	0	1,000	541.00	.00	459.00	
50190623 POWER PURCHASED							
50190623 56200 HEAT	3,000	53	3,053	3,052.61	.00	.39	100.0%
50190623 56220 ELECTRICIT	45,000	0	45,000	37,433.77	4,557.56	3,008.67	93.3%
50190623 56261 GAS/DESIEL	4,500	22	4,522	4,503.47	.00	18.53	99.6%
TOTAL POWER PURCHASED	52,500	75	52,575	44,989.85	4,557.56	3,027.59	94.2%
TOTAL EXPENSES	52,500	75	52,575	44,989.85	4,557.56	3,027.59	
50190624 PUMPING SUPPLY & EXPENSE							
50190624 56914 PUMP SUPP	3,300	80	3,380	3,100.00	.00	280.00	91.7%
TOTAL PUMPING SUPPLY & EXPENSE	3,300	80	3,380	3,100.00	.00	280.00	91.7%
TOTAL EXPENSES	3,300	80	3,380	3,100.00	.00	280.00	
50190641 CHEMICALS							
50190641 56912 CHEMICALS	20,000	100	20,100	20,058.31	.00	41.69	99.8%
TOTAL CHEMICALS	20,000	100	20,100	20,058.31	.00	41.69	99.8%
TOTAL EXPENSES	20,000	100	20,100	20,058.31	.00	41.69	
50190643 TREATMENT EXPENSE							
50190643 56916 TRTMT EXP	6,500	368	6,868	6,832.50	.00	35.00	99.5%
TOTAL TREATMENT EXPENSE	6,500	368	6,868	6,832.50	.00	35.00	99.5%
TOTAL EXPENSES	6,500	368	6,868	6,832.50	.00	35.00	
50190663 METER EXPENSE							
50190663 53710 MTR CALIBR	750	100	850	850.00	.00	.00	100.0%

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

50190663 METER EXPENSE	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
TOTAL METER EXPENSE	750	100	850	850.00	.00	.00	100.0%
TOTAL EXPENSES	750	100	850	850.00	.00	.00	
50190673 MAINTENANCE OF MAINS							
50190673 54515 MNT MAINS	3,000	700	3,700	3,600.00	.00	100.00	97.3%
TOTAL MAINTENANCE OF MAINS	3,000	700	3,700	3,600.00	.00	100.00	97.3%
TOTAL EXPENSES	3,000	700	3,700	3,600.00	.00	100.00	
50190678 MAINTENANCE OF MISC. PLANT							
50190678 54505 MNT MISC P	12,000	650	12,650	12,233.35	.00	416.65	96.7%
50190678 56802 SFTY EQUIP	1,000	0	1,000	245.00	.00	755.00	24.5%
50190678 56804 LAB EQP	2,900	0	2,900	207.55	.00	2,692.45	7.2%
TOTAL MAINTENANCE OF MISC. PLANT	15,900	650	16,550	12,685.90	.00	3,864.10	76.7%
TOTAL EXPENSES	15,900	650	16,550	12,685.90	.00	3,864.10	
50190920 PLANT OPERATIONS WAGES							
50190920 51610 SPVR SAL	86,778	0	86,778	90,397.13	.00	-3,619.53	104.2%*
50190920 51635 SHIFT OPER	70,210	0	70,210	74,495.06	.00	-4,284.60	106.1%*
50190920 51640 LAB TECH	49,037	0	49,037	48,651.45	.00	385.62	99.2%
TOTAL PLANT OPERATIONS WAGES	206,025	0	206,025	213,543.64	.00	-7,518.51	103.6%
TOTAL EXPENSES	206,025	0	206,025	213,543.64	.00	-7,518.51	
50190921 MISC							
50190921 54150 LAKESIDE	2,500	0	2,500	2,500.00	.00	.00	100.0%
50190921 54420 FIN SERV	14,000	0	14,000	14,000.00	.00	.00	100.0%
50190921 56100 OPER EXP	11,000	-755	10,245	7,066.72	26.95	3,151.33	69.2%
50190921 58810 GOBONDPR	117,388	0	117,388	.00	.00	117,388.24	.0%
50190921 58811 GOBONDINT	40,788	0	40,788	21,049.01	.00	19,739.19	51.6%

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

50190921 MISC		ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
50190921 59300	TRANS FDS	0	0	0	62,500.00	.00	-62,500.00	100.0%*
TOTAL MISC		185,676	-755	184,921	107,115.73	26.95	77,778.76	57.9%
	TOTAL EXPENSES	185,676	-755	184,921	107,115.73	26.95	77,778.76	
50190923 PROFESSIONAL FEES								
50190923 53600	ACCTG SERV	3,000	0	3,000	1,530.00	.00	1,470.00	51.0%
50190923 53705	LAB TESTS	6,400	1,089	7,489	6,760.50	728.50	.00	100.0%
50190923 58110	TMDS	1,500	0	1,500	471.00	150.00	879.00	41.4%
TOTAL PROFESSIONAL FEES		10,900	1,089	11,989	8,761.50	878.50	2,349.00	80.4%
	TOTAL EXPENSES	10,900	1,089	11,989	8,761.50	878.50	2,349.00	
50190926 BENEFITS								
50190926 52000	HLTHCARE	44,681	0	44,681	.00	.00	44,681.37	.0%
50190926 52300	RETIREMENT	19,090	0	19,090	.00	.00	19,089.88	.0%
50190926 52500	SOCSEC	15,777	0	15,777	.00	.00	15,777.40	.0%
50190926 52900	GG WORKCOM	7,973	0	7,973	.00	.00	7,973.17	.0%
TOTAL BENEFITS		87,522	0	87,522	.00	.00	87,521.82	.0%
	TOTAL EXPENSES	87,522	0	87,522	.00	.00	87,521.82	
50190933 TRANSPORTATION EXPENSE								
50190933 54305	CAR MNTNC	1,900	300	2,200	1,954.70	216.29	29.01	98.7%
TOTAL TRANSPORTATION EXPENSE		1,900	300	2,200	1,954.70	216.29	29.01	98.7%
	TOTAL EXPENSES	1,900	300	2,200	1,954.70	216.29	29.01	
50190990 CAPITAL								
50190990 57505	SEWER TIE	1,000	0	1,000	.00	.00	1,000.00	.0%
TOTAL CAPITAL		1,000	0	1,000	.00	.00	1,000.00	.0%
	TOTAL EXPENSES	1,000	0	1,000	.00	.00	1,000.00	

YEAR-TO-DATE BUDGET REPORT

FOR 2023 12

50190991 CONTINGENCY	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
50190991 CONTINGENCY							
50190991 58910 CONTINGENC	10,710	-4,000	6,710	8,474.38	.00	-1,764.38	126.3%*
50190991 59305 CONT CNR	23,809	0	23,809	.00	.00	23,809.41	.0%
TOTAL CONTINGENCY	34,519	-4,000	30,519	8,474.38	.00	22,045.03	27.8%
TOTAL EXPENSES	34,519	-4,000	30,519	8,474.38	.00	22,045.03	
50191627 GU OPERATING AGREEMENT							
50191627 53726 GU CUST SE	17,976	0	17,976	18,408.64	1,691.36	-2,123.84	111.8%*
TOTAL GU OPERATING AGREEMENT	17,976	0	17,976	18,408.64	1,691.36	-2,123.84	111.8%
TOTAL EXPENSES	17,976	0	17,976	18,408.64	1,691.36	-2,123.84	
5019701 SEWER-CHARGE / SERVICE							
5019701 46020 SEWERUSE	-528,693	0	-528,693	-509,255.91	.00	-19,436.61	96.3%*
5019701 46021 SEWER LATE	-500	0	-500	-269.35	.00	-230.65	53.9%*
5019701 46022 SEW ASSESS	0	0	0	-1,189.81	.00	1,189.81	100.0%
5019701 46024 SEWER MISC	0	0	0	-77.26	.00	77.26	100.0%
5019701 46044 REV NON CU	0	0	0	-250.00	.00	250.00	100.0%
5019701 48001 INT DEPOS	0	0	0	-451.99	.00	451.99	100.0%
TOTAL SEWER-CHARGE / SERVICE	-529,193	0	-529,193	-511,494.32	.00	-17,698.20	96.7%
TOTAL REVENUES	-529,193	0	-529,193	-511,494.32	.00	-17,698.20	
5019702 SEWER-GRANTS/CONTR							
5019702 42029 STATE GRAN	0	0	0	-286.00	.00	286.00	100.0%
TOTAL SEWER-GRANTS/CONTR	0	0	0	-286.00	.00	286.00	100.0%
TOTAL REVENUES	0	0	0	-286.00	.00	286.00	
GRAND TOTAL	0	0	0	-29,382.93	7,805.45	21,577.48	100.0%

** END OF REPORT - Generated by Ian Stammel **

YEAR-TO-DATE BUDGET REPORT

REPORT OPTIONS

	Field #	Total	Page Break
Sequence 1	9	Y	N
Sequence 2	0	N	N
Sequence 3	0	N	N
Sequence 4	0	N	N

Report title:
YEAR-TO-DATE BUDGET REPORT

Includes accounts exceeding 0% of budget.
Print totals only: N
Year/Period: 2023/12
Print Full or Short description: S
Print MTD Version: N
Print full GL account: N
Format type: 1
Roll projects to object: N
Double space: N
Carry forward code: 1
Suppress zero bal accts: Y
Include requisition amount: N
Print Revenues-Version headings: N
Print revenue as credit: Y
Print revenue budgets as zero: N
Include Fund Balance: N
Print journal detail: N
From Yr/Per: 2022/ 1
To Yr/Per: 2022/12
Include budget entries: Y
Incl encumb/liq entries: Y
Sort by JE # or PO #: J
Detail format option: 1
Include additional JE comments: N
Multiyear view: D
Amounts/totals exceed 999 million dollars: N

Find Criteria

Field Name	Field Value
Fund	0501
TWN FUNCTION	
DEPT / LOCAT	
SDEP/BOEFUNC	
Character Code	
Org	
Object	
Project	
Account type	
Account status	
Rollup Code	

File #: 23-1838 **Agenda Date:** 7/25/2023 **Agenda #:** 5.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
PSR - Steve Banks.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)

Town of Ledyard
Highlands W.W.T.F.
Plant Supervisor's Report
Meeting Date: July 25, 2023

The goal of the plant staff is to efficiently collect and treat the wastewater and to produce the best quality effluent possible while maintaining the equipment and protecting the Town's assets.

- **Smith & Loveless pump station project was completed on 6-13-23. There are a few issues with the station that we are working out with Smith & Loveless.**
- **Recent Effluent BOD results have decreased. Will monitor process and results to see if this continues to trend back to normal levels. Bypass pumping could have been a factor in increased Effluent BOD levels.**
- **Recent heavy rain and lightning storms affected the plant process and equipment. Had to manually decant excess water and reset pump drives.**
- **Replaced starter and checked ground wire at Lakeside pump station. Unit is back up and running.**
- **Shoreline Fire Equipment here for annual fire extinguisher inspection. Had to remove a few of the units as they are now illegal due to chemicals that were banned by the federal government.**
- **Submitted annual NPDES permit renewal to DEEP.**
- **Waiting for a few more invoices to close out the pump station project.**
- **Kubota tractor sent to RI Harvesting for repairs.**

Respectfully,

Stephen W. Banks
Plant Supervisor

File #: 23-1542 **Agenda Date:** 7/25/2023 **Agenda #:** 1.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Ledyard Center Trail and Sewer Line Project status proceeding to a spring construction start continued.

Background:
\

From the June 27, 2023 meeting:

All parties agree on the final drawings. The district gave approval. Weston & Samson is working on paperwork and going out for bids shortly.

Department Comment/Recommendation:
(type text here)

CITY OF GROTON
DEPARTMENT OF UTILITIES – WATER DIVISION
SITE PLAN REVIEW SHEET

Title of Plan: Colonel Ledyard Highway – Multi-Use Pathway Latest Revision Date: October 22'

Location Colonel Ledyard Highway & Gallup Hill Rd W.I.P. # _____

Engineer Weston & Sampson Phone # 860-513-1473

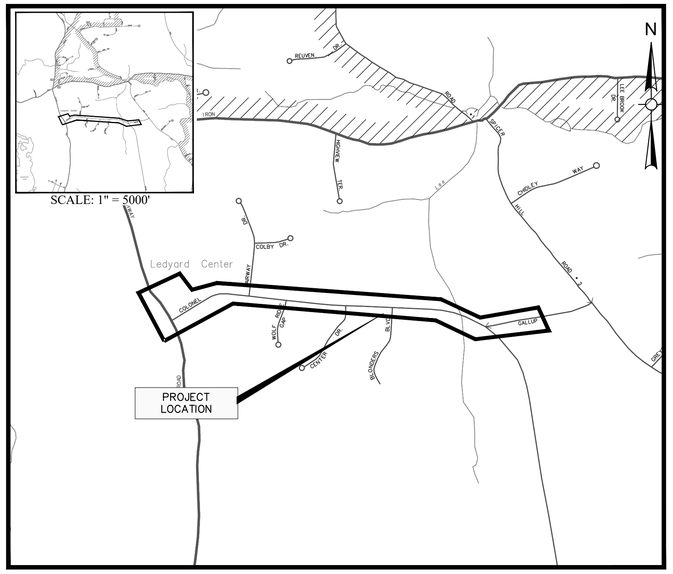
Reviewed By D. Lafontaine & M. Duarte Date of Review 5/12/23

	Check for the Following:	Notes Required on Plan Yes	No
1.	Note - All water main and service installations shall conform to the City of Groton, Department of Utilities, Water Main and Service Construction Specifications, with most current revisions.	x	
2.	Note - Approved backflow preventers are required on all fire sprinkler and domestic water lines.		x
3.	Note - Remote water meter read box required.		x
4.	Size of water mains and services and note indicating minimum cover shall be 4' – 6" from finish grade.	x	
5.	Pipe separations - 10' min between water and sewer 10' min between water and buildings 5' min between water and catch basins or drain pipes.	x	
6.	Site must be at subgrade before water utilities can be installed.	x	
7.	Valve locations - All branch line valves to be located as close as possible to main lines.	x	
8.	Engineer should provide flow calculations to confirm hydrant flow and domestic flow requirements (meter size).		x
9.	Architectural plans showing utility room locations and entry point of water service.		x
10.	Meter location inside building or meter pit.		x

11. Comments: Plans APPROVED with CONDITIONS. Final Approved plans should address comments on page #2 of this review.

11. Comments: (Continued)

1. Existing curb-boxes will require height adjustments depending on grade changes and/or relocated as required. Groton Utilities (GU) Project Management Staff to observe/inspect all field work.
2. All water main and service pipe crossings at new sewer and drainage pipes are to be per Groton Utilities (GU) Specifications Technical Spec. Drawing #5
3. Provide the following GU Water Standards – Technical Drawings on Detail Sheets of the drawing set:
    a. Drawing #1 – Gate Box Detail
    b. Drawing #2 – Gate Valve Connection Detail
    c. Drawing #3 – Tapping Sleeve & Valve Detail
    d. Drawing #4 – Thrust Block Details
    e. Drawing #5 – Sewer & Drainage Crossing Detail
    f. Drawing #6 – Hydrant & Valve Assembly
    g. Drawing #7 – Brass Wedge Detail
    h. Drawing # 11 – REV. Typical 1" Service Detail
    i. Drawing #20 – REV. Typical Trench Detail
4. Note: All hydrant relocations to be confirmed with Ledyard Fire Marshall.
5. Note: All hydrants to be relocated/installed per GU Specifications and Standards and are to be min. of 24" behind curb. GU representative to inspect all work.
6. Note: All Water Service Interruptions / Scheduled Shutdowns are to be coordinated with GU Project Management.
7. Note: Valves and Service Curb Stops are to be operated by GU staff only.
8. Sheet HWY-03: Hyd. #209 @ Town Greene Drive to be relocated to be closer to edge of road and on the south edge of the new bike path. OK by GU.
9. Sheet HWY-04: Hyd. #208 @ Fairway Drive to be relocated to be closer to edge of road and on south edge of new path and moved to the east to be further away from Fairway Drive radius in order to keep large vehicles from hitting the hydrant when turning right onto Fairway Drive.
10. Sheet HWY-04: Hyd. #206 @ Colby Drive near Parke's Place restaurant. Proposed relocation to west side of Colby Drive at intersection of Colonel Ledyard Highway. OK by GU.
11. Sheet HWY-07: Hyd. #202 at the relocated intersection of Gallup Hill Rd & Colonel Ledyard Hwy to be located behind new curbing. OK by GU.
12. Sheet HWY-07: Hyd. #201 near the high school exit to be relocated to be closer to curb-line in order to avoid proposed bike rack location. OK by GU.

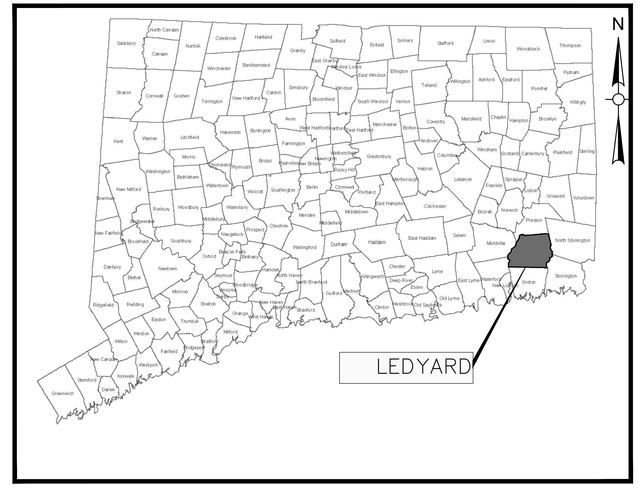


PROJECT LOCATION PLAN
SCALE: 1" = 1000'

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION

L171-0001



TOWN LOCATION MAP
SCALE: N.T.S.

CONTENTS

SHEET NAME	SHEET TITLE
GEN-01	INDEX PLANS, LEGENDS, AND NOTES
DET-01	SEDIMENTATION AND EROSION CONTROL DETAILS
DET-02	MISCELLANEOUS DETAILS
DET-03	HYDRODYNAMIC SEPARATOR DETAILS
DET-04 - DET-05	LOW PRESSURE SEWER DETAILS
DET-06	LANDSCAPE DETAILS
DET-07	GROTON UTILITY DETAILS
DET-08 - DET-11	CTDOT HIGHWAY GUIDE SHEETS
DET-12 - DET-14	CTDOT TRAFFIC GUIDE SHEETS
TYP-01	MULTI-USE PATHWAY AND SIDEWALK TYPICAL SECTIONS
TYP-02	ROADWAY TYPICAL SECTIONS
IGP-01	INTERSECTION GRADING PLANS
HWY-01	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 10+00 TO 16+50
HWY-02	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 211+50 TO 214+96 & STA. 110+00 TO 112+50
HWY-03	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 16+50 TO 22+00
HWY-04	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 22+00 TO 33+00
HWY-05	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 33+00 TO 44+00
HWY-06	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 44+00 TO 55+00
HWY-07	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 55+00 TO 65+90
PRO-01 - PRO-11	MULTI-USE PATHWAY PROFILES
XSC-01 - XSC-08	CRITICAL CROSS SECTIONS
S-1	EMBANKMENT WALL SITE NO. 1, NO. 2, NO. 3 PLAN AND ELEVATION
S-2	EMBANKMENT WALL SITE NO. 4 PLAN AND ELEVATION
S-3	EMBANKMENT WALL SECTIONS AND DETAILS
S-4	BORING LOGS
TCS-07	TRAFFIC CONTROL SIGNAL PLAN
	CTDOT HIGHWAY STANDARD DRAWINGS
	CTDOT TRAFFIC STANDARD DRAWINGS

FRED ALLYN, III
MAYOR

STEVE MASALIN, P.E.
DIRECTOR OF PUBLIC WORKS

JOSEPH TILLMAN
HIGHWAY SUPERINTENDENT

COLONEL LEDYARD HIGHWAY MULTI-USE PATHWAY
(STA: 10+00 TO 65+90)

PROJECT SPECIFICATIONS:
CONNECTICUT DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 818, DATED 2020; AND SPECIAL PROVISIONS

SURVEY INFORMATION DERIVED FROM:
WESTON & SAMPSON LAND SURVEYORS, INC.

VERTICAL DATUM - NAVD88
HORIZONTAL DATUM - NAD83

DESIGNED BY:
WESTON & SAMPSON ENGINEERS, INC.
712 BROOK STREET, SUITE 103
ROCKY HILL, CT 06067

CT. LIC. NO. XXXXX

MARCH 15, 2019

Issued Date:

MAY 2023

Issued For:

NOT RELEASED FOR CONSTRUCTION

Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06067
860-513-1473 800.SAMPSON
www.westonandsampson.com

Know what's below. Call before you dig.

CONSTRUCTION NOTES:

GENERAL:

1. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSIONS OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
2. DO NOT RELY SOLELY ON ELECTRONIC VERSIONS OF THESE DRAWINGS, SPECIFICATIONS, AND DATA FILES THAT ARE PROVIDED BY THE ENGINEER. FIELD VERIFY LOCATION OF PROJECT FEATURES.
3. THE CONTRACTOR SHALL PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
4. FENCES, MAIL BOXES, ETC. SHALL BE REMOVED AND REPLACED AS NECESSARY TO PERFORM THE WORK. UNLESS OTHERWISE INDICATED, ALL SUCH WORK SHALL BE PAID FOR UNDER CLEARING AND GRUBBING.
5. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND PAYMENT LIMITS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE TOWN. PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
6. THE CONTRACTOR SHALL MAINTAIN SIDE SLOPES AND DRAINAGE SWALES DURING CONSTRUCTION TO PREVENT PONDING AND EROSION.
7. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS.
8. THE CONTRACTOR SHALL GRADE PROPOSED SLOPES TO MEET EXISTING SLOPES WHERE SHOWN ON PLANS, IN ACCORDANCE WITH THE MINIMUM AND MAXIMUM SLOPES SPECIFIED.
9. ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING. COVERING WITH STEEL PLATES MAY BE ALLOWED IF APPROVED BY THE ENGINEER.
10. WHERE ENCOUNTERED, UNSUITABLE MATERIAL SHALL BE REMOVED TO A DEPTH OF AT LEAST 12-INCHES BELOW THE BOTTOM OF TRENCH EXCAVATIONS AND REPLACED WITH GRANULAR FILL, UNLESS OTHERWISE SPECIFIED.
11. DURING THE PROCESS OF WORK, THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE AREA OF CONSTRUCTION ACTIVITIES, INCLUDING SWEEPING AND WATER FOR DUST CONTROL AS NECESSARY, TO MINIMIZE CREATION AND DISPERSION OF DUST.
12. WHERE EXISTING FENCES ARE TO BE REMOVED AND RESET, A TEMPORARY CONSTRUCTION FENCE SHALL BE ERECTED AFTER REMOVAL FOR THE PROTECTION OF THE RESIDENTS. TEMPORARY CONSTRUCTION FENCES SHALL BE PAID FOR UNDER CLEARING AND GRUBBING.
13. ALL HIGHWAY LINE MONUMENTATION WITHIN THE PROJECT LIMITS MUST BE DELINEATED AND PROTECTED FROM DAMAGE OR MOVEMENT. ANY COST ASSOCIATED WITH RESETTING OF THE MONUMENTATION SHALL BE AT THE CONTRACTOR'S EXPENSE IF DISTURBED BY CONTRACTOR.
14. THE CONTRACTOR SHALL COMPLETE ALL LAYOUTS, SURVEYS, ETC. REQUIRED FOR CONSTRUCTION OF THE PROJECT AS SHOWN AND AS SPECIFIED.
15. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE PROPER STORM DRAINAGE AND SANITARY FLOWS ARE MAINTAINED THROUGHOUT THE CONSTRUCTION DURATION.
16. ALL PROPOSED MANHOLES, MANHOLE COVERS AND FRAMES, CATCH BASINS, AND CATCH BASIN GRATES AND FRAMES SHALL CONFORM TO THE REQUIREMENTS AS SHOWN IN THE CONTRACT PLANS AND DOCUMENTS.
17. REMOVAL OF ALL TREES WITHIN THE EXCAVATION LINES SHALL BE PAID FOR BY CLEARING AND GRUBBING.
18. ALL GUIDE RAIL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS/SUPPLEMENTS, AND STANDARD DETAILS.

WORK RESTRICTIONS:

1. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
2. NO WORK WILL BE ALLOWED TO BE PERFORMED ON SUNDAY AND ON ALL TOWN HOLIDAYS WITHOUT TOWN AUTHORIZATION.
3. ALL CONSTRUCTION ACTIVITIES, INCLUDING THE LOADING AND UNLOADING OF MATERIALS AND EQUIPMENT, SHALL BE LIMITED TO MONDAY THROUGH FRIDAY FROM 7:00 AM TO 6:00 PM AND SATURDAY FROM 9:00 AM TO 5:00 PM UNLESS OTHERWISE AUTHORIZED BY THE TOWN. TOWN MUST BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY WORK ON SATURDAY.

REGULATORY REQUIREMENTS:

1. WITHIN LOCAL RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS AS SUPPLEMENTED BY THE TECHNICAL SPECIFICATIONS INCLUDED IN THIS CONTRACT.
2. WITHIN STATE RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS/SUPPLEMENTS.
3. PROVIDE TRAFFIC SIGNAGE AND PAVEMENT MARKINGS IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY, PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
5. DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND LOCAL REQUIREMENTS.

EROSION AND SEDIMENT CONTROL:

1. THE CONTRACTOR SHALL INSTALL SPECIFIED EROSION AND CONTROL DEVICES BEFORE BEGINNING OTHER WORK ON SITE AND MAINTAIN THEM FOR THE DURATION OF THE PROJECT.
2. CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING INLET PROTECTION FOR EXISTING AND PROPOSED CATCH BASINS, IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT EDITION OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (CT DEEP BULLETIN 34). ALL MEASURES SHALL BE MAINTAINED AND UPGRADED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION.
3. REFER TO THE DRAWINGS FOR EROSION AND SEDIMENT CONTROL LOCATIONS AND DETAILS.
4. IMPLEMENT ALL NECESSARY MEASURES REQUIRED TO CONTROL STORMWATER RUNOFF, DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE. PERFORM CORRECTIVE ACTION AS NEEDED FOR EROSION CLEAN-UP AND REPAIRS TO OFF SITE AREAS, IF ANY, AT NO COST TO OWNER.
5. EXISTING DRAINAGE STRUCTURES AND PIPES ARE TO BE CLEANED AND FLUSHED WHERE INDICATED ON THE PLANS AND SHALL BE PAID FOR BY "CLEAN EXISTING DRAINAGE SYSTEM".
6. INSPECT AND MAINTAIN EROSION CONTROL MEASURES WEEKLY AND AFTER MAJOR RAINFALL EVENTS, DISPOSE OF SEDIMENT IN AN UPLOAD AREA. DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
7. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL MEASURES, CLEAN SEDIMENT AND DEBRIS FROM TEMPORARY MEASURES AND FROM PERMANENT STORM DRAIN AND SANITARY SEWER SYSTEMS.

UTILITIES:

1. THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455 AND THE TOWN AT LEAST 72 HOURS PRIOR TO EXCAVATING AT ANY LOCATION, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS. A COPY OF THE CBYD PROJECT REFERENCE NUMBER(S) SHALL BE PROVIDED WHEN COMPLETING THE HIGHWAY PERMIT APPLICATION. EXCAVATION SHALL COMMENCE ONCE A HIGHWAY PERMIT IS RECEIVED BY THE CONTRACTOR.
2. LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.
3. TEST PITS TO LOCATE EXISTING UTILITIES MAY BE ORDERED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM "TEST PIT".
4. THE CONTRACTOR SHALL TERMINATE EXISTING UTILITIES IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. COORDINATE UTILITY SERVICE DISCONNECTS WITH UTILITY REPRESENTATIVES.
5. THE CONTRACTOR SHALL COORDINATE THE WORK AND WORK SCHEDULE WITH UTILITY COMPANIES. PROVIDE ADEQUATE NOTICE TO UTILITIES TO PREVENT DELAYS IN CONSTRUCTION. VALVES AND SERVICE CURB STOPS ARE TO BE OPERATED BY GROTON UTILITY STAFF ONLY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING OF FRAMES, GRATES, GATES, VALVE BOXES ETC., WHICH SHALL BE DONE IN ACCORDANCE WITH INDIVIDUAL UTILITY COMPANY REQUIREMENTS.
7. RIM ELEVATIONS FOR MANHOLES, VALVE COVERS, GATE AND PULL BOXES, AND OTHER STRUCTURES SHALL BE SET OR RESET FLUSH WITH FINAL GRADES.
8. EXISTING STRUCTURES SHALL BE CORED PRIOR TO INSTALLING PIPE.

SURVEY NOTES:

1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AS AMENDED, AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. THE TYPE OF SURVEY IS AN EXISTING CONDITIONS SURVEY, NO BOUNDARY DETERMINATION / OPINION HAS BEEN DEVELOPED. THIS SURVEY CONFORMS TO THE FOLLOWING ACCURACY CLASSES:HORIZONTAL CLASS A-2, TOPOGRAPHIC CLASS T-3, AND VERTICAL CLASS V-3.
2. PROPERTY LINES AND RIGHT OF WAY LINES DEPICTED, WERE DEVELOPED VIA GIS AND TAX MAPS AND ARE APPROXIMATE ONLY.
3. ELEVATIONS AND CONTOURS AS DEPICTED HEREON REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD) AS ESTABLISHED USING GPS SURVEY METHODS IN MARCH, 2021.
4. SURVEY PERFORMED BY WESTON & SAMPSON LAND SURVEYORS, INC. IN MARCH, 2021.
5. THE UTILITIES AS DEPICTED HEREON ARE BASED UPON OBSERVED EVIDENCE AT THE TIME OF THE FIELD SURVEY. NO ATTEMPT WAS MADE TO VERIFY THE LOCATIONS AND NO MAPPING WAS OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO WESTON & SAMPSON. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG.

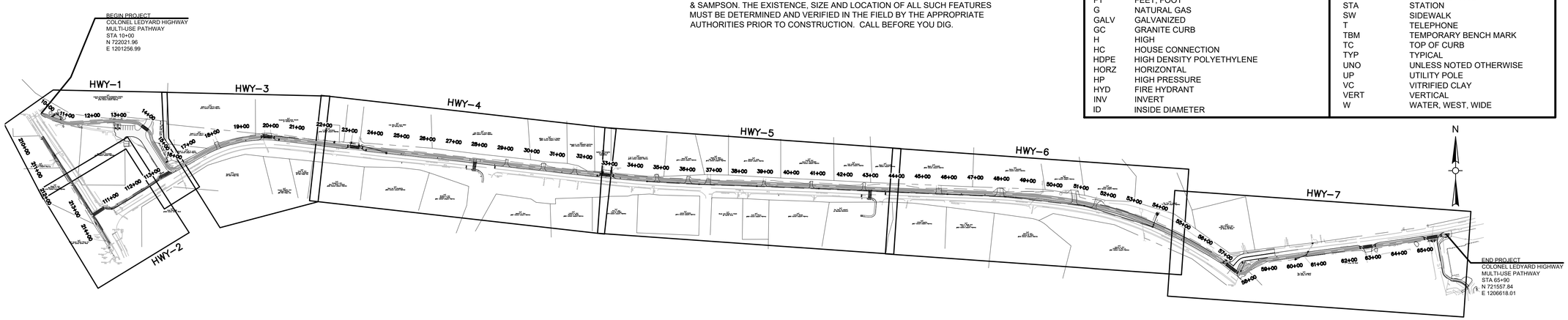
LEGEND

DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER	8" PVC SAN.	8" PVC SAN.	FENCE	X	X
WATER MAIN	W	W	INDIVIDUAL DECIDUOUS TREE		
STORM DRAIN	D		INDIVIDUAL EVERGREEN TREE		
ELECTRIC	E	E	TREE LINE		
TELEPHONE	T	T	BUSH		
SANITARY SEWER LATERAL	SS	SS	STUMP		
WATER SERVICE	WS	WS	SURVEY MARKER		
SANITARY SEWER MANHOLE	SMH	SMH	PROPERTY LINE		
STORM DRAIN MANHOLE	DMH	DMH	EASEMENT LINE		
ELECTRICAL MANHOLE	EMH	EMH	SPOT ELEVATIONS	× 100.2	× 101.5
TELEPHONE MANHOLE	TMH	TMH	CONTOUR LINES	56	56
CATCH BASIN			DEPRESSION CONTOUR LINES		
HYDRANT			HOUSE NUMBER	#35	
WATER GATE		WG	FLOOR ELEVATION	FL=56.7	
SPRINKLER HEAD			SILL ELEVATION	S=56.7	
UTILITY POLE			WETLAND		
GUY POLE			WETLAND FLAGS	WF#	
GUY WIRE			GRASS PAVERS		
OVERHEAD WIRE			GUIDE RAIL		MBR
LIGHT POST			POST		
EDGE OF PAVEMENT			SIGN		
EDGE OF UNPAVED ROAD			BENCH MARK		
SAFETY EDGE			TEST PIT	TP 1	TP-1
BERM			BORING	B-1	
SIDEWALK	CONC. WALK	CONC. WALK	DRAINAGE DITCH / SWALE		
BOULDER			MAILBOX		
STONE WALL			FENCE	X	
RETAINING WALL	RET. WALL	RET. WALL			

ITEMS SHOWN IN THE LEGEND MAY NOT BE PRESENT IN THESE PLANS

ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE
BC	BITUMINOUS CONCRETE, BOTTOM OF CURB
BIT	BITUMINOUS
BLDG	BUILDING
BM	BENCH MARK
CATV	CABLE TELEVISION
CB	CATCH BASIN
CC	CONCRETE CURB
CI	CAST IRON
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CP	CONTROL POINT
CU FT	CUBIC FEET
CY	CUBIC YARD
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
E	ELECTRIC, EAST
EA	EACH
EL	ELEVATION
EOP	EDGE OF PAVEMENT
EW	EACH WAY
EX	EXISTING
FT	FEET, FOOT
G	NATURAL GAS
GALV	GALVANIZED
GC	GRANITE CURB
H	HIGH
HC	HOUSE CONNECTION
HDPE	HIGH DENSITY POLYETHYLENE
HORZ	HORIZONTAL
HP	HIGH PRESSURE
HYD	FIRE HYDRANT
INV	INVERT
ID	INSIDE DIAMETER
IP	IRON PIPE
LF	LINEAR FEET
LPS	LOW PRESSURE SEWER
LS	LUMP SUM
MAX	MAXIMUM
MB	MAIL BOX
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
NF	NOT FOUND
NO OR #	NUMBER
PE	POLYETHYLENE
ℙ	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
PR	PROPOSED
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY
S	SEWER, SOUTH
SF	SQUARE FEET
SPEC	SPECIFICATIONS
SQ FT	SQUARE FEET
SS	SEWER SERVICE
STA	STATION
SW	SIDEWALK
T	TELEPHONE
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL
W	WATER, WEST, WIDE



INDEX PLAN - COLONEL LEDYARD HIGHWAY
MULTI-USE PATHWAY
SCALE 1"=200'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

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INDEX PLAN, LEGEND, AND GENERAL NOTES

Sheet Number:

GEN-01

Rev. 1.6 Date: 04/10/2019

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SEDIMENTATION AND EROSION CONTROL PLAN

GENERAL

THIS PLAN PROPOSES EROSION CONTROL MEASURES TO ADEQUATELY CONTROL ACCELERATED EROSION AND SEDIMENTATION AND REDUCE THE DANGER FROM STORM WATER RUNOFF AT THE SITE. THE RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION, AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY STAGING CONSTRUCTION ACTIVITY AND PRESERVING NATURAL VEGETATION WHENEVER POSSIBLE.

EXISTING VEGETATION SHALL BE PROTECTED AND ONLY THAT CLEARING AND GRUBBING ABSOLUTELY NECESSARY FOR THE PROPOSED CONSTRUCTION SHALL BE PERFORMED. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND CONTOUR, UNLESS OTHERWISE INDICATED ON THE PLANS. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH HIS CONSTRUCTION METHODS AND SHALL COMPLY WITH THE FOLLOWING GUIDELINES.

REFERENCE IS MADE TO THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (2002), AS AMENDED. THE GUIDELINES ARE OBTAINABLE ONLINE FROM THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION AT WWW.CT.GOV/DEEP AND SHOULD BE USED AS A REFERENCE IN CONSTRUCTING THE EROSION AND SEDIMENT CONTROLS INDICATED ON THESE PLANS.

SEDIMENTATION CONTROL

ALL AREAS SHALL BE PROTECTED FROM SEDIMENTATION DURING AND AFTER CONSTRUCTION, PARTICULARLY THE STORAGE OF EXCAVATED OR STOCKPILED MATERIAL. THE CONTRACTOR SHALL CAREFULLY STRIP ALL TOPSOIL, LOAM, OR ORGANIC MATTER PRIOR TO TRENCHING OR OTHER OPERATIONS AND SHALL STORE THEM SEPARATELY FROM ALL OTHER MATERIALS DURING EXCAVATION. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIAL (I.E. SILT FENCE).

STABILIZING OF SLOPES SHALL BE DONE IMMEDIATELY AFTER CONSTRUCTION OF SLOPES. SLOPES THAT ARE STEEPER THAN 2:1 SHALL BE PROTECTED WITH EROSION CONTROL MATTING TYPE H. ALL OTHER AREAS SHALL BE MULCHED WITH HAY OR STRAW AS REQUIRED.

EROSION AND SEDIMENTATION CONTROL PLAN

SEDIMENTATION CONTROL SYSTEM – THE SEDIMENTATION CONTROL SYSTEM SHALL CONSIST OF SILT FENCE.

GEOTEXTILE BARRIER FENCE – THE SEDIMENTATION CONTROL SYSTEM SHALL BE INSTALLED IMMEDIATELY AFTER A CUT SLOPE HAS BEEN GRADED, BEFORE A FILL SLOPE HAS BEEN CREATED AND AS INDICATED ON THE PLANS. THE SYSTEM IS DESIGNED TO INTERCEPT SILT AND SEDIMENT BEFORE IT REACHES THE WETLAND AREAS, OR WATERCOURSES. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. THE SEDIMENTATION CONTROL SYSTEM IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE FENCE ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

RIPRAP – RIPRAP, IF REQUIRED OR SPECIFIED, IS TO BE INSTALLED AS ENERGY, DISSIPATION STRUCTURES. THE RIPRAP IS TO BE INSTALLED BEFORE OUTLET STRUCTURES ARE ACTIVATED, AND ALL ADJACENT AREAS ARE TO BE IMMEDIATELY SEEDED IF IN SEASON OTHERWISE THE SOIL IS TO BE STABILIZED BY OTHER METHODS.

IN ALL AREAS, REMOVAL OF TREES, BUSHES AND OTHER VEGETATION, AND DISTURBANCE OF THE SOIL, IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE.

DURING CONSTRUCTION, AS SMALL AN AREA OF SOIL AS POSSIBLE SHOULD BE EXPOSED FOR AS SHORT A TIME AS POSSIBLE. AFTER CONSTRUCTION, GRADE, RESPREAD TOPSOIL, AND STABILIZE SOIL BY SEEDING AND MULCHING SO AS TO PREVENT EROSION.

SEDIMENTATION AND EROSION CONTROL MAINTENANCE PROCEDURES

ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSPECTED DURING CONSTRUCTION ON A WEEKLY BASIS, AND FOLLOWING ALL STORMS, BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL MAINTAIN AND MAKE REPAIRS AND REMOVE SEDIMENT AS REQUESTED BY THE RESIDENT ENGINEER. THIS WORK SHALL BE PERFORMED WITHIN 24 HOURS OF THE REQUEST AND THERE SHALL BE NO SEPARATE PAYMENT FOR THIS WORK.

THE CONTRACTOR SHALL PROVIDE ROUTINE SWEEPING OF ALL PAVED SURFACES SUBJECT TO SEDIMENT ACCUMULATION DURING CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL CLEAN SEDIMENT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, AND PIPES AT THE COMPLETION OF CONSTRUCTION, AND AS REQUESTED BY THE RESIDENT ENGINEER TO KEEP THE SYSTEM FUNCTIONING PROPERLY DURING CONSTRUCTION.

FOLLOWING COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REPAIR ALL ERODED AREAS AND ENSURE A GOOD STAND OF TURF IS ESTABLISHED THROUGHOUT. THE CONTRACTOR SHALL REPAIR ALL ERODED OR DISPLACED RIPRAP, AND CLEAN SEDIMENT COVERED STONES.

TYPICAL CONSTRUCTION SEQUENCE

PRIOR TO COMMENCEMENT OF WORK, EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED. A TYPICAL SEQUENCE OF CONSTRUCTION IS:

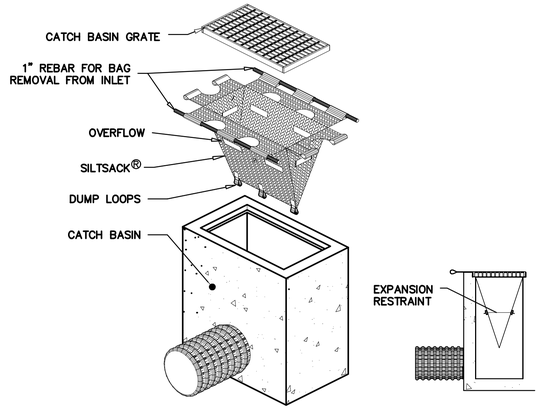
1. OBTAIN APPROPRIATE PERMITS, NOTIFY TOWN OFFICIALS OF CONSTRUCTION COMMENCEMENT, AND SUBMIT CONSTRUCTION TIMETABLE.

2. ON–SITE CONSTRUCTION SEQUENCE SHALL START WITH THE MINIMUM AMOUNT OF CLEARING REQUIRED TO INSTALL EROSION CONTROL MEASURES AS SHOWN ON PLAN. THIS INCLUDES SILTATION FENCING, SILT CURTAIN, AND OTHER MEASURES NOTED ON THE PLAN. NO WORK SHALL TAKE PLACE UNTIL THE ENGINEER AND WETLAND ENFORCEMENT OFFICER HAVE INSPECTED AND APPROVED INSTALLED MEASURES.

DURING CONSTRUCTION ALL EROSION AND SEDIMENT STRUCTURES SHALL BE MAINTAINED IN PROPER WORKING ORDER. DISTURBED AREAS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY TAKE PLACE WHERE IMMEDIATELY REQUIRED TO FURTHER CONSTRUCTION. IT IS DESIRABLE FROM AN EROSION PREVENTION CONCERN TO MINIMIZE DISTURBED AREAS. FINAL GRADING AND SEEDING SHALL TAKE PLACE AS SOON AS PRACTICAL.

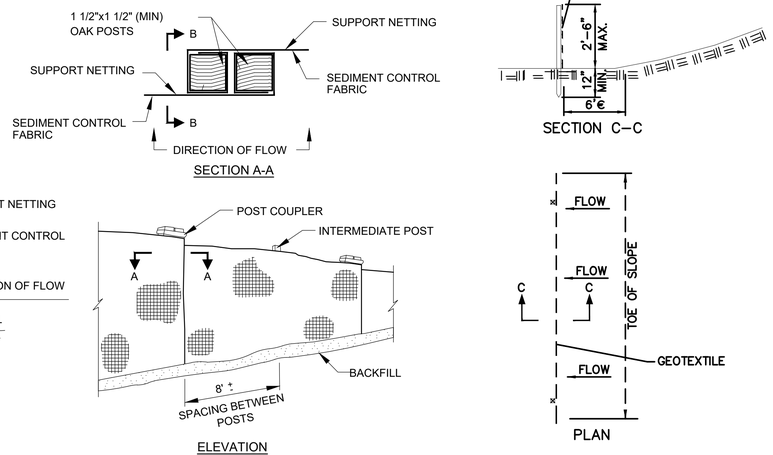
A RAIN GAUGE SHALL BE PLACED AT THE PROJECT SITE IN A WORKABLE LOCATION AND MONITORED DURING RAINFALL PERIODS UNTIL ALL DISTURBED AREAS ARE STABILIZED. IN THE EVENT THERE IS A RAINFALL GREATER THAN 1/2" IN A 12 HOUR PERIOD, ALL EROSION CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS REQUIRED. IF NO RAIN GAUGE IS USED, ALL EROSION CONTROL MEASURES SHALL BE CHECKED AFTER ALL RAINFALL EVENTS.

A CHECK LIST PROVIDED BY THE ENGINEER SHALL BE FILLED OUT EVERY WEEK OR AFTER EACH RAINFALL EVENT OF 1/2" OR GREATER.

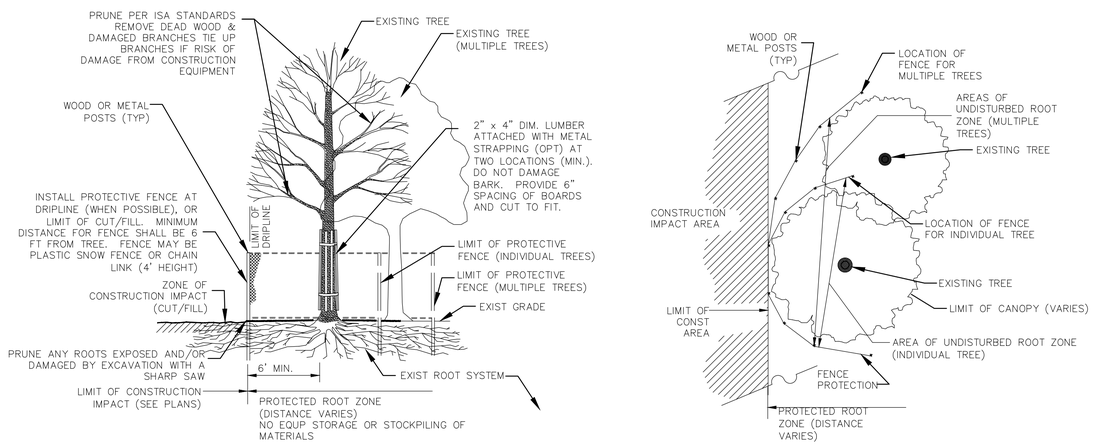


NOTES:
1. PROVIDE HI–FLOW SILT SACK TYPE A FOR TYPE "C–L" CATCH BASIN TOPS AND TYPE B WITH CURB DEFLECTOR FOR TYPE "C" CATCH BASIN TOPS OR OTHER STRUCTURES WITH CURB INLET.

CATCH BASIN INLET PROTECTION
N.T.S.



SEDIMENTATION AND EROSION CONTROL DETAIL (SILT FENCE)
N.T.S.



EXISTING TREE PROTECTION
N.T.S.

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY & SIDEWALK EXTENSION
L171-0001

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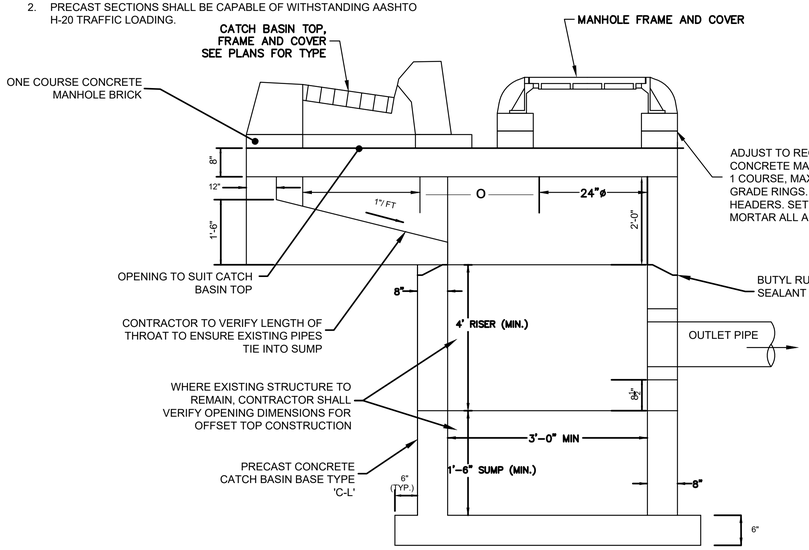
SEDIMENTATION AND EROSION CONTROL DETAILS

Sheet Number:

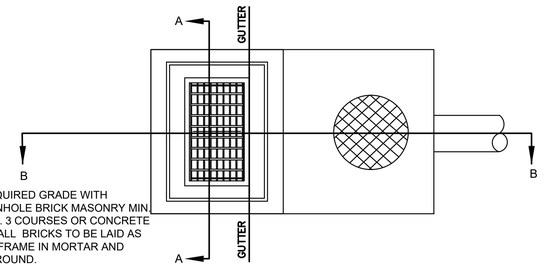
DET-01

Rev. 1.6 Date: 04/10/2019

NOTES
1. SET TOP SLAB TO MEET EXIST. SLOPE OF CURB LINE AND CROSS SLOPE OF SIDEWALK. ADJUST DIMENSIONS OF CAST-IN-PLACE SECTION.
2. PRECAST SECTIONS SHALL BE CAPABLE OF WITHSTANDING AASHTO H-20 TRAFFIC LOADING.

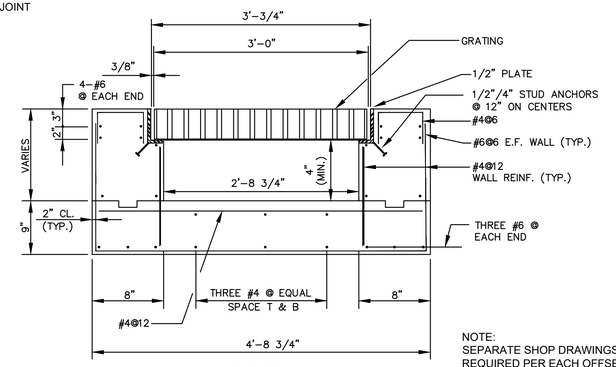


SECTION B–B



ADJUST TO REQUIRED GRADE WITH CONCRETE MANHOLE BRICK MASONRY MIN. 1 COURSE, MAX. 3 COURSES OR CONCRETE GRADE RINGS. ALL BRICKS TO BE LAID AS HEADERS. SET FRAME IN MORTAR AND MORTAR ALL AROUND.

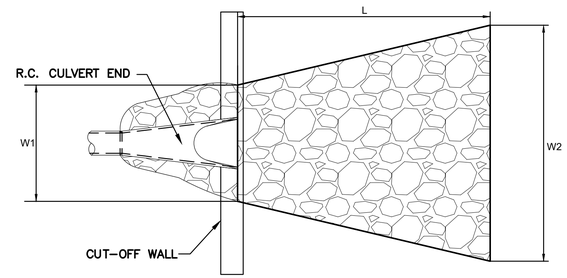
BUTYL RUBBER JOINT SEALANT (TYP)



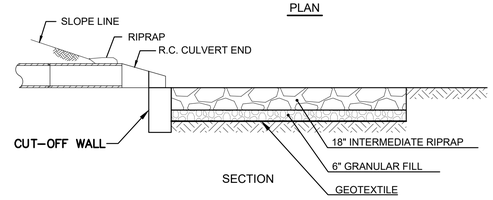
SECTION A–A

NOTE:
SEPARATE SHOP DRAWINGS ARE REQUIRED PER EACH OFFSET CATCH BASIN AND OFFSET CATCH BASIN TOP.

OFFSET CATCH BASIN
N.T.S.



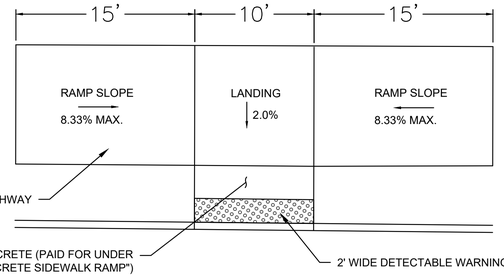
PLAN



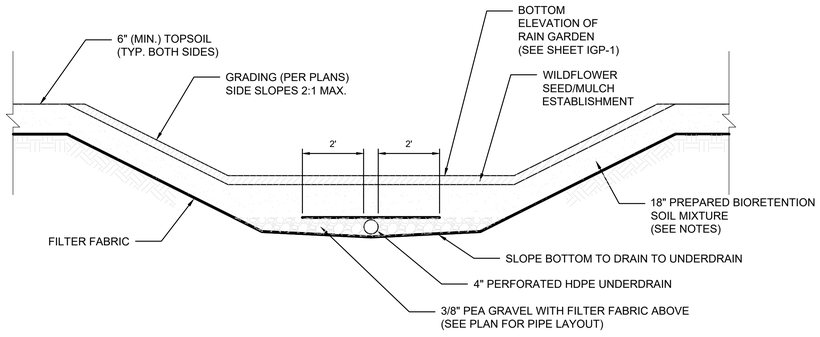
SECTION

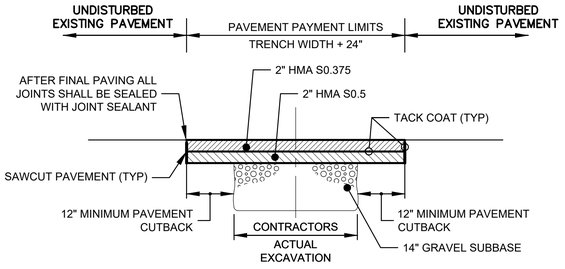
DIMENSIONS			
STA	W1	W2	L
54+00	6'	10'	10'
60+10	5'	5'	6'

RIPRAP APRON
N.T.S



MULTI–USE PATH RAMP
N.T.S.





PERMANENT TRENCH PAVEMENT REPLACEMENT DETAIL
N.T.S.

BIORETENTION SOIL MIXTURE SHALL BE A MIXTURE OF SAND COMPOST AND SOIL

50% SAND
30% TOPSOIL, AND
20% COMPOST.

THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS, OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%. SOIL PH SHOULD GENERALLY BE BETWEEN 5.5–6.5, A RANGE THAT IS OPTIMAL FOR MICROBIAL ACTIVITY AND ADSORPTION OF NITROGEN, PHOSPHORUS, AND OTHER POLLUTANTS. USE SOILS WITH 1.5% TO 3% ORGANIC CONTENT AND MAXIMUM 500–PPM SOLUBLE SALTS.

THE SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D 422.

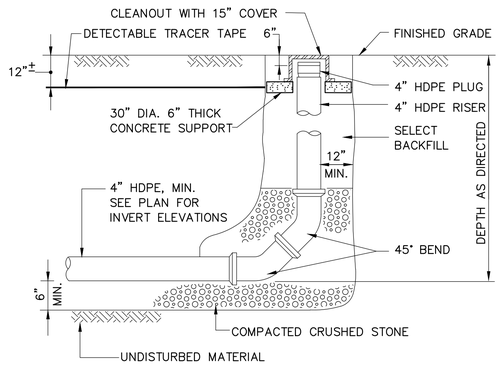
SIEVE SIZE	PERCENT PASSING
2–INCH	100
¾–INCH	70–100
¼–INCH	50–80
U.S. NO. 40	15–40
U.S. NO. 20	0–3

THE TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND OR LOAM MIXTURE.

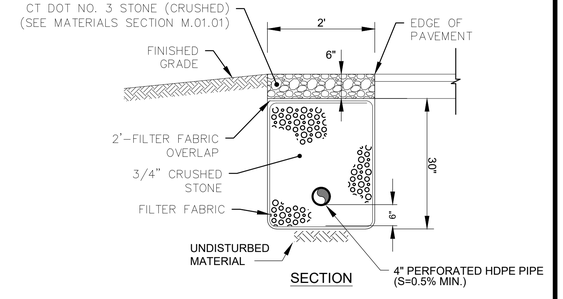
BIO–RETENTION (RAIN GARDEN) DETAIL
N.T.S.

CONSTRUCTION NOTES FOR BIORETENTION BASIN (RAIN GARDEN):

1. IN ORDER TO MINIMIZE SEDIMENT IMPACT ON THE ABILITY OF THE PROPOSED BASINS TO INFILTRATE, THE CONSTRUCTION OF THE BASINS SHALL BE DONE DURING THE LATE STAGES OF SITE WORK ONCE ALL UPGRADIENT AREAS HAVE BEEN STABILIZED WITH A FIRST COURSE OF BITUMINOUS PAVING AND VEGETATIVE STABILIZATION HAS BEEN ACHIEVED
2. INSTALL SEDIMENTATION CONTROL SYSTEM AROUND THE PERIMETER OF THE BASINS TO PREVENT SEDIMENT LADEN WATER FROM ENTERING THE BASIN.
3. CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED TO DRIVE OVER THE AREA INTENDED TO SERVE AS INFILTRATION. STOCKPILING OF MATERIAL SHALL NOT BE ALLOWED OVER THESE AREAS AS WELL.
4. ONLY LOW GROUND PRESSURE EQUIPMENT SHALL BE USED TO EXCAVATE THE BASINS TO MINIMIZE COMPACTION OF SOILS BENEATH BASIN FLOOR AND SIDE SLOPES.
5. THE BASINS SHALL NOT BE CONSTRUCTED DURING OR IMMEDIATELY AFTER A RAIN EVENT OR CONSTRUCTED DURING SATURATED CONDITIONS.
6. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF NON–NATIVE FILL, LEDGE, OR UNSUITABLE MATERIAL IS ENCOUNTERED AT THE PROPOSED BOTTOM OF THE BASINS PRIOR TO CONSTRUCTION.



CLEANOUT DETAIL
N.T.S.



STONE TRENCH (PRE-TREATMENT)
NOT TO SCALE

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY & SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

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Consultants:

Revisions:

No.	Date	Description

Seal:

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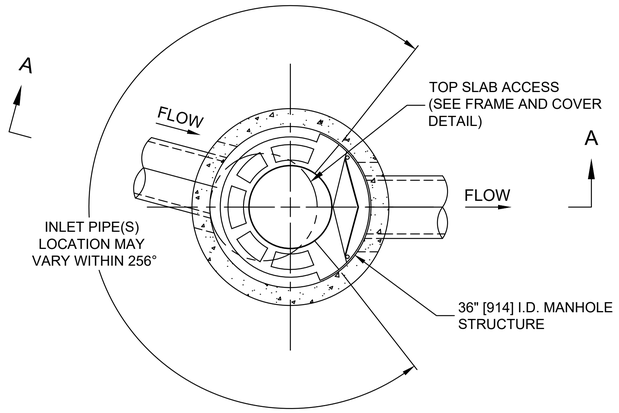
Reviewed By:	RC
Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

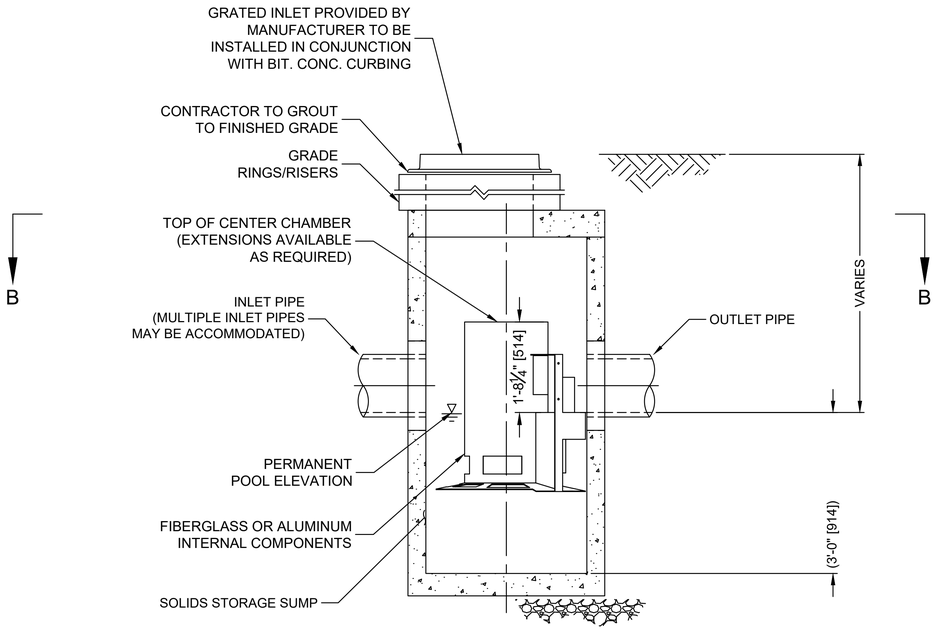
Drawing Title:
MISCELLANEOUS DETAILS

Sheet Number:
DET-02

Rev. 1.6 Date: 04/10/2019



PLAN VIEW B-B
NOT TO SCALE



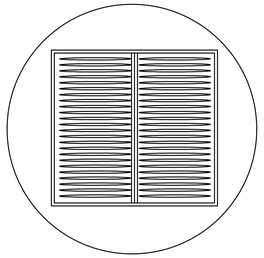
ELEVATION A-A
NOT TO SCALE

CASCADE
separator™

CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-3 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION	
GRATED INLET ONLY (NO INLET PIPE)	
GRATED INLET WITH INLET PIPE OR PIPES	CHOSEN CONFIGURATION
CURB INLET ONLY (NO INLET PIPE)	
CURB INLET WITH INLET PIPE OR PIPES	



FRAME AND GRATE
(DIAMETER VARIES)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			STA. 54+00
WATER QUALITY FLOW RATE (cfs [L/s])			0.08 cfs
PEAK FLOW RATE (cfs [L/s])			5.28 cfs
RETURN PERIOD OF PEAK FLOW (yrs)			10-YR.
RIM ELEVATION			244.13
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1	240.88	RCP	15"
INLET PIPE 2			
OUTLET PIPE	240.80	RCP	18"

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306, SHALL BE MADE IN USA, AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CS-3
CASCADE SEPARATOR
STANDARD DETAIL

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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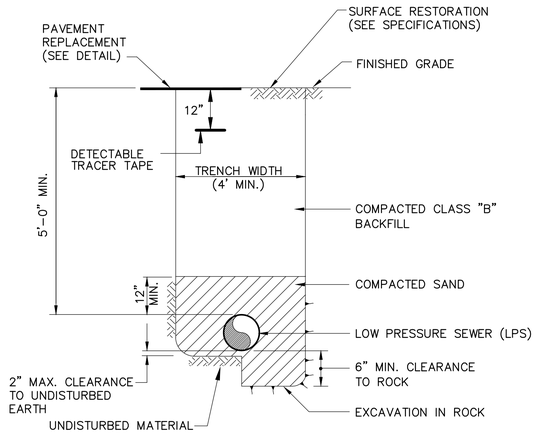
W&S File No.:	

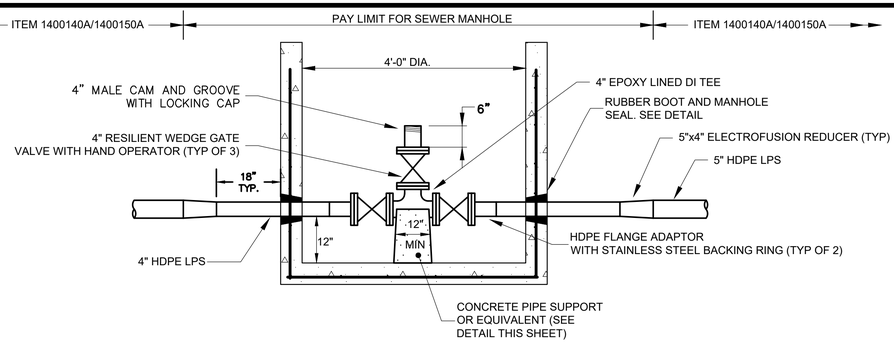
Drawing Title:
HYDRODYNAMIC SEPARATOR DETAILS

Sheet Number:
DET-03

Rev: 1.6 Date: 04/10/2019

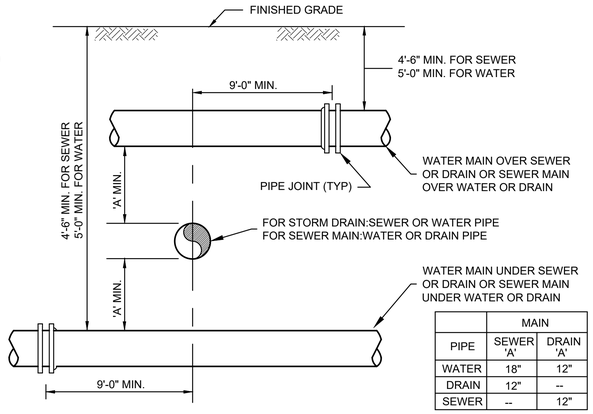


LOW PRESSURE SEWER (LPS) TRENCH DETAIL
N.T.S.



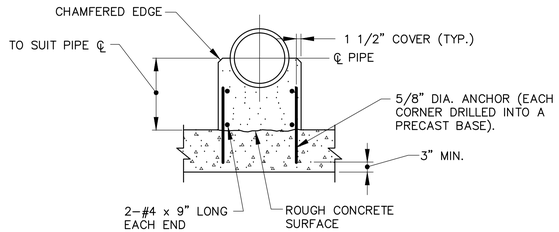
NOTE: ALL MANHOLE MATERIALS TO BE AS SHOWN ON TYPICAL PRECAST MANHOLE DETAIL.

LPS CLEANOUT MANHOLE DETAIL
N.T.S.

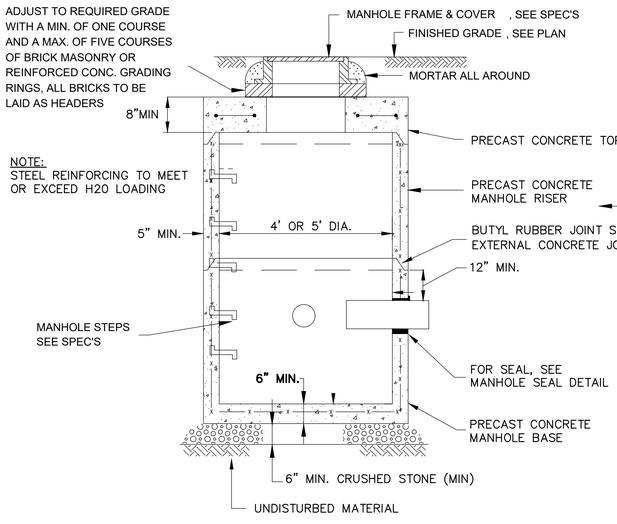


	MAIN	
PIPE	SEWER 'A'	DRAIN 'A'
WATER	18"	12"
DRAIN	12"	--
SEWER	--	12"

WATER, SEWER OR DRAIN CROSSING DETAIL
N.T.S.



CONCRETE PIPE SUPPORT
N.T.S.



PRECAST CONCRETE MANHOLE DETAIL
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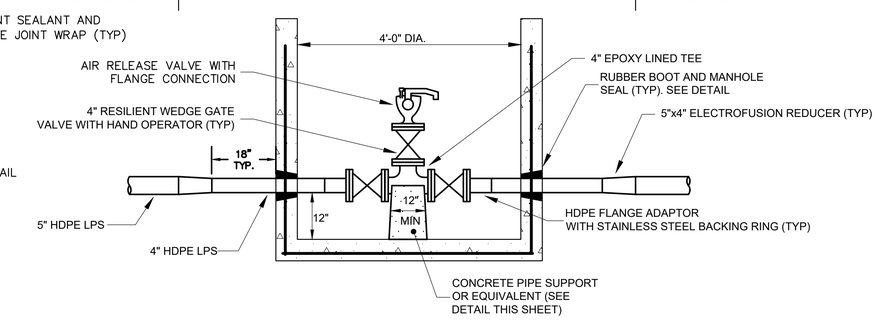
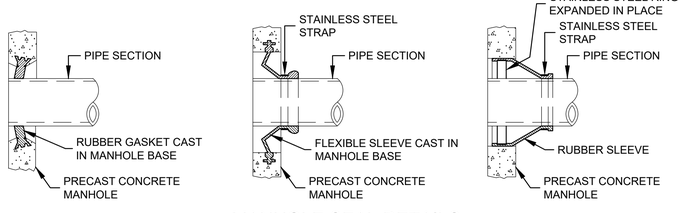
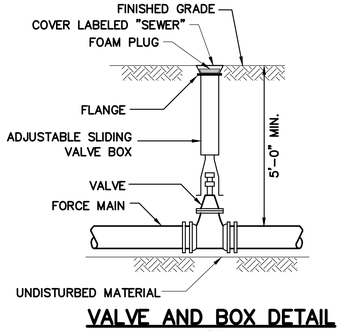


NOTE: ALL MANHOLE MATERIALS TO BE AS SHOWN ON TYPICAL PRECAST MANHOLE DETAIL.

LPS AIR RELEASE MANHOLE DETAIL
N.T.S.



MANHOLE SEAL DETAILS
N.T.S.



VALVE AND BOX DETAIL
N.T.S.

PAYMENT LIMITS FOR "SEWER MANHOLE - ITEM 1403001A" MAY VARY. SEE RESPECTIVE SEWER MANHOLE DETAILS FOR LIMITS AS DEFINED.

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY & SIDEWALK EXTENSION
L171-0001

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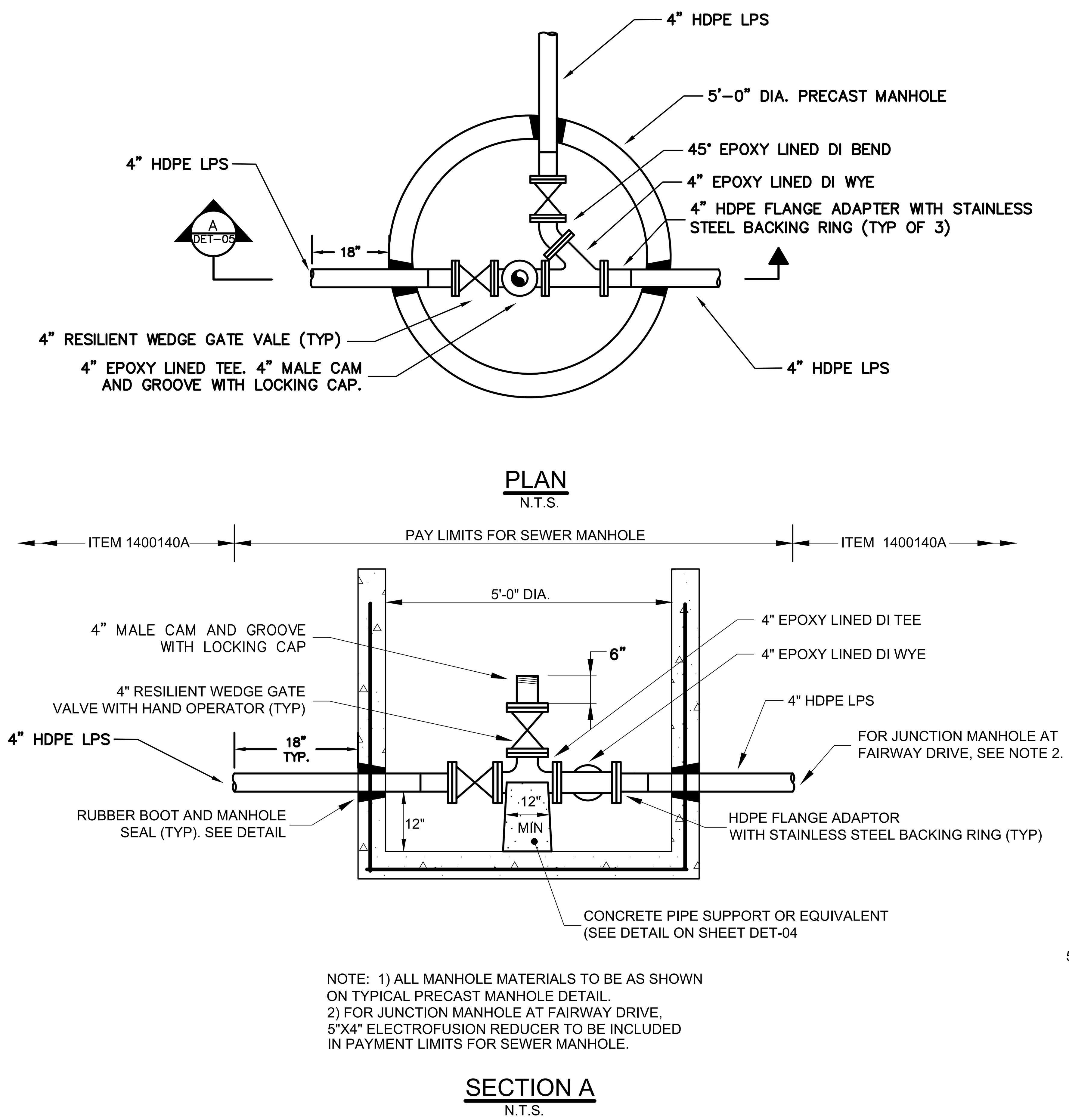
W&S File No.:	

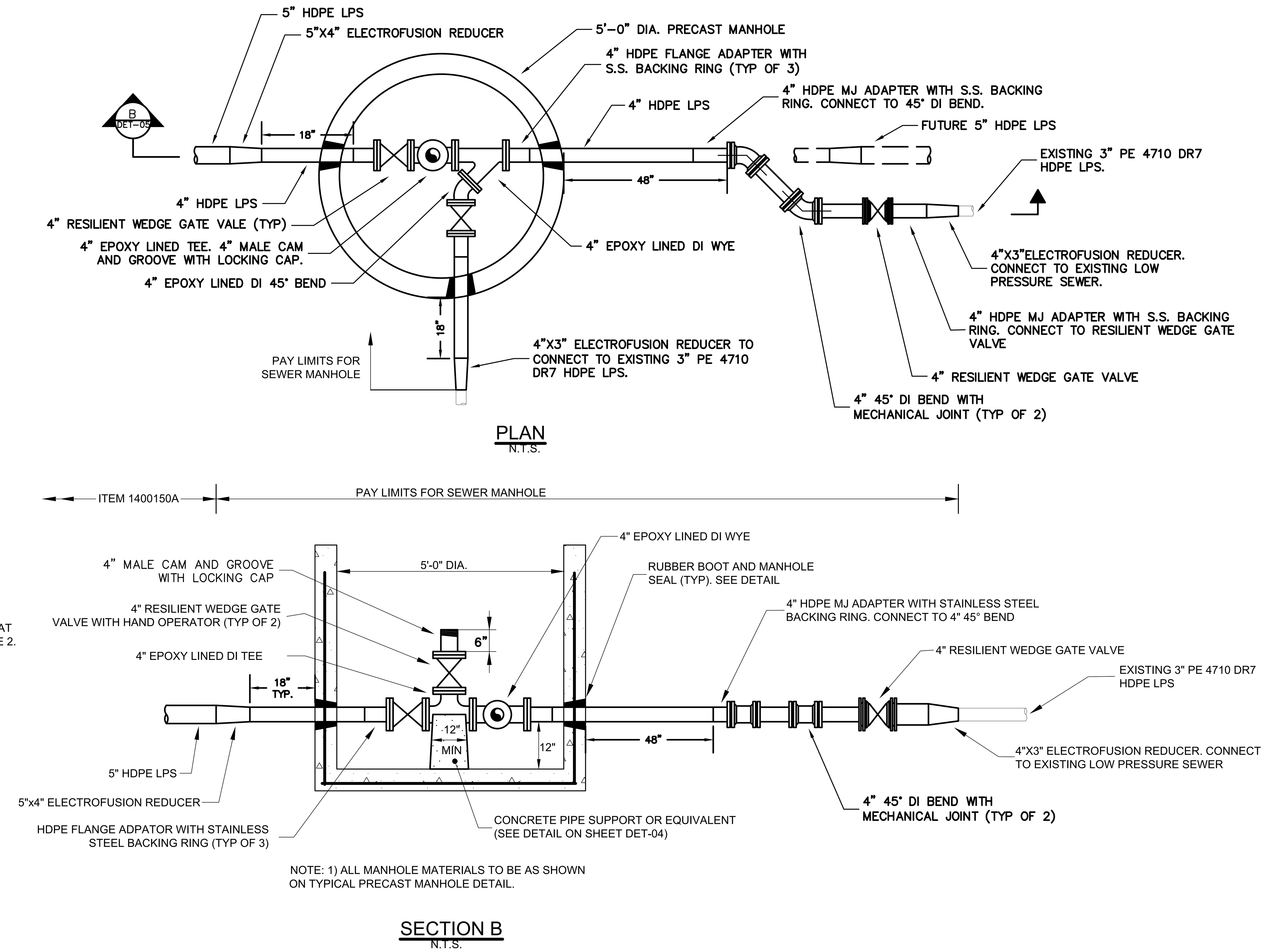
Drawing Title:
LOW PRESSURE SEWER DETAILS

Sheet Number:
DET-04

Rev. 1.0 Date: 04/10/2019



LOW PRESSURE SEWER JUNCTION MANHOLE
N.T.S.



LOW PRESSURE SEWER "HIGH SCHOOL" MANHOLE
N.T.S.

PAYMENT LIMITS FOR "SEWER MANHOLE - ITEM 1403001A" MAY VARY. SEE RESPECTIVE SEWER MANHOLE DETAILS FOR LIMITS AS DEFINED.

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W&S File No.:	

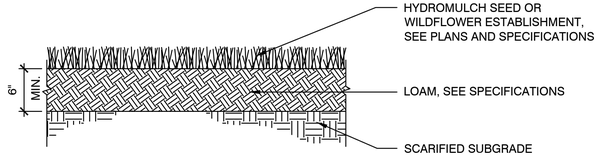
Drawing Title:

LOW PRESSURE SEWER DETAILS

Sheet Number:

DET-05

Rev. 1.6 Date: 04/10/2019



LOAM AND SEED
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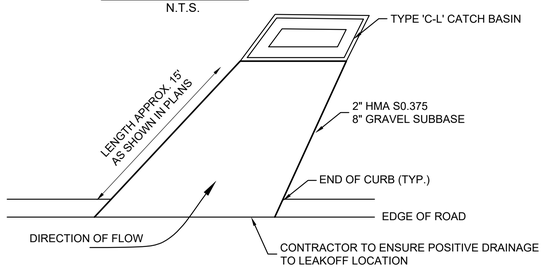
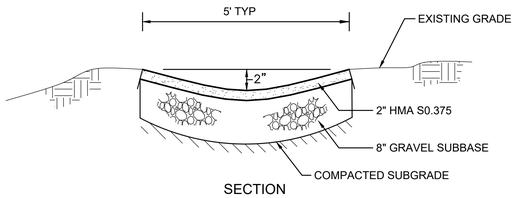


PLAN

NOTES:
1. LEAK-OFF CONFIGURATION TO MATCH PROPOSED PLANS



SECTION

LEAK-OFF DETAIL
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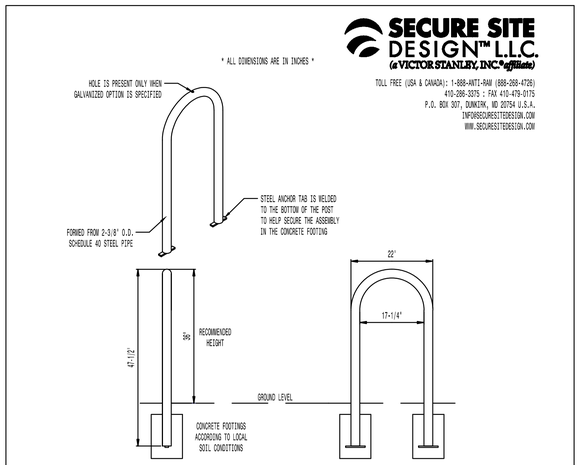
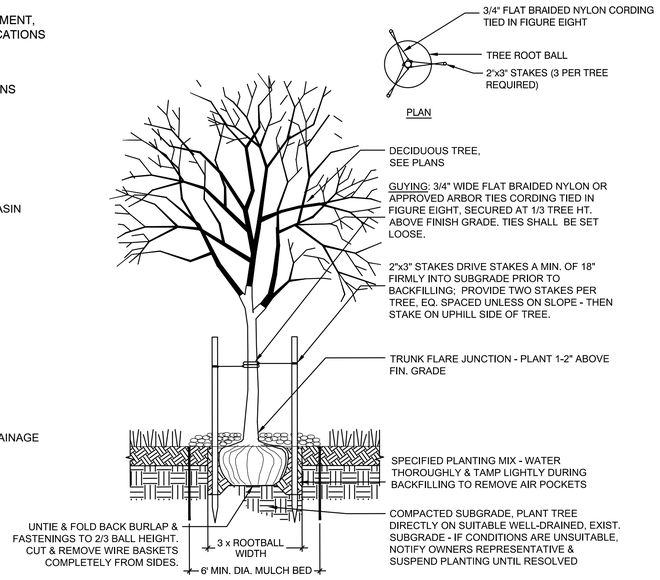
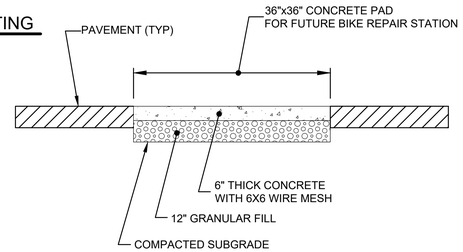


BICYCLE STAND
N.T.S.



TREE STAKING AND PLANTING
N.T.S.



CONCRETE PAD DETAIL
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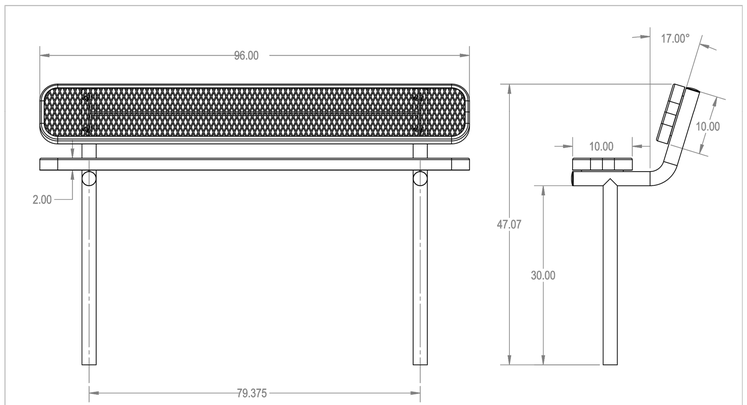

	NAME	DATE
DRAWN	GM	1/25/2016
SALES APPR.		
CLIENT APPR.		
MFG APPR.		
Q.A.		
Design By - CADWorksPro Chicago, IL www.cadworkspro.com		

Mfg. by Aadvantage Panels & Fence, Inc.
MyTCOAT
Commercial Outdoor Furniture
www.mytcoat.com

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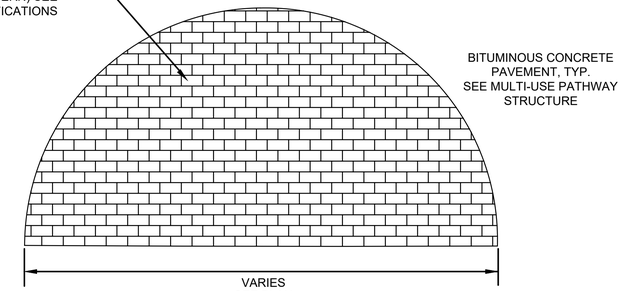
AAdvantage Panels & Fence, Inc.
TITLE: 8Ft Rectangular Bench with Back InGround - Expanded Metal
SIZE A | DWG. NO. BRT08-A-19-000 | REV
WEIGHT: | SHEET 2 OF 3

BENCH
N.T.S.



DECORATIVE CROSSWALK
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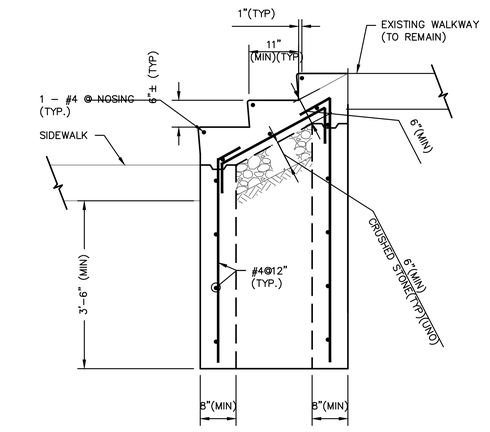
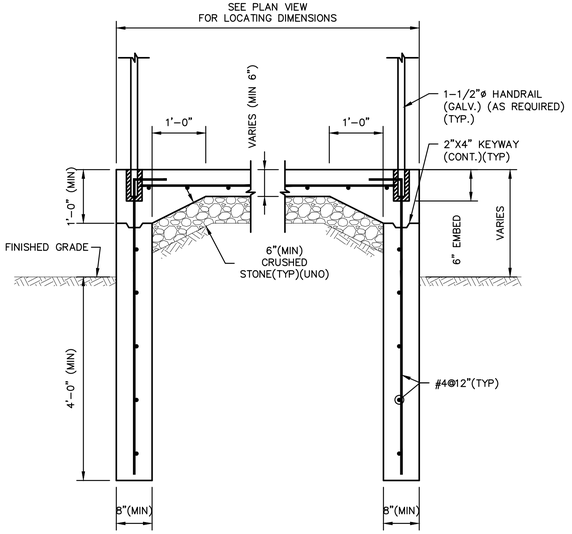


1 CS2.01 TYPICAL STAIR DETAIL
SCALE: 3/4" = 1'-0"



2 S-3 TYPICAL STAIR SECTION
SCALE: 3/4" = 1'-0"

Project:
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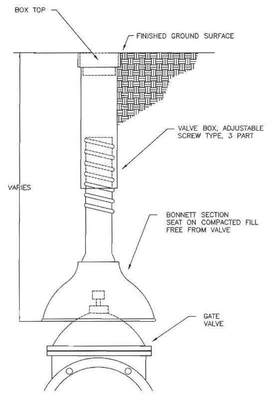
Drawing Title:
LANDSCAPE DETAILS

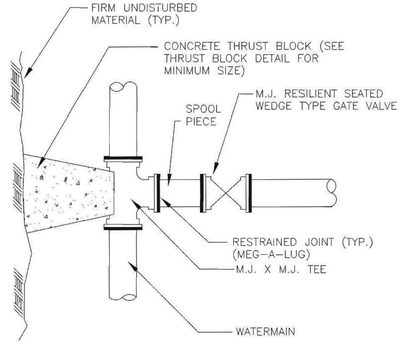
Sheet Number:
DET-06

Rev: 1.8 Date: 04/10/2019



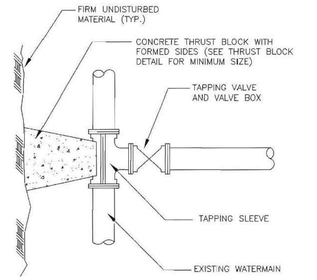
GATE BOX DETAIL

NOT TO SCALE



GATE VALVE CONNECTION DETAIL

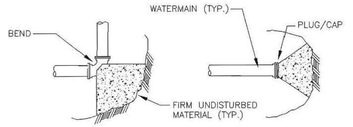
NOT TO SCALE



NOTE: CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING MAIN.

TAPPING SLEEVE & VALVE DETAIL

NOT TO SCALE



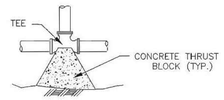
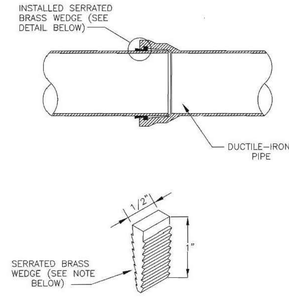


TABLE OF BEARING AREAS (S.F.)			
SIZE OF MAIN (IN.)	BEND (90)	BENDS (45 & UNDER)	TEES, CAPS OR PLUGS
8 & UNDER	5	3	4
10 & 12	12	6	9

NOTES: 1. CONCRETE FOR THRUST BLOCKS SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
2. THRUST BLOCK BEARING AREAS TOO BE IN ACCORDANCE WITH TABLE, UNLESS DETERMINED OTHERWISE BY THE ENGINEER BECAUSE OF SOIL CONDITIONS.
3. THRUST BLOCK SIDES SHALL BE FORMED WITH PLYWOOD.

THRUST BLOCK DETAILS

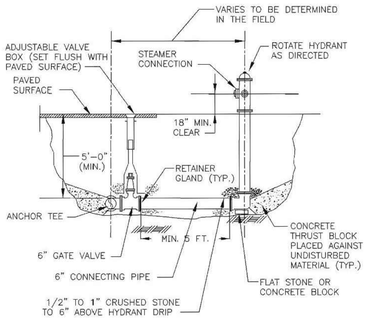
NOT TO SCALE



NOTE:
BRASS WEDGES ARE TO BE INSTALLED ON ALL DUCTILE-IRON, PUSH-ON PIPING, INCLUDING HYDRANT BRANCHES, ETC. TO PROVIDE FOR ELECTRICAL THAWING. FOR 2" THROUGH 12" PIPE, TWO WEDGES SHALL BE USED PER JOINT; FOR LARGER DIAMETER PIPE FOUR WEDGES SHALL BE USED PER JOINT. EACH WEDGE IS DRIVEN INTO THE OPENING BETWEEN THE PLAIN END AND THE BELL UNTIL SNUG. WHEN FOUR WEDGES ARE USED, THEY ARE INSTALLED SIDE BY SIDE, IN PAIRS.

SERRATED BRASS WEDGE DETAIL

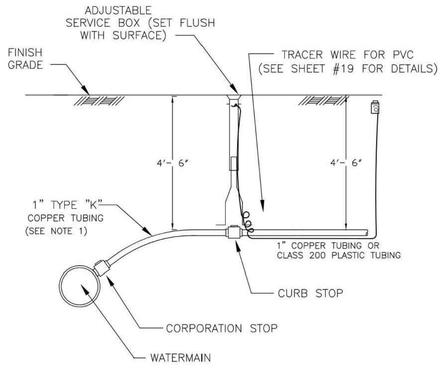
NOT TO SCALE



NOTE: DEPTH OF HYDRANT BURY TO SUIT INSTALLED DEPTH OF COVER OVER WATERMAIN.

HYDRANT ASSEMBLY DETAIL

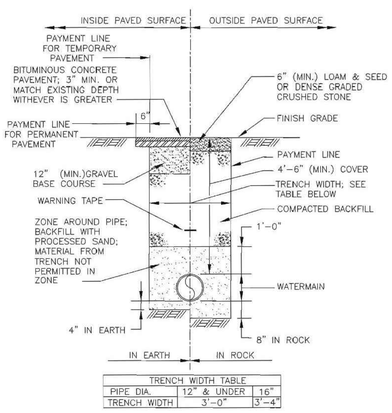
NOT TO SCALE



1. MINIMUM SIZE OF ANY WATER SERVICE INSTALLED FROM MAIN TO PROPERTY LINE SHALL BE 1".
2. TYPE "K" COPPER TUBING MUST BE INSTALLED FROM MAIN TO PROPERTY LINE.
   TYPE "K" COPPER TUBING OR CLASS 200 PLASTIC TUBING MUST BE INSTALLED FROM PROPERTY LINE TO BUILDING WITH TRACER WIRE (SEE SHEET 19 FOR DETAILS)
3. METER PIT MAY REPLACE CURB STOP, BOX, AND HOUSE METER IN BASEMENT.
4. ALL JOINTS TO METER SHALL BE FLARED OR COMPRESSION TYPE.
5. BUILDINGS WITHOUT BASEMENTS MUST HAVE EXTERIOR METER PITS.
6. SERVICE LINES MUST BE CAULKED INSIDE FOUNDATION WALL SLEEVE.
7. BACKFILL: HAND-FILL WITH SAND OR EQUAL TO 12" ABOVE PIPE.
8. TAPPED COLLARS MAY BE USED FOR SERVICE CONNECTIONS.
9. ELECTRICAL GROUNDING WILL NOT BE PERMITTED ON ANY PORTION OF AN EXISTING COPPER WATER SERVICE PARTIALLY REPLACED BY PLASTIC PIPE.

* Pipe rating shall be class 200 water service pipe manufactured to meet or exceed requirements of water service tubing Class 200 (ASTM Standard D-2737 CTS-OD). The pipe shall bear the emblem of National Sanitation Foundation for use in potable water systems. Class 200 water service pipe must be approved by I.A.P.M.O. for use as underground water service pipe and shall bear the seal of the Uniform Plumbing Code. The pipe must conform to the National Bureau of Standards Product Standard Requirements.

*(CTS-OD Indicates Copper Tubing Size, Outside Diameter)

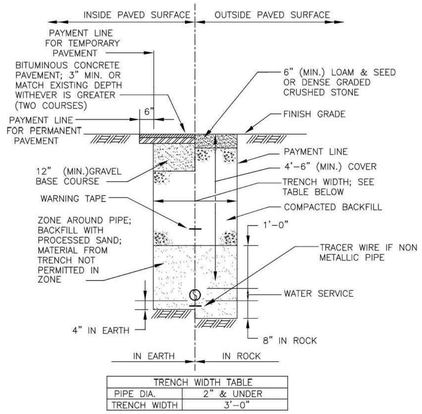


TRENCH WIDTH TABLE		
PIPE DIA.	12" & UNDER	16"
TRENCH WIDTH	3'-0"	3'-4"

NOTE: PAYMENT FOR PAVEMENT INSTALLED BEYOND PAYMENT LINE WILL BE MADE ONLY WHEN SUCH INSTALLATION IS APPROVED BY THE ENGINEER.

WATERMAIN TRENCH DETAIL

NOT TO SCALE

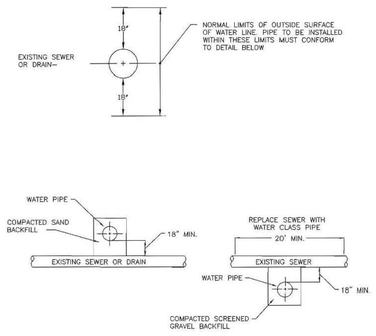


TRENCH WIDTH TABLE	
PIPE DIA.	2" & UNDER
TRENCH WIDTH	3'-0"

NOTE: PAYMENT FOR PAVEMENT INSTALLED BEYOND PAYMENT LINE WILL BE MADE ONLY WHEN SUCH INSTALLATION IS APPROVED BY THE ENGINEER.

WATER SERVICE TRENCH DETAIL

NOT TO SCALE



TYPICAL SEWER AND DRAIN CROSSING

NOT TO SCALE

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY & SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

Weston & Sampson
Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06067
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consultants:

Revisions:

No.	Date	Description

Seal:

COA:

Issued For:

Scale:	AS NOTED
Date:	MAY 2023
Drawn By:	NSD
Reviewed By:	RC
Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

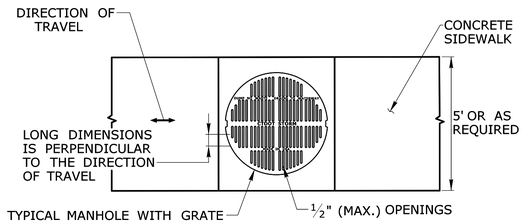
Drawing Title:
GROTON UTILITY DETAILS

Sheet Number:
DET-07

Rev. 1.6 Date: 04/10/2019

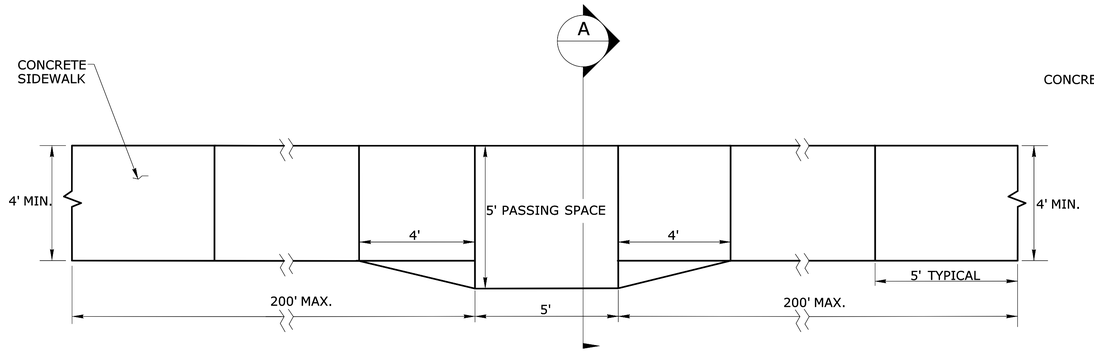
GENERAL NOTES:

1. SEE CONCRETE SIDEWALK RAMPS GUIDE SHEETS FOR PEDESTRIAN RAMP TYPES.
2. ALL CURBING SHALL BE INSTALLED AS EITHER PRECAST OR CAST IN PLACE AS DIRECTED.



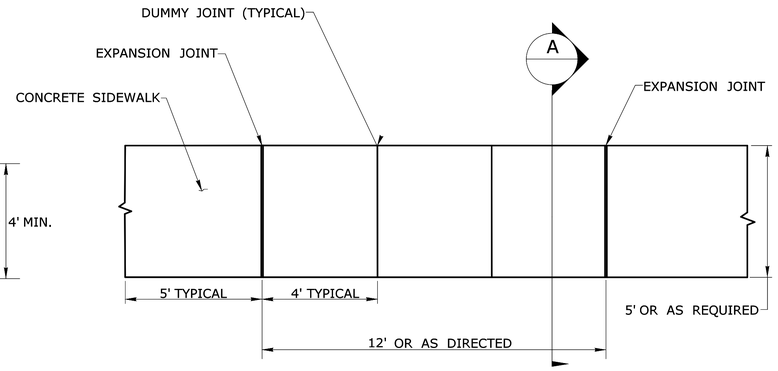
PEDESTRIAN ACCESS ROUTE OVER A MANHOLE WITH GRATE

1. HORIZONTAL OPENINGS IN GRATES AND JOINTS MUST NOT BE MORE THAN ½ INCH
2. ELONGATED OPENINGS IN GRATES MUST BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DIRECTION OF TRAVEL

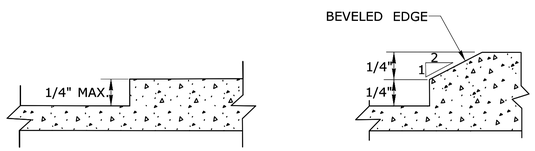


5' PASSING SPACE FOR 4' WIDE SIDEWALK PLAN

PASSING SPACES SHALL BE PROVIDED AT INTERVALS OF 200' MAXIMUM FOR SIDEWALKS LESS THAN 5' IN WIDTH

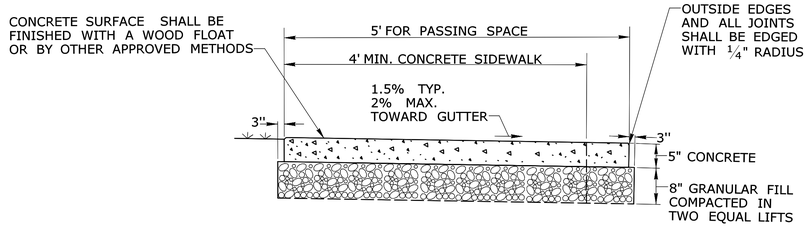


5' WIDE SIDEWALK PLAN



VERTICAL SURFACE DISCONTINUITIES

VERTICAL SURFACE DISCONTINUITIES MUST BE BEVELED TO A HEIGHT NOT GREATER THAN ¼ INCH. THE BEVEL MUST BE THE ENTIRE WIDTH OF THE DISCONTINUITY.



5' PASSING SPACE FOR 4' WIDE SIDEWALK SECTION A

DESIGNER/DRAFTER: CHECKED BY:

SIGNATURE/ BLOCK:

OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

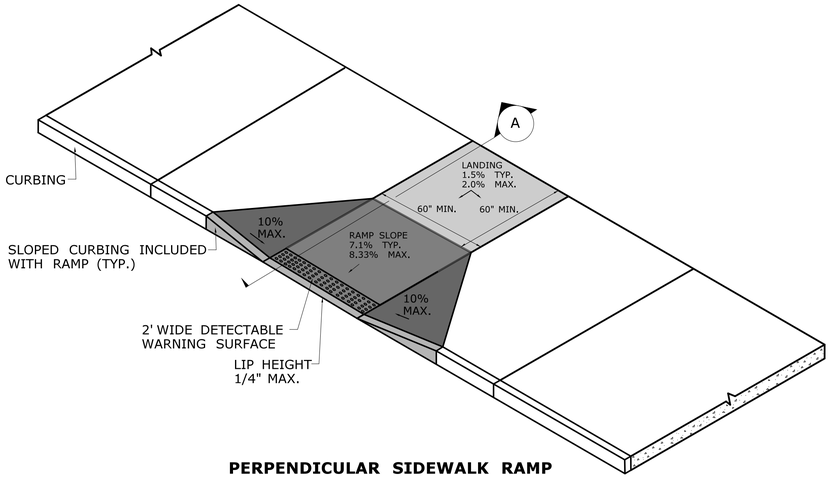
APPROVED BY:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

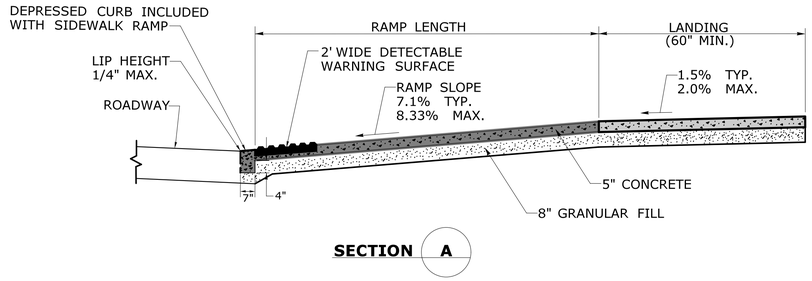
PROJECT NUMBER: L171-0001
PROJECT DESCRIPTION: LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION
TOWN(S): LEDYARD
DRAWING TITLE: CONCRETE SIDEWALKS AND RAMPS

DRAWING NO. DET-08
SHEET NO.

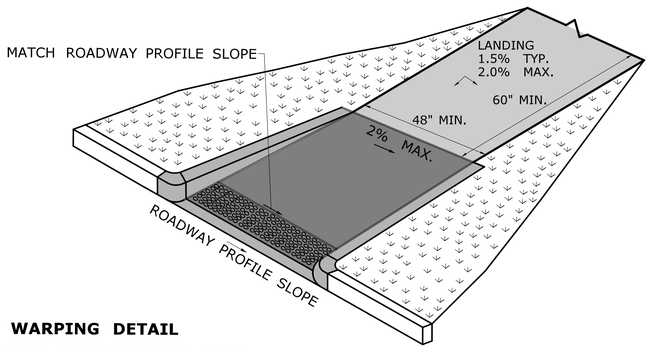
LASTED SAVED BY: RichardEH **FILE NAME:** W:\CT_CONNECT_DDE\CT_Configuration\Organization\Cell\CTDOT_Borders_Contract.cel
PLOTTED DATE: 10/15/2021



PERPENDICULAR SIDEWALK RAMP AND SECTION

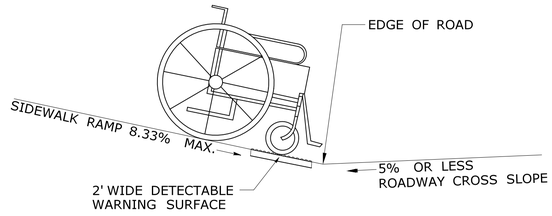


SECTION A

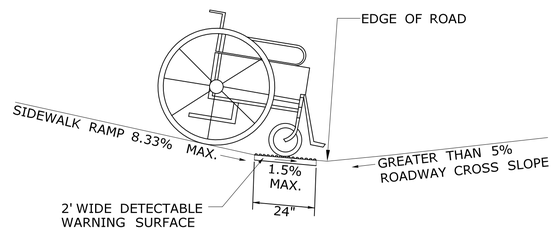


RAMP WARPING DETAIL

1. TRANSITION SIDEWALK RAMP TO MATCH ROADWAY PROFILE AS GRADUALLY AS POSSIBLE. DO NOT EXCEED 3 % PER FOOT CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
2. COMPLETE TRANSITION TO ROADWAY PROFILE BEHIND DETECTABLE WARNING SURFACE.



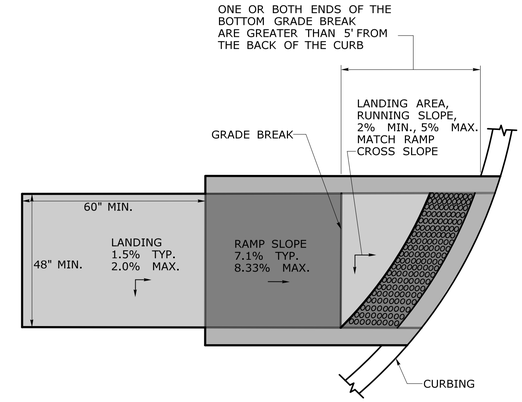
SIDEWALK RAMP GRADE AT ROADWAY CROSS SLOPE OF 5% OR LESS GUTTER COUNTER SLOPE



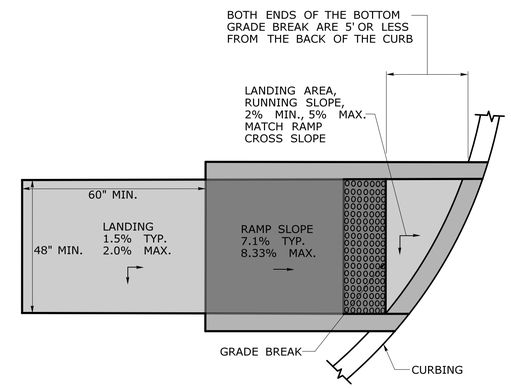
SIDEWALK RAMP GRADE AT ROADWAY CROSS SLOPE OF GREATER THAN 5% GUTTER COUNTER SLOPE

GENERAL NOTES:

1. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
2. VERTICAL SURFACE DISCONTINUITIES AT JOINTS SHALL NOT EXCEED $^{1}/_{4}$ INCH.
3. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION OR CONTRACTION JOINT.
4. THE RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.33 PERCENT MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET.



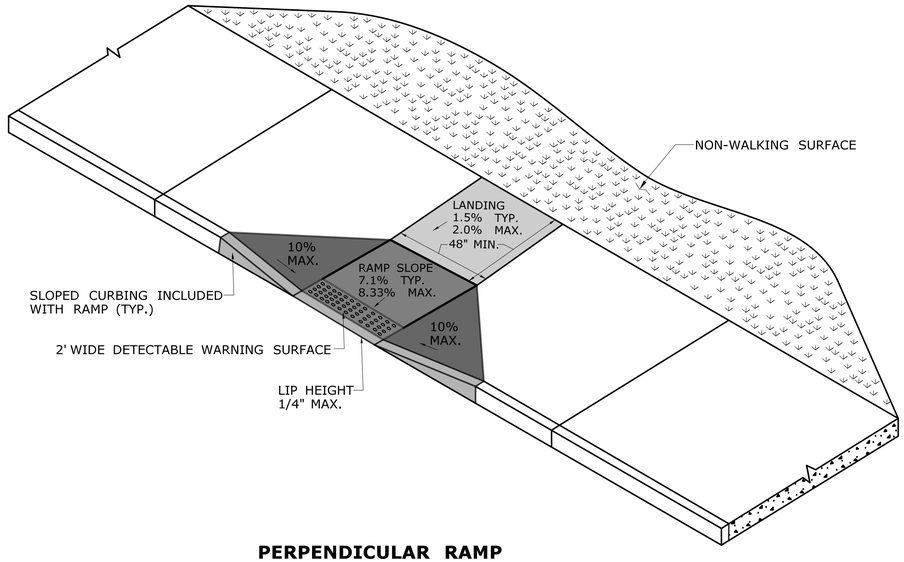
GRADE BREAK GREATER THAN 5' DETECTABLE WARNING SURFACE LOCATION



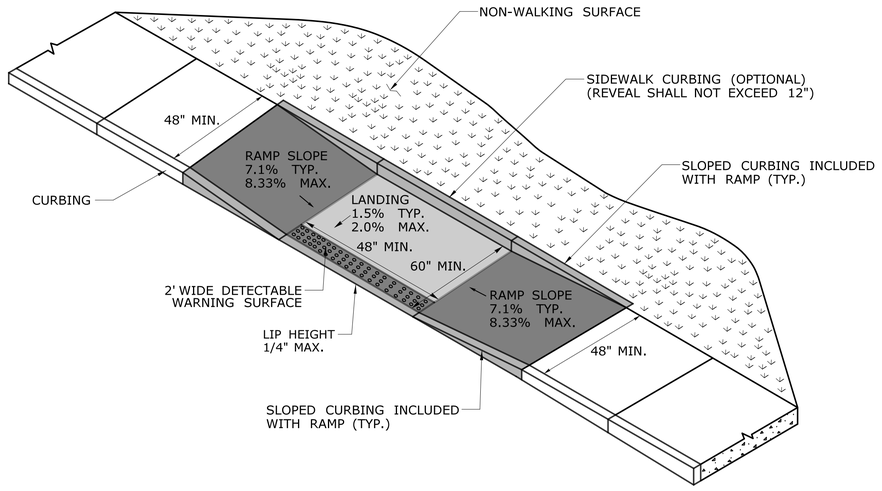
GRADE BREAK OF 5' OR LESS DETECTABLE WARNING SURFACE LOCATION

DESIGNER/DRAFTER:	CHECKED BY:	SIGNATURE/ BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	APPROVED BY:	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	PROJECT NUMBER: L171-0001 PROJECT DESCRIPTION: LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION TOWN(S): LEDYARD DRAWING TITLE: CONCRETE SIDEWALK RAMP SHEET 1	DRAWING NO. DET-09 SHEET NO.

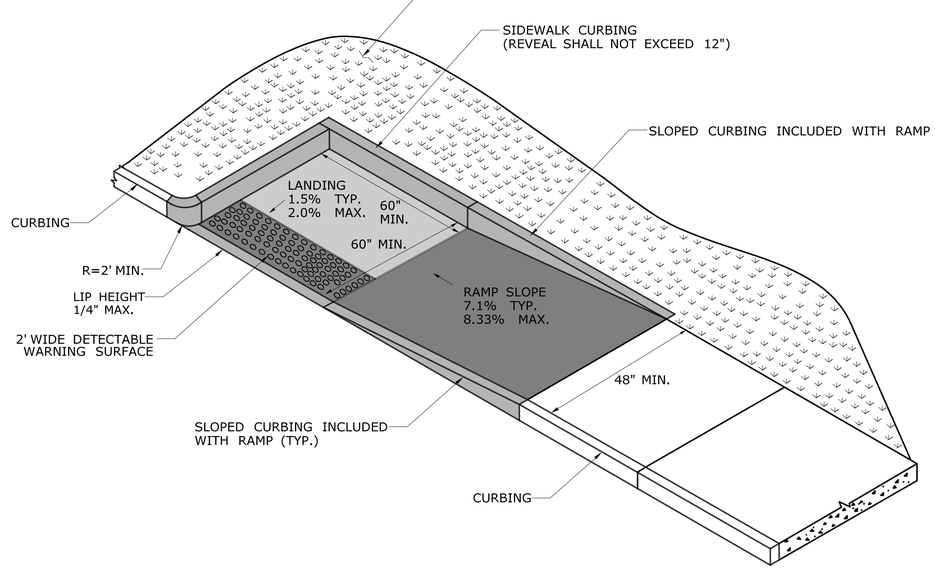
LASTED SAVED BY: RichardEH **FILE NAME:** W:\CT_CONNECT_DDE\CT_Configuration\Organization\Cell\CTDOT_Borders_Contract.cel
PLOTTED DATE: 10/15/2021



PERPENDICULAR RAMP
WITH 48" BY-PASS
(TYPE 8)



PARALLEL RAMP WITHOUT
NON-WALKING SURFACE
(TYPE 9)



PARALLEL RAMP
WITH LANDING AT BOTTOM ON CORNER
(TYPE 10)

DESIGNER/DRAFTER: CHECKED BY:

SIGNATURE/
BLOCK:

OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

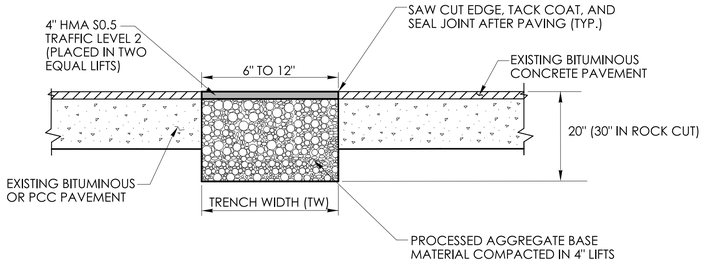
APPROVED BY:

STATE OF CONNECTICUT
DEPARTMENT
OF
TRANSPORTATION

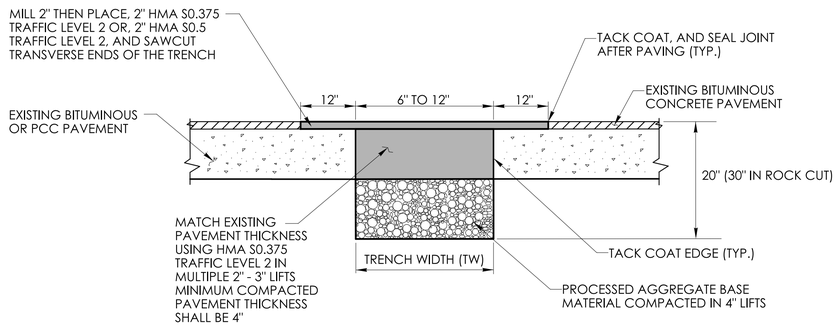
PROJECT NUMBER: L171-0001
PROJECT DESCRIPTION: LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION
TOWN(S): LEDYARD
DRAWING TITLE: CONCRETE SIDEWALK RAMP SHEET 4

DRAWING NO.
DET-10
SHEET NO.

LASTED SAVED BY: RichardEH **FILE NAME:** W:\CT_CONNECT_DDE\CT_Configuration\Organization\Cell\CTDOT_Borders_Contract.cel
PLOTTED DATE: 10/15/2021



TEMPORARY PAVEMENT - FOR NARROW TRENCH THROUGH BITUMINOUS CONCRETE OR OVERLAID PORTLAND CEMENT CONCRETE (PCC) (TRENCH WIDTH BETWEEN 6" AND 12")



PERMANENT PAVEMENT - FOR NARROW TRENCH THROUGH BITUMINOUS CONCRETE OR OVERLAID PORTLAND CEMENT CONCRETE (PCC) (TRENCH WIDTH BETWEEN 6" AND 12"

GENERAL NOTES:

1. LONGITUDINAL TRENCHING FOR JOINTED CONCRETE PAVEMENT:

   A. IF THE LONGITUDINAL TRENCH FALLS BETWEEN THE SLAB CENTERLINE AND THE EDGE OF SLAB, REMOVE CONCRETE AND BITUMINOUS CONCRETE PAVEMENT FROM THE TRENCH EDGE TO THE EDGE OF ROAD. IF THE LONGITUDINAL TRENCH FALLS BETWEEN THE LONGITUDINAL JOINT AND THE SLAB CENTERLINE, REMOVE THE ENTIRE CONCRETE SLAB AND BITUMINOUS CONCRETE PAVEMENT TO THE EDGE OF ROAD. IN EITHER CASE REBUILD WITH THE FOLLOWING:

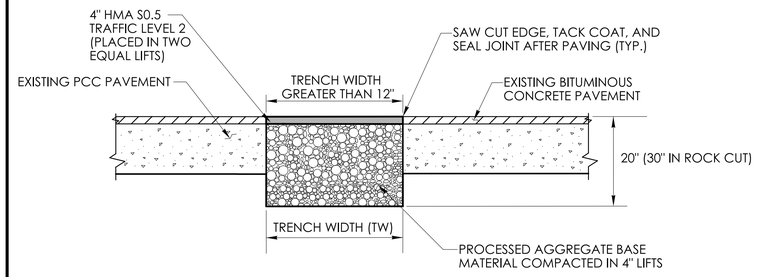
      a. PLACE HMA S1.0 TRAFFIC LEVEL 2 IN TWO EQUAL 4" - 5" LIFTS TO MATCH EXISTING CONCRETE PAVEMENT THICKNESS
      b. PLACE HMA S0.5 TRAFFIC LEVEL 2 IN 2" - 3" LIFTS TO MATCH EXISTING BITUMINOUS CONCRETE PAVEMENT THICKNESS, WITH THE FINAL LIFT BEING 2"

2. TRANSVERSE TRENCHING FOR JOINTED CONCRETE PAVEMENT:

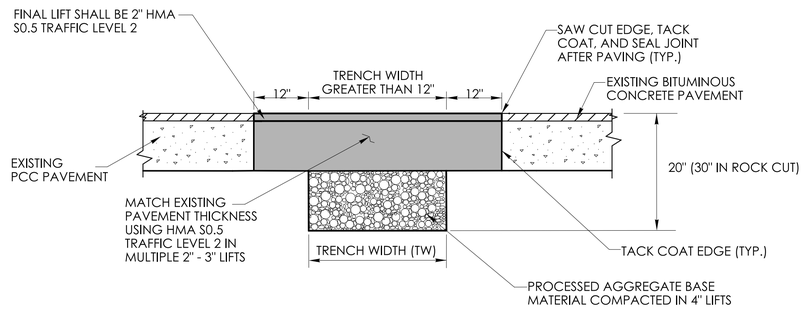
TABLE 1	
TOTAL SLAB LENGTH (L)	MIN. LENGTH REMAINING
40' OR LONGER	1/4 L
15' - 40'	10'
15' OR SHORTER	REBUILD TO NEAREST JOINT

   A. FOR TRANSVERSE TRENCHES, THE MINIMUM SLAB LENGTH AS SHOWN IN TABLE 1 SHALL BE LEFT IN PLACE TO THE NEAREST TRANSVERSE JOINT. IF THIS CRITERIA CANNOT BE MET, THE EXISTING SLAB AREA FROM THE TRENCH EDGE TO THE NEAREST TRANSVERSE JOINT SHALL BE REMOVED AND REBUILT AS FOLLOWS:

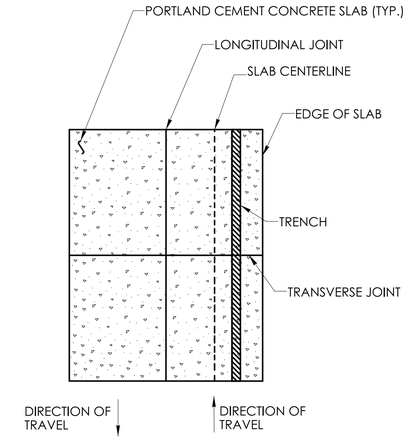
      a. PLACE HMA S1.0 TRAFFIC LEVEL 2 IN TWO EQUAL 4" - 5" LIFTS TO MATCH EXISTING CONCRETE PAVEMENT THICKNESS
      b. PLACE HMA S0.5 TRAFFIC LEVEL 2 IN 2" - 3" LIFTS TO MATCH EXISTING BITUMINOUS CONCRETE PAVEMENT THICKNESS, WITH THE FINAL LIFT BEING 2"



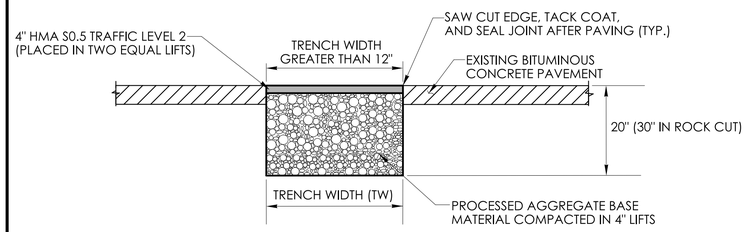
TEMPORARY PAVEMENT FOR TRENCH THROUGH OVERLAID PORTLAND CEMENT CONCRETE (PCC) (TRENCH WIDTH GREATER THAN 12")



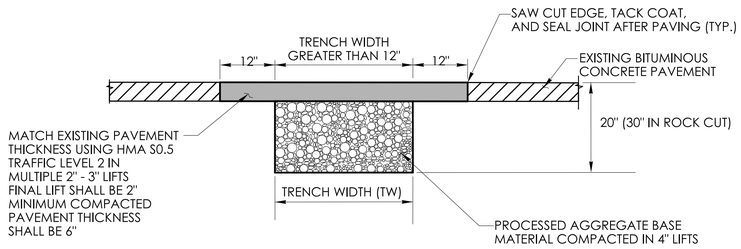
PERMANENT PAVEMENT FOR TRENCH THROUGH OVERLAID PORTLAN CEMENT CONCRETE (PCC) (TRENCH WIDTH GREATER THAN 12")



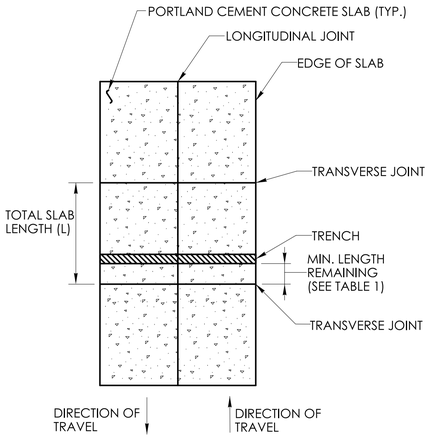
LONGITUDINAL TRENCHING FOR JOINTED CONCRETE PAVEMENT (SEE NOTE 1)



TEMPORARY PAVEMENT FOR TRENCH THROUGH BITUMINOUS CONCRETE (TRENCH WIDTH GREATER THAN 12")



PERMANENT PAVEMENT FOR TRENCH THROUGH BITUMINOUS CONCRETE



TRANSVERSE TRENCHING FOR JOINTED CONCRETE PAVEMENT (SEE NOTE 2)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: CHECKED BY:

SIGNATURE/ BLOCK:

OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

APPROVED BY:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: L171-0001
PROJECT DESCRIPTION: LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION
TOWN(S): LEDYARD
DRAWING TITLE: PAVEMENT REPAIR

DRAWING NO. DET-11
SHEET NO.

LASTED SAVED BY: RichardEH **FILE NAME:** W:\CT_CONNECT_DDE\CT_Configuration\Organization\Cell\CTDOT_Borders_Contract.cel
PLOTTED DATE: 11/23/2022

R1 - SERIES

R1-1 *

LEGEND - WHITE
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.85	18	31-0532	1	.080
5.19	30	31-0552	1	.080
7.98	36	31-0553	1	.080
13.3	48	31-0557	2	.100

R1-2 *

LEGEND - RED
BACKGROUND -WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
0.97	18	31-0520	1	.080
3.90	36	31-0523	1	.080
6.77	48	31-0522	2	.100
10.83	60	31-0528	2	.100

R1-3P *

LEGEND - WHITE
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
0.75	18X6	31-0508		.080

R2 - SERIES

R2-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-5505	1	.080
7.50	30X36	31-5504	1	.080
12.00	36X48	31-5506	2	.100
20.00	48X60	31-5507	2	.100

R2-4a

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
32	48X96	31-5510	2	.125

R3 - SERIES

R3-1

LEGEND - BLACK
BACKGROUND - WHITE
CIRCLE & DIAGONAL - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1604	1	.080
9.00	36X36	31-1627	2	.080

R3-2

LEGEND - BLACK
BACKGROUND - WHITE
CIRCLE & DIAGONAL - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1603	1	.080
9.00	36X36	31-1629	2	.080

R3-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1648	1	.080
9.00	36X36	31-1647	2	.080

R3-4

LEGEND - BLACK
BACKGROUND - WHITE
CIRCLE & DIAGONAL - RED

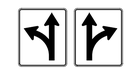
AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1622	1	.080
9.00	36X36	31-1632	2	.080

R3-5

31-0183 31-0184

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36		1	.080

R3-6



31-0157 31-0158

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36		1	.080

R3-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30	31-0117	1	.080
9.00	36X36	31-0120	2	.080

R3-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30	31-0118	1	.080
9.00	36X36	31-0123	2	.080

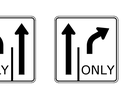
R3-6

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X24	31-0175	1	.080

R3-8

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30	31-0290	1	.080

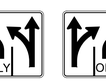
R3-8



31-0222 31-0223

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30		1	.080

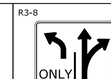
R3-8



31-0262 31-0261

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30		1	.080

R3-8



31-0282 31-0283

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30		2	.080

R3-8

31-0295 31-0219

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30		2	.080

R3-8

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.75	42X30	31-0279	2	.100

R3-8

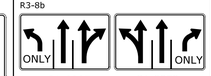
31-0262 31-0261

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30		1	.080

R3-8b

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
10.00	48X30	31-0302	2	.100

R3-8b



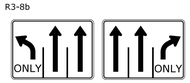
31-0307 31-0372

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
10.00	48X30		2	.100

R3-8b

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.75	42X30	31-0334	2	.100

R3-8b



31-0370 31-0371

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.75	42X30		2	.100

R4 - SERIES

R4-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1502	1	.080

R4-16

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
20.00	48X60	31-1574	2	.100

R4-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1562	1	.080
20.00	48X60	31-1564	2	.100

R4-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1526	1	.080
12.00	36X48	31-1536	2	.100
20.00	48X60	31-1546	2	.100

R5 - SERIES

R5-1 *

LEGEND - WHITE
BACKGROUND - WHITE
CIRCLE - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30	31-1119	1	.080
9.00	36X36	31-1120	2	.080
16.00	48X48	31-1121	2	.100

R5-1a *

LEGEND - WHITE
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.00	36X24	31-1122	2	.080
8.75	42X30	31-1123	2	.100

R5-10a(CT)

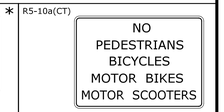
LEGEND - BLACK
TOP SECTION BACKGROUND - YELLOW
BOTTON SECTION BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
32.50	60X78	31-1719	2	.125

R5-10c

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	31-1774	1	.080

R5-10a(CT)



AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36X36	31-1775	2	.100

R5-11

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	30X24	31-1790	1	.080
20.00	48X36	31-1792	2	.100

R6 - SERIES

R6-1 *

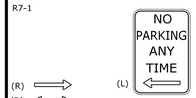
AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	36X12	31-1188	1	.080
6.75	54X18	31-1189	2	.100

R6-1 *

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	36X12	31-1177	1	.080
6.75	54X18	31-1178	2	.100

R7 - SERIES

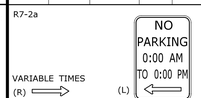
R7-1



LEGEND - RED
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	12X18	31-0630	1	.080

R7-2a



LEGEND - RED
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	12X18	31-0603	1	.080

R8 - SERIES

R8-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
12.00	48X36	31-0670	2	.100

R9 - SERIES

R9-3

LEGEND - BLACK
BACKGROUND - WHITE
CIRCLE & DIAGONAL - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.25	18X18	31-1705	1	.080
4.00	24x24	31-1769	1	.080
6.25	30x30	31-1770	1	.080

R9-3a

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	12X18	31-1702	1	.080

R10 - SERIES

R10-6

31-0801 31-0802

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.00	24X36		1	.080

R10-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-0806	1	.080

R10-11b

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36X36	31-0816	2	.080

R10-10L

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36	31-0852	1	.080

R10-11a

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36	31-0830	1	.080
12.00	36X48	31-0819	2	.100

R10-11c(CT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36	31-0847	1	.080

R10-15 *

31-1626 31-1625

LEGEND AND SYMBOLS - BLACK
YIELD SYMBOL - RED
BACKGROUND:
TOP - FLUORESCENT YELLOW-GREEN
BOTTOM - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30		1	.080

R11 - SERIES

R11-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1915	1	.080
20.00	48X60	31-1918	2	.100

RETROREFLECTIVE STRIP

LEGEND - N/A
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.00	4X48	31-5003	1	.080
2.00	4X72	31-5004	1	.080

NOTES:

1. THE LEGEND "O.S.T.A." SHALL APPEAR ON ALL R- SERIES SIGNS EXCEPT WHEN SUFFIXED WITH THE LETTER "Z".
2. FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
3. POSTS - SEE STANDARD SHEET TR-1208_02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
4. POSTS SHALL BE 4 LBS./FT.
5. SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.
6. FOR OVERHEAD MOUNTED SIGNS, SEE STANDARD SHEET TR-1114_01 - "BONDING AND UTILITY POLE ATTACHMENT DETAILS, SIGN HANGER, "Y" CLAMP DETAIL."

COLORS:

BACKGROUND - WHITE - EXCEPT AS NOTED.

LEGEND - BLACK - EXCEPT AS NOTED.

ALL SIGNS TO USE TYPE IX RETROREFLECTIVE SHEETING WITH THE EXCEPTION OF OVERHEAD MOUNTED SIGNS AND SIGNS DESIGNATED WITH AN * WHICH SHALL BE TYPE XI RETROREFLECTIVE SHEETING.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
4	10-2021	REVISED SHEETING TYPE	TR-GS_01
3	12-2018	REVISED RETROREFLECTIVE STRIPS	TR-GS_01
2	10-2018	REVISED R5-11 SIGNS PER MUTCD	TR-GS_01
1	6-2018	NEW SHEET ISSUED	TR-GS_01

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.

Plotted Date: 10/14/2021

DESIGNER/DRAFTER: **A. MERMELSTEIN**
CHECKED BY: **B. SCHILLING**
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Filename: ...\CTDOT_TRAFFIC_GS.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION

TOWN: **LEDYARD**

DRAWING TITLE:
SIGN FACE SHEET ALUMINUM (X)
R-SERIES TYPICAL SIGN DETAILS

PROJECT NO. **L171-0001**
DRAWING NO. **TR-GS_01**
SHEET NO. **DET-12**

S - SERIES

S1-1

LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.75	36	41-2112	1	.080
12.00	48	41-2113	2	.100

W1 - SERIES

W1-1L

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4006	1	.080
9.00	36	41-4031	1	.080

W1-1R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4005	1	.080
9.00	36	41-4160	1	.080

W1-6

LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW
(LEFT OR RIGHT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.00	48X24	41-4223	2	.100
12.50	60X30	41-4262	2	.100

W1-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4029	1	.080
9.00	36	41-4169	1	.080

W1-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4168	1	.080
9.00	36	41-4032	1	.080

W1-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.00	48X24	41-4207	2	.100
12.50	60X30	41-4208	2	.100

W1-8

LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW
(LEFT OR RIGHT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	18X24	41-3951	1	.080
7.50	30X36	41-4211	1	.080
12.00	36X48	41-4260	2	.080

W2 - SERIES

W2-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4226	1	.080
9.00	36	41-4236	1	.080

W2-2

(LEFT OR RIGHT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4225	1	.080
9.00	36	41-4235	1	.080

W3 - SERIES

W3-1

OCTAGON - RED

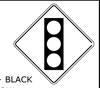
AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-0501	1	.080
16.00	48	41-0503	2	.100

W3-2

TRIANGLE - RED & WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-0504	1	.080
16.00	48	41-0506	2	.100

W3-3



SYMBOL & LEGEND - BLACK
BACKGROUND - YELLOW
TOP CIRCLE - RED
BOTTOM CIRCLE - GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-0835	1	.080
16.00	48	41-0848	2	.100

W/ FLASHERS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
25.00	60	41-0534	2	.125

W4 - SERIES

W4-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4448	1	.080
16.00	48	41-4452	2	.100

W4-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4449	1	.080
16.00	48	41-4459	2	.100

W4-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4442	1	.080
16.00	48	41-4446	2	.100

W4-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4441	1	.080
16.00	48	41-4447	2	.100

W4-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4468	1	.080
16.00	48	41-4435	2	.100

W4-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4470	1	.080
16.00	48	41-4434	2	.100

W5 - SERIES

W5-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4402	1	.080
16.00	48	41-4404	2	.100

W6 - SERIES

W6-1

W6-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4335	1	.080
16.00	48	41-4330	2	.100

W6-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4329	1	.080
16.00	48	41-4331	2	.100

W7 - SERIES

W7-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4506	1	.080
9.00	36	41-4530	1	.080
16.00	48	41-4508	2	.100

W8 - SERIES

W8-5

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4519	1	.080
9.00	36	41-4520	1	.080
16.00	48	41-4521	2	.100

W9 - SERIES

W9-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4443	1	.080
16.00	48	41-4444	2	.100

W9-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4440	1	.080
16.00	48	41-4445	2	.100

W9-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4454	1	.080
16.00	48	41-4456	2	.100

W9-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4453	1	.080
16.00	48	41-4455	2	.100

W11 - SERIES

W11-2

LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4829	1	.080
9.00	36	41-4830	1	.080

W11-8

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4680	1	.080
9.00	36	41-4681	1	.080

W12 - SERIES

W12-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4213	1	.080
9.00	36	41-4215	1	.080

LEFT
LANE

(SUBPLATE)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	30X24	41-4721		.080

W12-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4706	1	.080
16.00	48	41-4708	2	.100

RIGHT
LANE

(SUBPLATE)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	30X24	41-4722		.080

W13 - SERIES

W13-1P

(SUBPLATE)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.25	18X18	41-5566		.080
4.00	24X24	41-5567		.080
6.25	30X30	41-5574		.080

W13-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
12.00	36X48	41-5596	2	.100

W13-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
12.00	36X48	41-5581	2	.100

W16 - SERIES

W16-2aP

(SUBPLATE)
USE AT ADVANCE SIGN LOCATION
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-6140		.080

W16-7PL

(SUBPLATE)
USE AT CROSSWALK
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-2617		.080

W16-7PR

(SUBPLATE)
USE AT CROSSWALK
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-2619		.080

W16-9P

(SUBPLATE)
USE AT ADVANCE SIGN LOCATION
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.75	30X18	41-6137		.080

W16-2aP

(SUBPLATE)
USE AT ADVANCE SIGN LOCATION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-6130		.080
3.75	30X18	41-6134		.080

RETROREFLECTIVE STRIP

LEGEND - N/A
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	4X72	41-5010	1	.080

LEGEND - N/A
BACKGROUND - FLUORESCENT YELLOW

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	4X48	41-5001	1	.080
2.00	4X72	41-5006	1	.080

NOTES:

1. FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
2. POSTS - SEE STANDARD SHEET TR-1208_02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
3. POSTS SHALL BE 4 LBS./FT.
4. SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.
5. FLUORESCENT YELLOW RETROREFLECTIVE STRIPS SHALL BE INSTALLED ON ALL SIGN POSTS FOR W1-6 AND W1-8 SIGNS. FLUORESCENT YELLOW GREEN RETROREFLECTIVE STRIPS SHALL BE INSTALLED ON ALL SIGN POSTS FOR S1-1 AND W11-2 SIGNS LOCATED AT CROSSINGS. RETROREFLECTIVE STRIPS SHOULD NOT BE INSTALLED ON ADVANCE CROSSING WARNING SIGNS. SEE STANDARD SHEET TR-1208_01 "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS" FOR RETROREFLECTIVE STRIP DETAILS AND INSTALLATION.

COLORS:

BACKGROUND - YELLOW - EXCEPT AS NOTED.
LEGEND - BLACK - EXCEPT AS NOTED.
ALL SIGNS TO USE TYPE XI RETROREFLECTIVE SHEETING.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
2	10-2021	REVISED SHEETING TYPE	TR-GS_02
1	6-2018	NEW SHEET ISSUED	TR-GS_02

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.

Plotted Date: 10/14/2021

DESIGNER/DRAFTER: **A. MERMELSTEIN**
CHECKED BY: **B. SCHILLING**
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Filename: ...\CTDOT_TRAFFIC_GS.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION

TOWN: **LEDYARD**

DRAWING TITLE:
SIGN FACE SHEET ALUMINUM (Y)
S&W SERIES TYPICAL SIGN DETAILS

PROJECT NO. **L171-0001**
DRAWING NO. **TR-GS_02**
SHEET NO. **DET-13**

D1 - SERIES

D1-1

51-5202 Variable →

D1-2

51-5203 Variable Variable →

VARIABLE LEGEND & ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	60X12	51-5202	2	.100
10.00	60X24	51-5203	2	.100

D3 - SERIES

D3-1

Variable Road Name

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.00	48X18	51-2004	2	.100
7.50	60X18	51-2001	2	.100
9.00	72X18	51-2002	2	.125
10.50	84X18	51-2003	2	.125

D4 - SERIES

D4-2 PARK - RIDE →

VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	51-6006	1	.080
7.50	30X36	51-6007	1	.080
5.00	24X30	51-6033	1	.080
7.50	30X36	51-6034	1	.080
5.00	24X30	51-6044	1	.080
7.50	30X36	51-6045	1	.080

D4-2 EXIT 000 1 PARK - RIDE

VARIABLE EXIT NUMBER

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
38.50	84X66	51-2082	3	.125
38.50	84X66	51-2095	3	.125
38.50	84X66	51-2097	3	.125
38.50	84X66	51-2099	3	.125

D5 - SERIES

D5-2b REST AREA →

LEGEND - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
42.25	78X78	51-6901	2	.125

SERVICE PLAZA →

LEGEND - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
39.00	72X78	51-6158	2	.125

D7 - SERIES

D-7

51-6802 Variable →

51-6803 Variable Variable →

W or W/O ARROW
VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.17	60X12	51-6802	2	.100
8.33	60X24	51-6803	2	.100

D9 - SERIES

D9-2 H

** FOR ARROW SUBPLATES USE M5 & M6 SERIES

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6788	1	.080

51-6705 DIESEL →
51-6706 FOOD →
51-6708 GAS →
51-6709 LODGING →

VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.25	36X9		2	.080

51-5405 STATE POLICE →
51-6714 CAMPING →
51-6960 INFO →

VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.25	36X9		2	.080

D10 - SERIES

D10-4 NORTH 95 MILE 000

CARDINAL DIRECTION, SHIELD AND NUMERALS ARE VARIABLE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.75	18X54	51-5307	1	.080

RECREATIONAL RS- SERIES

RS-054

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6873	1	.080

RS-117

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-7872	1	.080

51-2705 51-2706 L or R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.19	21X15	51-2705		.080
2.19	21X15	51-2706		.080

E5 - SERIES

E5-1a EXIT →

FOR USE AT "NO NUMBERED" EXITS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
30.00	72X60	51-6150	2	.125

E5-1a EXIT 00 → 51-6125 EXIT 00 → 51-6124

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
32.50	78X60		2	.125

E5-1a EXIT 00 B → 51-6127 EXIT 00 B → 51-6126

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
45.00	108X60		2	.125

E5-1a EXIT 00 A-B → 51-6129 EXIT 00 A-B → 51-6128

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
57.50	138X60		2	.125

I - SERIES

I-3 (Variable) River

VARIABLE: RIVER, BROOK, CREEK

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	18X12	51-2009	1	.080
4.50	36X18	51-2007	2	.080
12.00	48X36	51-2051	2	.100

(Town Name) (INCORPORATED OR SETTLED) (DATE) TOWN LINE

VARIABLE: TOWN / CITY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	40X27	51-2020	2	.080

I-7

LEGEND - BLACK
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-1448	1	.080
6.25	30X30	51-1445	1	.080
7.50	36X30	51-5937	2	.080

INCIDENT MANAGEMENT

N 0 .0 | N 0 0 .0 | N 0 0 0 .0

CARDINAL DIRECTION VARIABLE - N, S, E, W

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	12X36	51-5103	1	.080
4.00	12X48	51-5104	1	.080
5.00	12X60	51-5105	1	.080

SYMBOL - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	18X24	51-5943	1	.080

51-6504 Variable
51-6505 Variable Variable

TO BE SUBMOUNTED W/ 51-5943
LEGEND - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
0.75	18X6	51-6504		.080
1.50	18X12	51-6505		.080

M1 - SERIES

M1-1 INTERSTATE CONNECTICUT 00 — 51-6662 51-6666 VARIABLE: 1 or 2 DIGITS

INTERSTATE CONNECTICUT 000 — 51-6663 51-6667 VARIABLE: 3 DIGITS

LEGEND - WHITE
BACKGROUND - RED & BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.20	24X24	51-6662	1	.080
3.99	30X24	51-6663	1	.080
7.20	36X36	51-6666	2	.080
8.99	45X36	51-6667	2	.100

M1-4 00 — 51-6615 51-6635 VARIABLE: 1 or 2 DIGITS

000 — 51-6644 51-6645 VARIABLE: 3 DIGITS

LEGEND - BLACK
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6615	1	.080
5.00	30X24	51-6644	1	.080
9.00	36X36	51-6635	2	.080
11.25	45X36	51-6645	2	.100

M1-5 00 — 51-6616 51-6636 VARIABLE: 1 or 2 DIGITS

000 — 51-6647 51-6646 VARIABLE: 3 DIGITS

LEGEND - BLACK
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6616	1	.080
5.00	30X24	51-6647	1	.080
9.00	36X36	51-6636	2	.080
11.25	45X36	51-6646	2	.100

M2 - SERIES

M2-1 JCT

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-6640	(1)	.080
2.19	21X15	51-6610	(2)	.080

M3 - SERIES

M3-1 NORTH

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6651	(1)	.080
2.00	24X12	51-6611	(2)	.080
4.50	36X18	51-6655	(1)	.080
4.50	36X18	51-6625	(2)	.080

M3-2 EAST

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6652	(1)	.080
2.00	24X12	51-6612	(2)	.080
4.50	36X18	51-6656	(1)	.080
4.50	36X18	51-6626	(2)	.080

M3-3 SOUTH

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6653	(1)	.080
2.00	24X12	51-6613	(2)	.080
4.50	36X18	51-6657	(1)	.080
4.50	36X18	51-6627	(2)	.080

M3-4 WEST

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6654	(1)	.080
2.00	24X12	51-6614	(2)	.080
4.50	36X18	51-6658	(1)	.080
4.50	36X18	51-6628	(2)	.080

M4 - SERIES

M4-5 TO

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6650	(1)	.080
2.00	24X12	51-6620	(2)	.080

M5 - SERIES

M5-1 51-2690 51-2630 | 51-2691 51-2631

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2690	(1)	.080
2.19	21X15	51-2691	(1)	.080
2.19	21X15	51-2630	(2)	.080
2.19	21X15	51-2631	(2)	.080

M5-2 51-2692 51-2632 | 51-2693 51-2633

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2692	(1)	.080
2.19	21X15	51-2693	(1)	.080
2.19	21X15	51-2632	(2)	.080
2.19	21X15	51-2633	(2)	.080

M6 - SERIES

M6-1 → L or R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2686	(1)	.080
2.19	21X15	51-2626	(2)	.080

M6-2 51-2688 51-2629 | 51-2689 51-2628 51-2609

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2688	(1)	.080
2.19	21X15	51-2689	(1)	.080
2.19	21X15	51-2628	(2)	.080
2.19	21X15	51-2629	(2)	.080
4.38	30X21	51-2609	(2)	.080

M6-3 ↑

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2685	(1)	.080
2.19	21X15	51-2625	(2)	.080

M6-4 ↔

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2687	(1)	.080
2.19	21X15	51-2627	(2)	.080

NOTES:

1. FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
2. POSTS - SEE STANDARD SHEET TR-1208_02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
3. POSTS SHALL BE 4 LBS./FT.
4. SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.

COLORS:

D - SERIES
D1, 2, 3, 4, 10 BACKGROUND-GREEN, LEGEND-WHITE
D7, RS BACKGROUND-BROWN, LEGEND-WHITE
D9 BACKGROUND-BLUE, LEGEND-WHITE
ALL OTHER D-SERIES AS NOTED

E - SERIES
BACKGROUND-GREEN, LEGEND-WHITE

I - SERIES
BACKGROUND-GREEN, LEGEND-WHITE (EXCEPT AS NOTED)

M2 - M6 SERIES
(1) BACKGROUND-BLUE, LEGEND-WHITE
(2) BACKGROUND-WHITE, LEGEND-BLACK

ALL SIGNS TO USE TYPE XI RETROREFLECTIVE SHEETING WITH THE EXCEPTION OF SIDE MOUNTED SIGNS WITH WHITE BACKGROUND WHICH SHALL BE TYPE IX RETROREFLECTIVE SHEETING.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
4	10-2021	REVISED SHEETING TYPE	TR-GS_04
3	12-2018	REVISED D2, D3, D9, AND I SIGN SERIES.	TR-GS_03
2	7-2018	REVISED BROWN COLOR TO TYPE IV.	TR-GS_03
1	6-2018	NEW SHEET ISSUED	TR-GS_03

Plotted Date: 10/14/2021

DESIGNER/DRAFTER: A. MERMELSTEIN
CHECKED BY: B. SCHILLING
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\CTDOT_TRAFFIC_GS.dgn

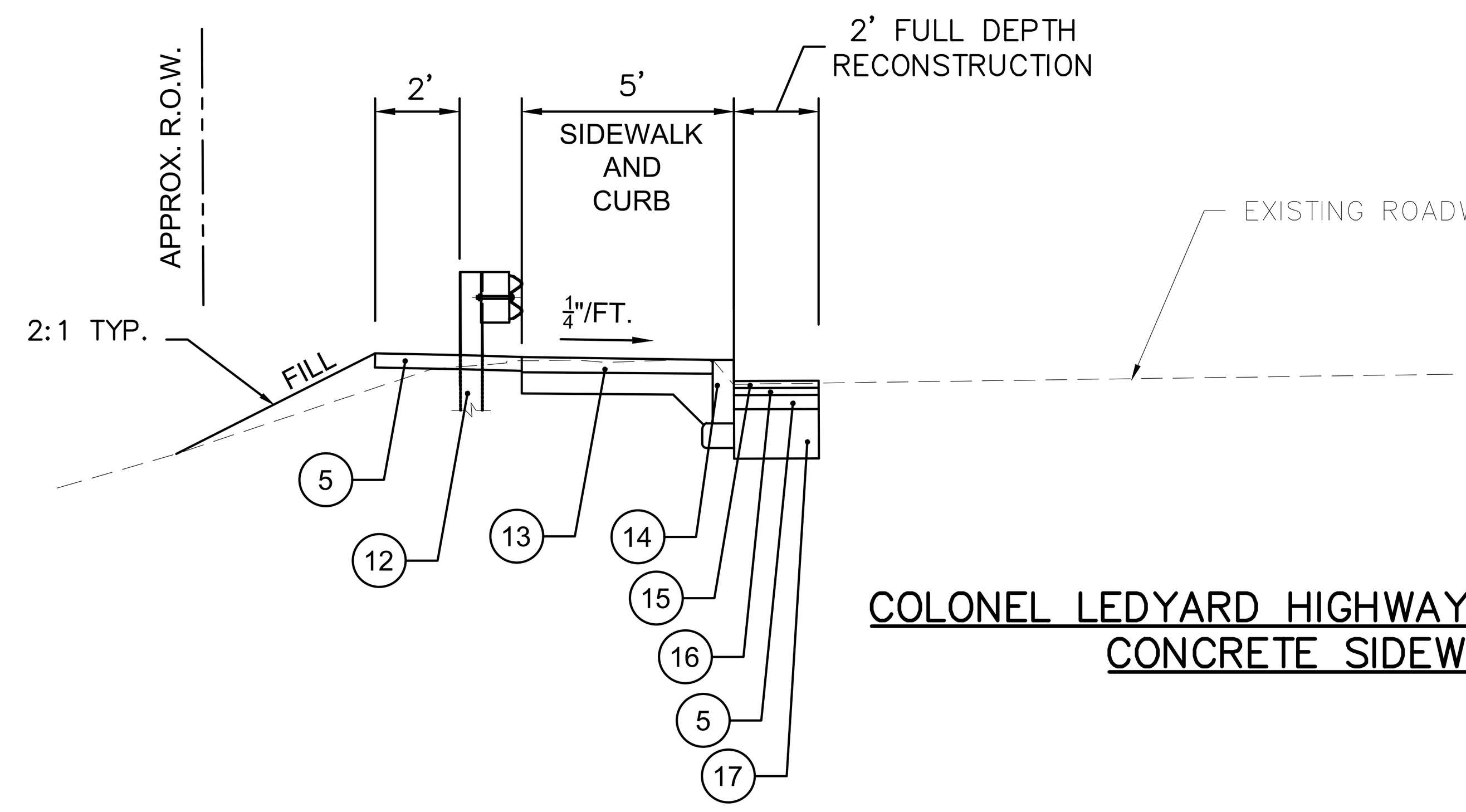
SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION

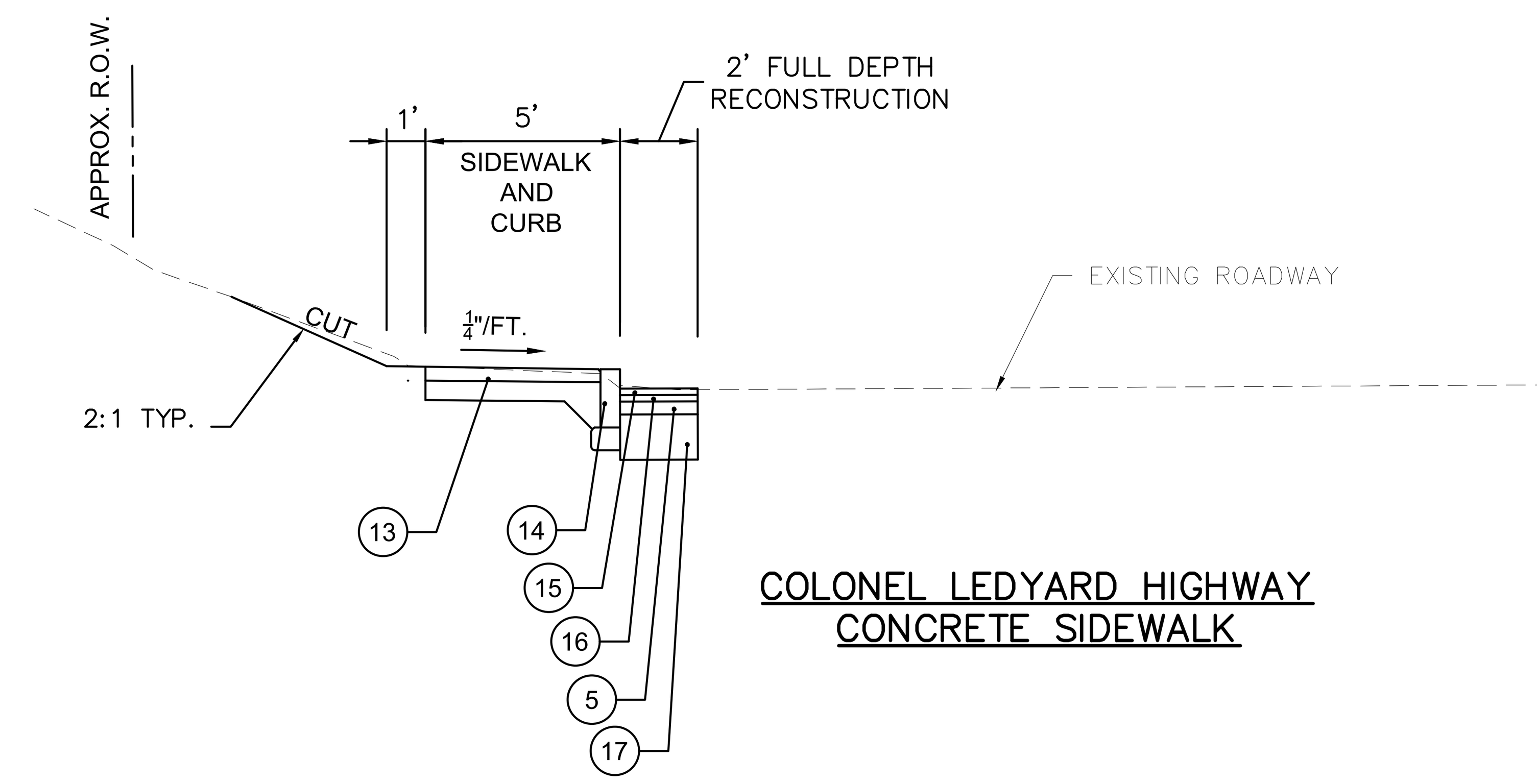
TOWN: LEDYARD

DRAWING TITLE:
SIGN FACE SHEET ALUMINUM (2)
D,RS,E,I,&M SERIES TYPICAL SIGN DETAILS

PROJECT NO. L171-0001
DRAWING NO. TR-GS_03
SHEET NO. DET-14

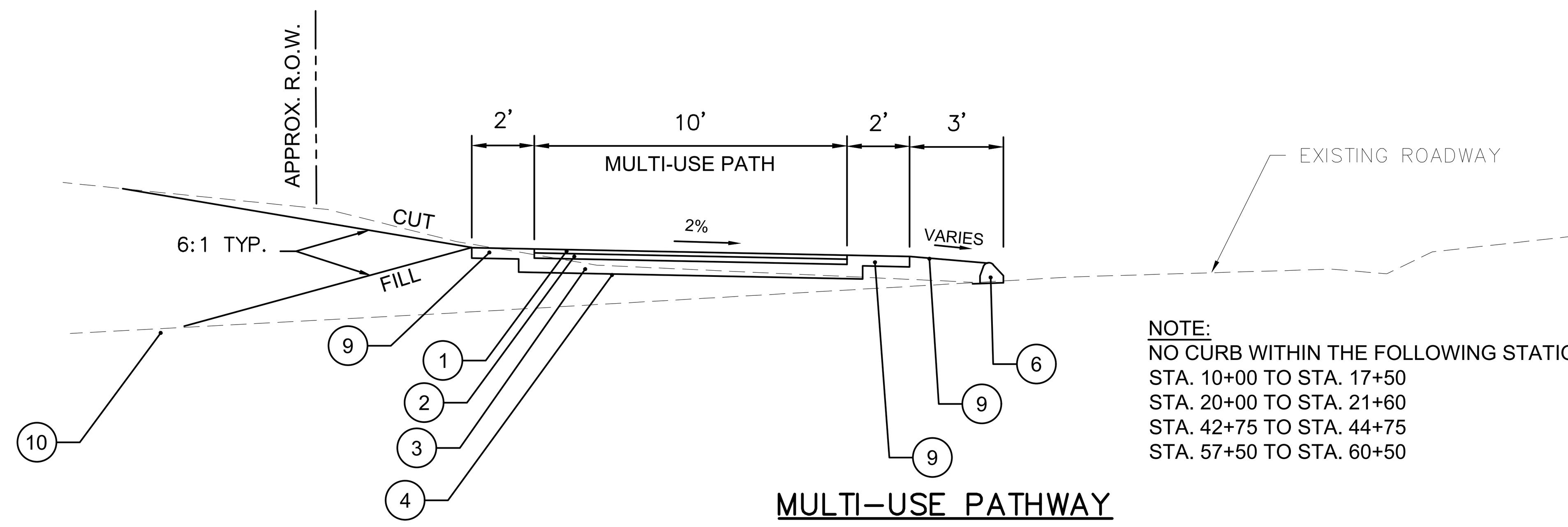


COLONEL LEDYARD HIGHWAY – ROUTE 117
CONCRETE SIDEWALK



COLONEL LEDYARD HIGHWAY
CONCRETE SIDEWALK

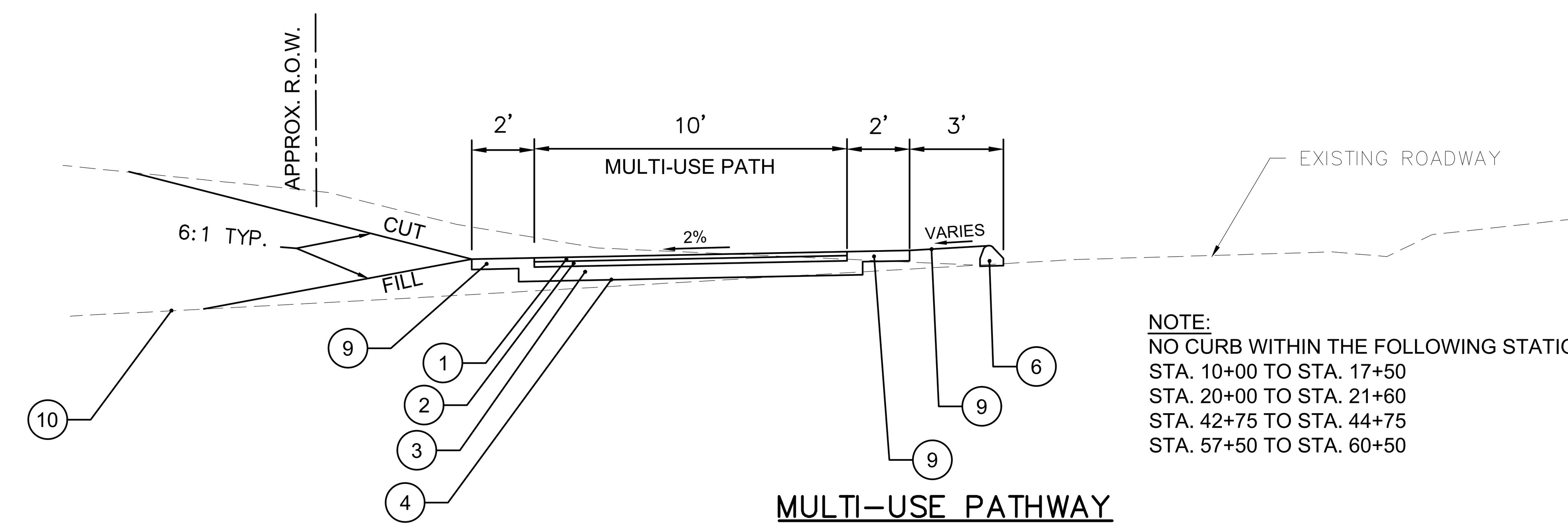
START – STA. 11+00
STA. 12+75 – STA. 13+25
STA. 17+70 – STA. 20+00
STA. 22+00 – STA. 24+50
STA. 31+00 – STA. 31+80
STA. 33+50 – STA. 37+50
STA. 40+50 – STA. 42+00
STA. 45+50 – STA. 47+50
STA. 61+00 – END



MULTI–USE PATHWAY

NOTE:
NO CURB WITHIN THE FOLLOWING STATION RANGES -
STA. 10+00 TO STA. 17+50
STA. 20+00 TO STA. 21+60
STA. 42+75 TO STA. 44+75
STA. 57+50 TO STA. 60+50

STA. 11+50 – STA. 12+50
STA. 13+50 – STA. 17+50
STA. 25+00 – STA. 30+50
STA. 32+00 – STA. 33+20
STA. 38+00 – STA. 40+00
STA. 42+50 – STA. 45+00
STA. 48+00 – STA. 51+65
STA. 56+50 – STA. 60+50



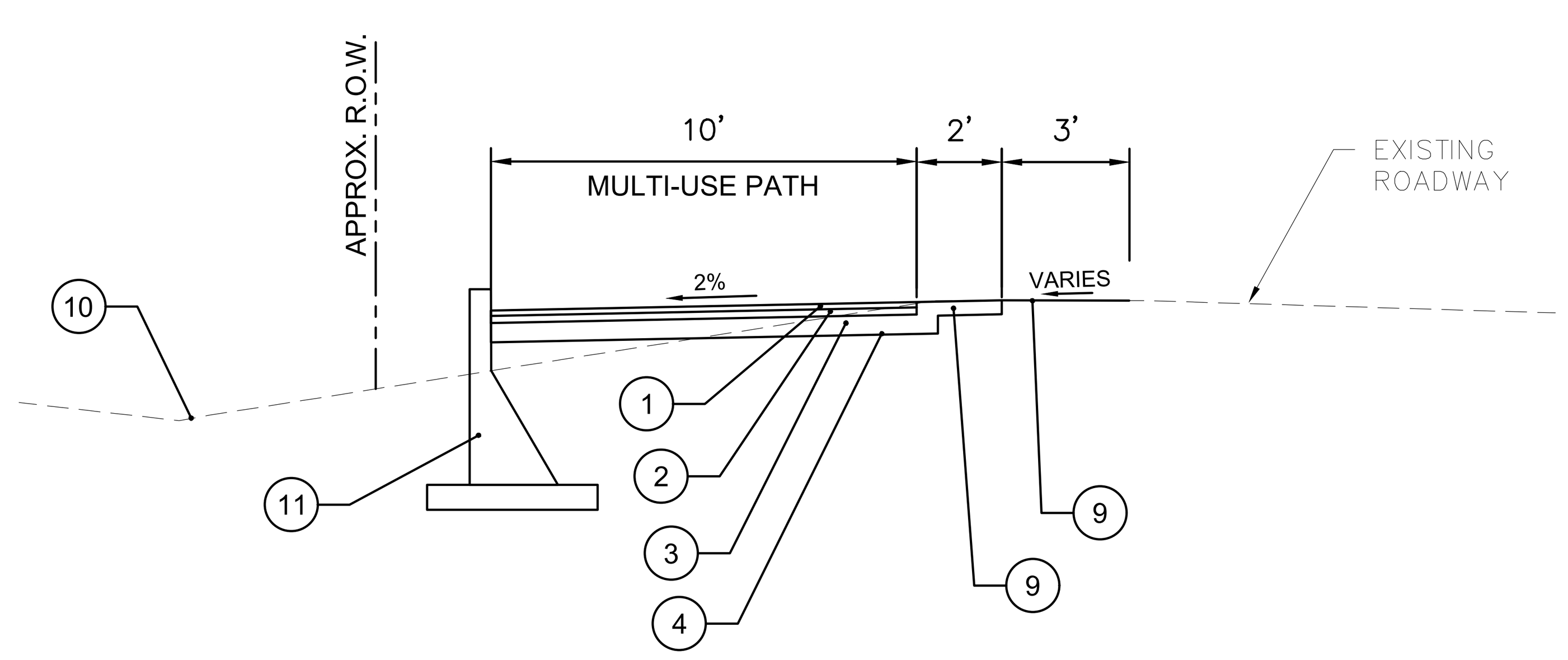
MULTI–USE PATHWAY

NOTE:
NO CURB WITHIN THE FOLLOWING STATION RANGES -
STA. 10+00 TO STA. 17+50
STA. 20+00 TO STA. 21+60
STA. 42+75 TO STA. 44+75
STA. 57+50 TO STA. 60+50

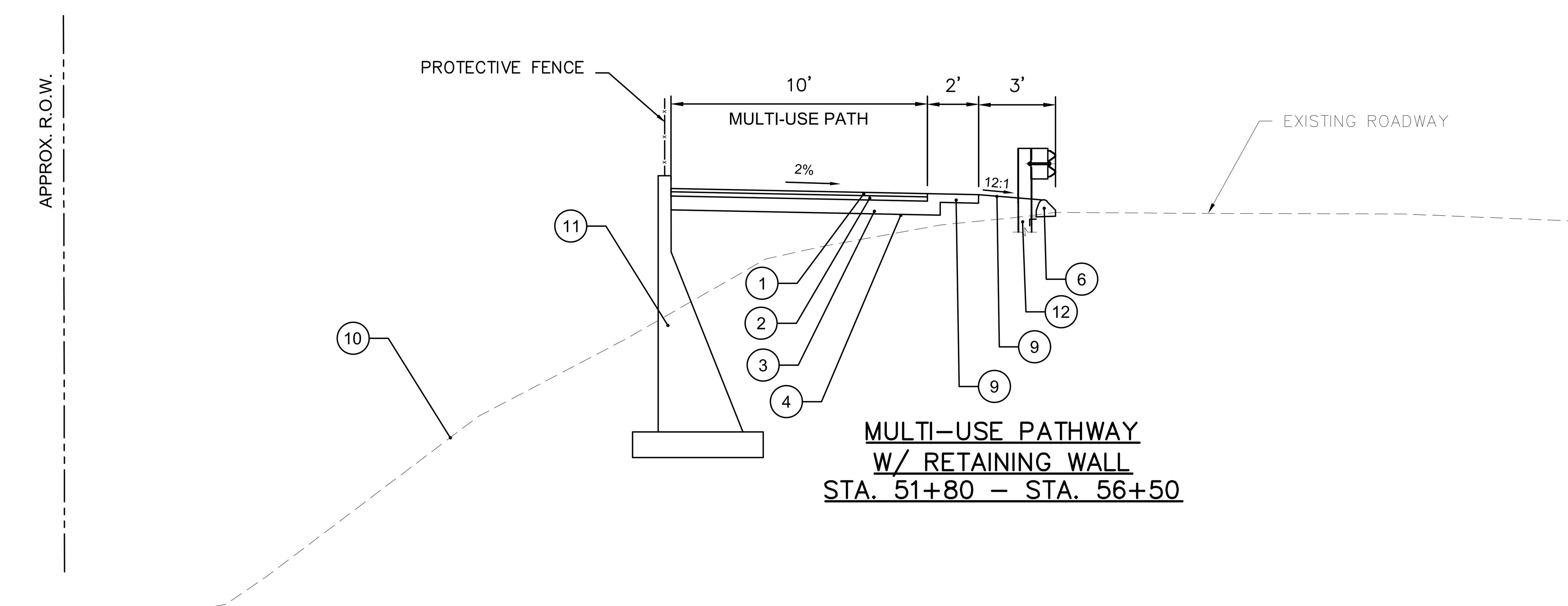
LEGEND

1 - 1.5" HMA S0.375
2 - 2" HMA S0.5
3 - 6" PROCESSED AGGREGATE BASE
4 - COMPACTED SUBGRADE
5 - 4" PROCESSED AGGREGATE BASE
6 - 6" BITUMINOUS CONCRETE LIP CURBING
7 - 6" CONCRETE CURBING
8 - CONCRETE SIDEWALK
9 - 4" TOPSOIL AND TURF ESTABLISHMENT
10 - EXISTING GRADE
11 - RETAINING WALL
12 - METAL BEAM RAIL (R-B MASH)
13 - CONCRETE SIDEWALK
14 - CONCRETE CURB
15 - 2" HMA S0.375
16 - 2" HMA S0.5
17 - 14" SUBBASE

NOTES:
1. ALL CUT OR FILL SLOPES TO BE 2:1 MAX, UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS OR APPROVED BY THE ENGINEER
2. CONTRACTOR TO TRANSITION CROSS SLOPE OF MULTI-USE PATHWAY AS NEEDED BETWEEN THE SPECIFIED STATION RANGES



MULTI–USE PATHWAY
W/ RETAINING WALL
STA. 20+20 – STA. 21+10



MULTI–USE PATHWAY
W/ RETAINING WALL
STA. 51+80 – STA. 56+50

TYPICAL SECTIONS
SCALE: 1"=4'
0 4' 8' 12'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

Weston & Sampson
Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06067
978.532.1900 800.SAMPSON
www.westonandsampson.com

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Reviewed By:	RC
Approved By:	MJJ
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W&S File No.:	

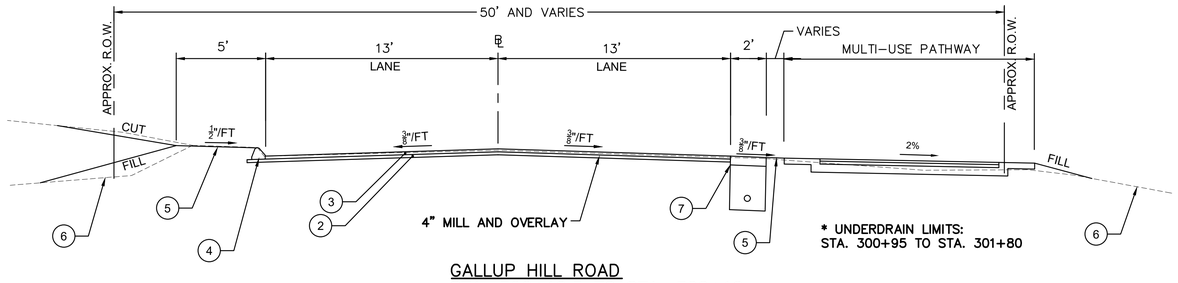
Drawing Title:

MULTI-USE PATHWAY AND SIDEWALK TYPICAL SECTIONS

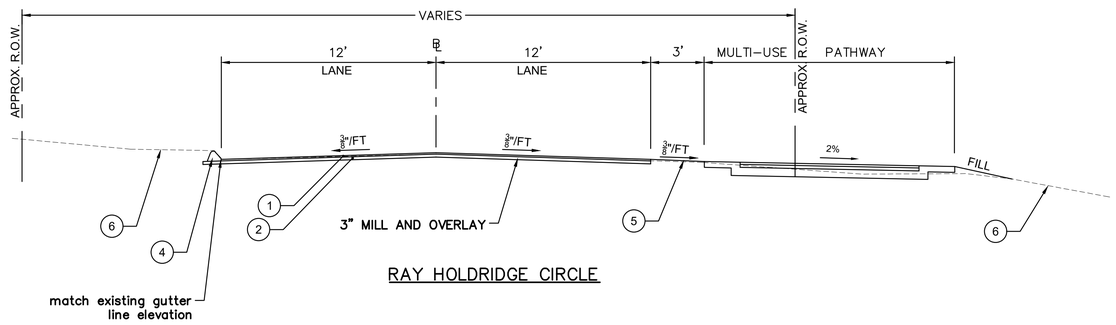
Sheet Number:

TYP-01

Rev. 1.6 Date: 04/10/2019



GALLUP HILL ROAD
STA. 300+16.5 TO STA. 302+10



RAY HOLDRIDGE CIRCLE

LEGEND

1. 1" HMA S0.375
2. 2" HMA S0.5
3. 2" HMA S0.375
4. 6" BITUMINOUS CONCRETE LIP CURBING
5. 4" TOPSOIL AND TURF ESTABLISHMENT
6. EXISTING GRADE
7. 6" CRUSHED STONE W/ 4" UNDERDRAIN *

NOTES:
1. ALL CUT OR FILL SLOPES TO BE 2:1 MAX, UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS OR APPROVED BY THE ENGINEER

TYPICAL SECTIONS
SCALE: 1"=4'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
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W&S File No.:	

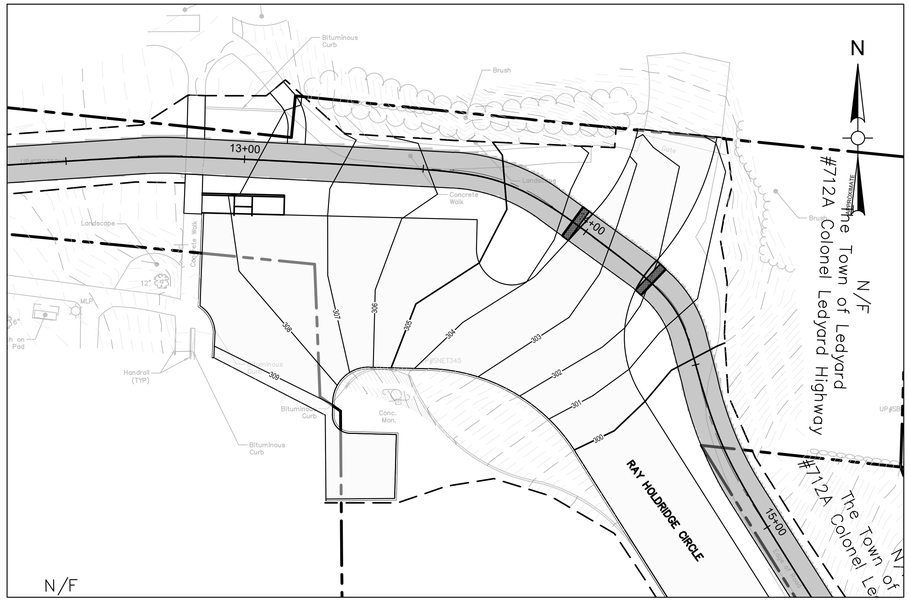
Drawing Title:

ROADWAY TYPICAL SECTIONS

Sheet Number:

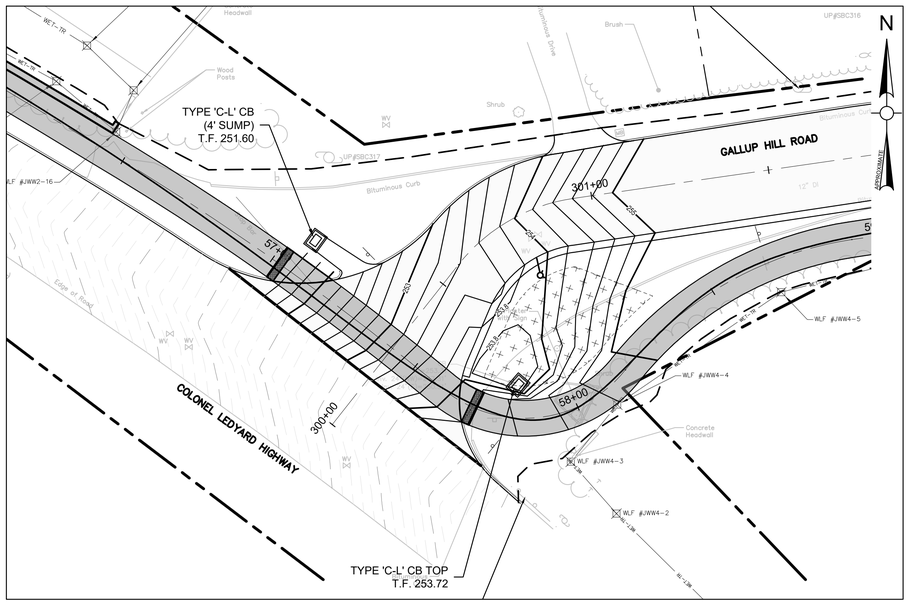
TYP-02

Rev.: 1.6 Date: 04/10/2019



PLAN
SCALE: 1"=20'
0 20' 40' 60'

RAY HOLDRIDGE CIRCLE



PLAN
SCALE: 1"=20'
0 20' 40' 60'

GALLUP HILL ROAD

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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L171-0001

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Drawing Title:

INTERSECTION
GRADING PLANS
RAY HOLDRIDGE CIR
GALLUP HILL RD

Sheet Number:

IGP-1

Rev. 1.0 Date: 04/10/2019

BEGIN PROJECT
COLONEL LEDYARD HIGHWAY
MULTI-USE PATHWAY
STA 10+00
N 722021.96
E 1201256.99

N/F
Ledyard Congregational Ecclesiastical Society
And The Ledyard Congregational Church
#722 Colonel Ledyard Highway
Ⓐ Ⓓ

LPS CLEANOUT MANHOLE
REMOVE TREE
BICYCLE STAND
36"X36" CONCRETE PAD FOR FUTURE BICYCLE REPAIR STATION (SEE SHEET DET-06)
KWANZAN CHERRY TREE (TYP.)
IMPRESSED PREFORMED THERMOPLASTIC PAVEMENT (SEE SHEET DET-06) (PAID FOR UNDER "DECORATIVE CROSSWALK")
TRAIL HEAD SIGN (DESIGN AND PLACEMENT TO BE COORDINATED WITH TOWN)
BENCH (TYP)
ORNAMENTAL LIGHT BOLLARD - SURFACE MOUNTED (SOLAR) (TYP.)
4" HDPE END CAP
10' WIDE MULTI-USE PATHWAY (TYP)
SLOPE LIMITS (TYP)
APPROX. R.O.W.
Benchmark "A"
Mag Nail in
Utility Pole
ELEV.=310.77'
CONCRETE SIDEWALK
REMOVE EXISTING CURB (PAID FOR UNDER EARTH EXCAVATION)
CONCRETE SIDEWALK
CONCRETE SIDEWALK RAMP - TYPE 9
REMOVE BIT CONC (TYP)
R=50.00
L=29.777
TAN=15.34
Δ=34°07'20"
REMOVE CONC WALK
DETECTABLE WARNING STRIP (TYP.) (CONCRETE PAID FOR UNDER "CONCRETE SIDEWALK RAMP")
SEDIMENTATION CONTROL SYSTEM (TYP.)
R=51.20
L=18.032
TAN=9.11
Δ=20°10'42"
REMOVE TREE (2)
R=650.00
L=74.299
TAN=37.19
Δ=6°32'57"
R=100.00
L=36.951
TAN=18.69
Δ=21°10'16"
REMOVE TREE
CONCRETE SIDEWALK
REMOVE CONC WALK
4" HDPE LPS (TYP. 5' BELOW PROPOSED GRADE)
R=100.00
L=12.047
TAN=6.03
Δ=6°54'09"
CONCRETE SIDEWALK
SAWCUT BIT. CONC. PAVEMENT
R=30.00
L=20.119
TAN=10.45
Δ=38°25'30"
N/F
The Town of Ledyard
Colonel Ledyard Highway
#712A
RELOCATE HYDRANT
PROPOSED HYDRANT LOCATION
INSTALL LPS BELOW EXISTING 15" RCP
R = 30'
4" HDPE END CAP
ADJUST GATE BOX
R=100.00
L=35.192
TAN=17.78
Δ=20°09'49"
RESET EXISTING "CONGREGATIONAL CHURCH" SIGN
RELOCATE EXISTING "PUBLIC LIBRARY" SIGN (COORDINATE WITH TOWN FOR LOCATION)
LPS JUNCTION MANHOLE
SIGN 51-2010
"RAY HOLDRIDGE CIR"
RAY HOLDRIDGE CIRCLE
REMOVE BIT CONC (TYP)
BIT CONC CURB (TYP.) (UNLESS NOTED OTHERWISE)
3" MILL & OVERLAY (TYP.) (SEE SHEET TYP-02)
TYPE 'C' CB TOP
R = 30'
SIGN 31-0553 "STOP"
12" EPOXY RESIN PAVEMENT MARKINGS (TYP.)
END CONC CURB
BEGIN BIT CONC CURB
SIDEWALK RAMP (TYPE 10)
CONC CURB (TYP)
R=25.00
L=37.858
TAN=23.63
Δ=86°45'53"
SIDEWALK RAMP (TYPE 16)
LIMIT OF MILL & OVERLAY SAWCUT BIT. CONC. PAVEMENT
INSTALL LPS ABOVE EXISTING 15" RCP
MATCHLINE C-C
(SEE DRAWING HWY-3)
MATCHLINE B-B
(SEE DRAWING HWY-2)
COLONEL LEDYARD HIGHWAY
APPROX. R.O.W.

TIE-IN TO EXISTING CONCRETE SIDEWALK
SIGN 51-5202 (2)
ARROW STRAIGHT "GROTON"
ARROW LEFT "COLONEL LEDYARD HWY."
4" WHITE EPOXY RESIN PAVEMENT MARKING (TYP.)
SAWCUT BIT. CONC. PAVEMENT (TYP.)
CONC WALK (TYP)
5' WIDE
TYPE 'C' CB TOP
RESET HANDHOLE
BIT. CONC. DRIVEWAY
APPROX. R.O.W.
COLONEL LEDYARD HIGHWAY
(ROUTE 117)
R-B END ANCHORAGE - TYPE I
SEDIMENTATION CONTROL SYSTEM (TYP.)
METAL BEAM RAIL (R-B MASH)
CONC CURB (TYP)
MATCHLINE A-A
(SEE DRAWING HWY-2)

N/F
Valpol Realty, LLC.
#723 Colonel Ledyard Highway

N/F
Briane R. And
Bernardine R. Bennet
#719 Colonel Ledyard Highway

N/F
Bill Library Association
#718 Colonel Ledyard Highway
Ⓑ

N

SCHEDULE OF RIGHTS AND EASEMENTS

Ⓐ	RIGHT TO GRADE REQUIRED
Ⓑ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) DRIVEWAY REQUIRED
Ⓒ	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
Ⓓ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED

PLAN
SCALE: 1"=20'
0 20' 40' 60'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY & SIDEWALK EXTENSION
L171-0001

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Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

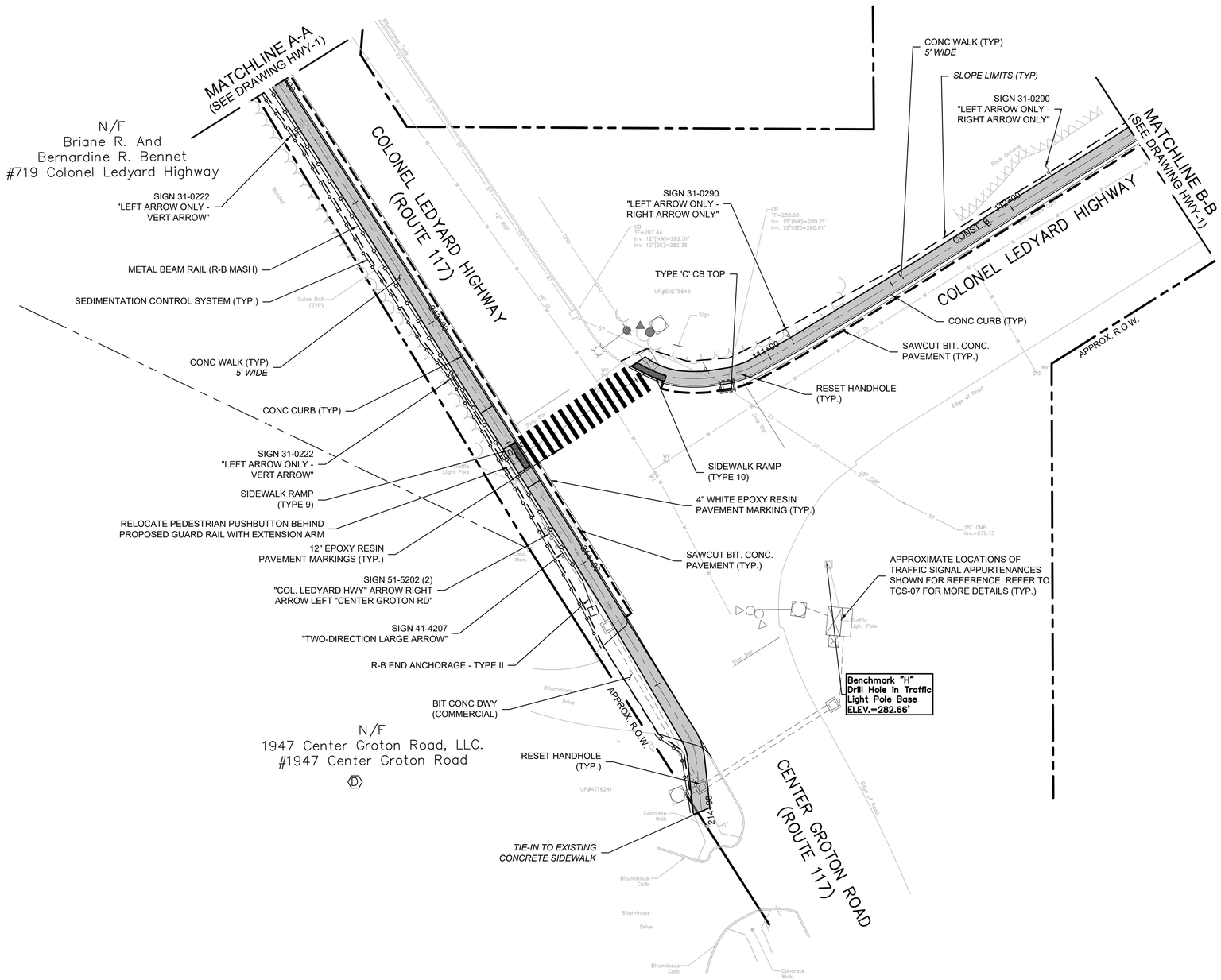
Drawing Title:

MULTI-USE PATHWAY & SIDEWALK PLAN
STA. 10+00 TO 16+50

Sheet Number:

HWY-1

Rev. 1.8 Date: 04/10/2019



PLAN
SCALE: 1"=20'
0 20' 40' 60'

SCHEDULE OF RIGHTS AND EASEMENTS	
A	RIGHT TO GRADE REQUIRED
B	RIGHT TO CONSTRUCT (OR RECONSTRUCT) DRIVEWAY REQUIRED
C	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
D	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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L171-0001

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W&S File No.:	

Drawing Title:

MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 211+50 TO 214+96
STA. 110+00 TO 112+50

Sheet Number:

HWY-2

Rev. 1.8 Date: 04/10/2019

N/F
David C. and Keli D. Levine
#712 Colonel Ledyard Highway

N/F
David C. and Keli D. Levine
#712 Colonel Ledyard Highway
Ⓐ Ⓑ Ⓒ

N/F
David C. and Keli D. Levine
#712 Colonel Ledyard Highway

N/F
Covenant Presbytarian Church
#1 Fairway Drive Ⓐ Ⓑ Ⓒ

N/F
A Spicer Cemete
#702 Colonel Ledyard
Ⓐ

N/F
Sandra L. Reynolds
#10 Wolf Ridge Gap

N/F
Carol S. And
Daniel G. Torgersen
#8 Wolf Ridge Gap

APPROX. R.O.W.

TOWN GREEN DRIVEWAY

COLONEL LEDYARD HIGHWAY

CUT BIT CONC PAVEMENT

SIGN 31-0553 "STOP"

CONVERT CB TO MH
STA:19+71.9 OFF:-1.3 LT
TF:297.49
INV IN:294.14 15" RCP
INV IN:294.38 15" RCP
INV OUT:293.53 18" RCP

SIGN 41-0835 "SIGNAL AHEAD"

SEDIMENTATION CONTROL SYSTEM (TYP.)

4" HDPE LPS (TYP. 5' BELOW PROPOSED GRADE)

BIT CONC CURB (TYP.)

BIT CONC DWY (COMMERCIAL)

INSTALL LPS BELOW EXISTING WATER SERVICE LINE (TYP)

ADJUST GATE BOX

END BIT CONC CURB
STA. 19+58

REMOVE EXISTING SIGN

DETECTABLE WARNING STRIP (TYP.)
(CONCRETE PAID FOR UNDER
"CONCRETE SIDEWALK RAMP")

BEGIN BIT CONC CURB
STA. 17+50

MATCHLINE C-C
(SEE DRAWING HWY-1)

INSTALL LPS BELOW
EXISTING 15" RCP

4"X3" HDPE LPS REDUCER.
MIN. 5' STUB WITH 3" HDPE
END CAP

VARIABLE DEPTH OF BIT CONC INSTALLED
AS LEVELING COURSE (MAX. 2" LIFT)
(PAID FOR UNDER "HMA S0.375")

INSTALL LPS BELOW EXISTING
WATER LINE

12" EPOXY RESIN PAVEMENT
MARKINGS

RELOCATE HYDRANT

LPS JUNCTION MANHOLE.

EDGE OF PAVEMENT

BEGIN BIT CONC CURB
STA. 21+61

SLOPE LIMITS (TYP)

RETAINING WALL - SITE NO. 1
(SEE SHEET S-1)

ADJUST GATE BOX

10' WIDE MULTI-USE PATHWAY (TYP)

MATCHLINE D-D
(SEE DRAWING HWY-4)

Benchmark "B"
Mag Nail In
Utility Pole
ELEV.=295.29'

CB
TF=285.25
Inv. 15"(SE)=281.95'
Inv. 15"(N)=282.05'
Inv. 15"(SW)=282.25

CB
TF=297.23
Inv. 18"(NW)=293.53'
Inv. 15"(SE)=293.56'
Inv. 15"(NE)=293.63'

15" RCP
Inv.=292.789

WLF #JWW1-21
WLF #JWW1-22
WLF #JWW1-23
WLF #JWW1-24
WLF #JWW1-25
WLF #JWW1-26
WLF #JWW1-27
WLF #JWW1-28

17+00
18+00
19+00
21+00
22+00
CONST. B

SCHEDULE OF RIGHTS AND EASEMENTS

Ⓐ	RIGHT TO GRADE REQUIRED
Ⓑ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) DRIVEWAY REQUIRED
Ⓒ	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
Ⓓ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED

PLAN
SCALE: 1"=20'
0 20' 40' 60'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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LEDYARD, CT 06339

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W&S File No.:	

Drawing Title:

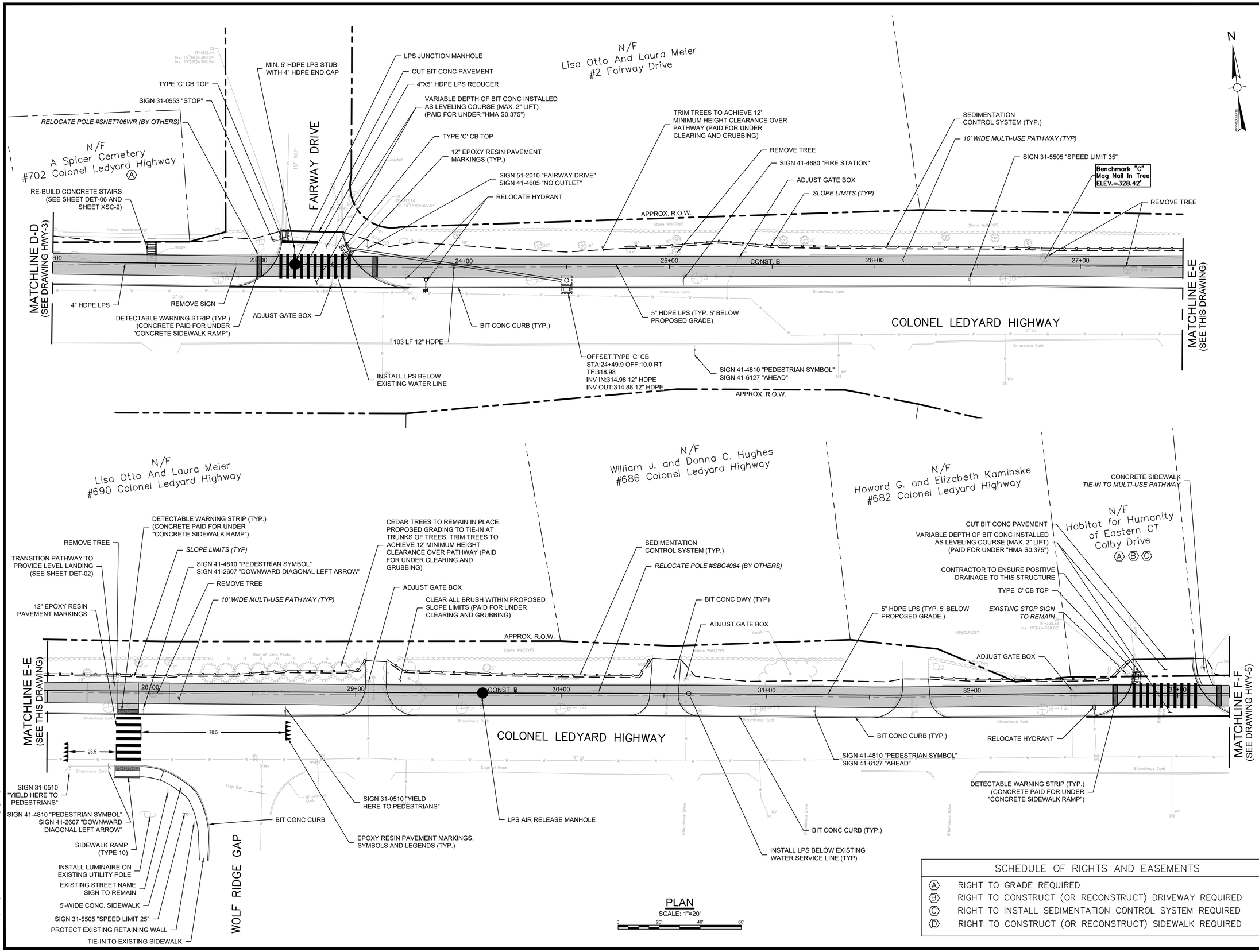
MULTI-USE PATHWAY & SIDEWALK PLAN STA. 16+50 TO 22+00

Sheet Number:

HWY-3

Rev. 1.0 Date: 04/10/2019

\\wes013cifs\WSProjects\CT\Ledyard CT\ENG20-1119 LOTCIP Multi-Use Trail 2020\CAD\LEDYARD_MUT_HWY.dwg



PLAN
SCALE: 1"=20'
0 20' 40' 60'

SCHEDULE OF RIGHTS AND EASEMENTS

Ⓐ	RIGHT TO GRADE REQUIRED
Ⓑ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) DRIVEWAY REQUIRED
Ⓒ	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
Ⓓ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED

Project:
TOWN OF LEDYARD, CT

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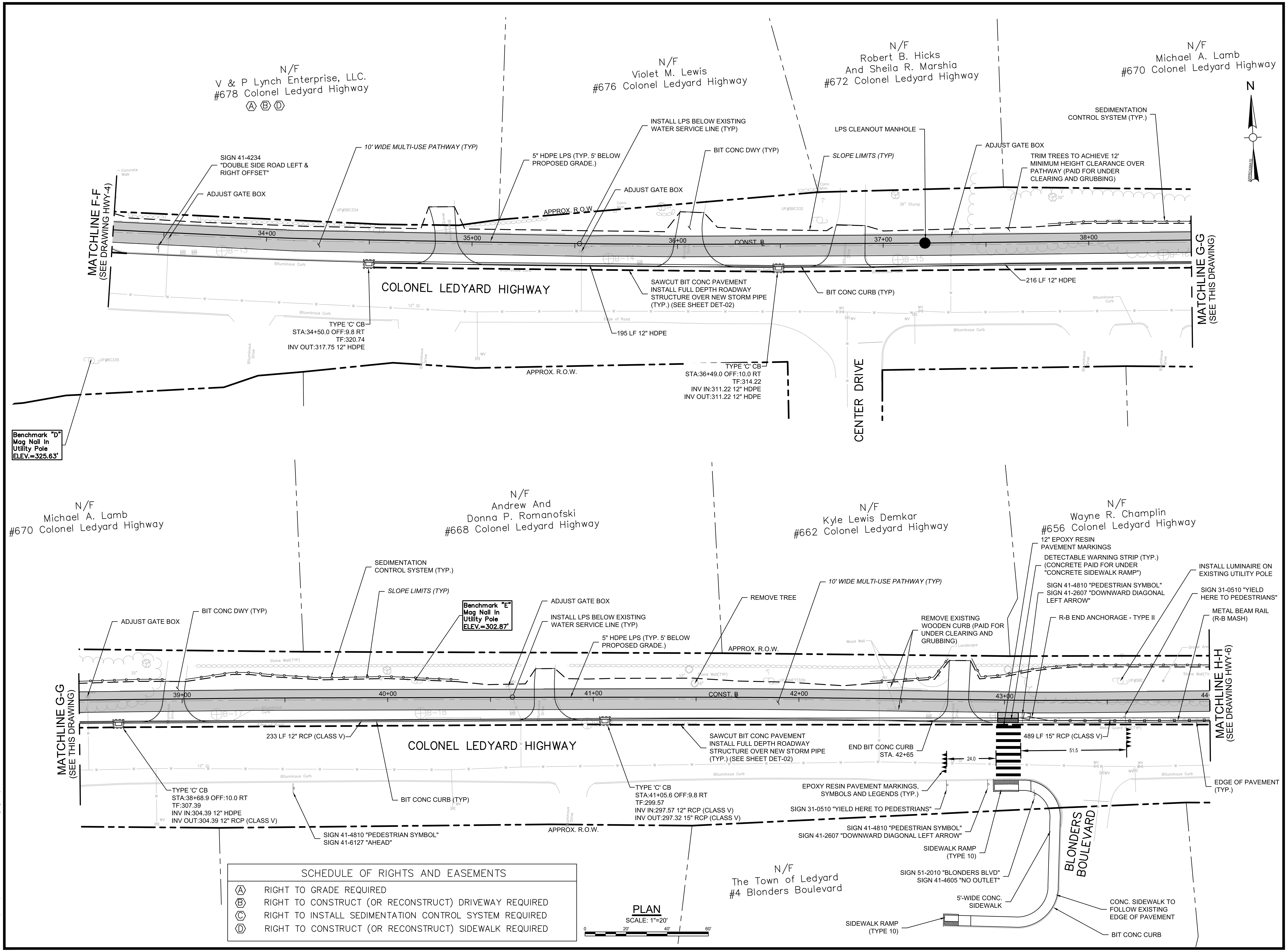
Drawing Title:

MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 22+00 TO 33+25

Sheet Number:

HWY-4

Rev: 1.6 Date: 04/10/2019


N/F
V & P Lynch Enterprise, LLC.
#678 Colonel Ledyard Highway
A B D
N/F
Violet M. Lewis
#676 Colonel Ledyard Highway
N/F
Robert B. Hicks
And Sheila R. Marshia
#672 Colonel Ledyard Highway
N/F
Michael A. Lamb
#670 Colonel Ledyard Highway
N
INSTALL LPS BELOW EXISTING WATER SERVICE LINE (TYP)
LPS CLEANOUT MANHOLE
SEDIMENTATION CONTROL SYSTEM (TYP.)
10' WIDE MULTI-USE PATHWAY (TYP)
BIT CONC DWY (TYP)
SLOPE LIMITS (TYP)
ADJUST GATE BOX
SIGN 41-4234 "DOUBLE SIDE ROAD LEFT & RIGHT OFFSET"
5" HDPE LPS (TYP. 5' BELOW PROPOSED GRADE.)
TRIM TREES TO ACHIEVE 12' MINIMUM HEIGHT CLEARANCE OVER PATHWAY (PAID FOR UNDER CLEARING AND GRUBBING)
ADJUST GATE BOX
ADJUST GATE BOX
MATCHLINE F-F (SEE DRAWING HWY-4)
APPROX. R.O.W.
34+00
35+00
36+00
CONST. B
37+00
38+00
MATCHLINE G-G (SEE THIS DRAWING)
COLONEL LEDYARD HIGHWAY
SAWCUT BIT CONC PAVEMENT INSTALL FULL DEPTH ROADWAY STRUCTURE OVER NEW STORM PIPE (TYP.) (SEE SHEET DET-02)
BIT CONC CURB (TYP)
216 LF 12" HDPE
TYPE 'C' CB STA:34+50.0 OFF:9.8 RT TF:320.74 INV OUT:317.75 12" HDPE
195 LF 12" HDPE
TYPE 'C' CB STA:36+49.0 OFF:10.0 RT TF:314.22 INV IN:311.22 12" HDPE INV OUT:311.22 12" HDPE
APPROX. R.O.W.
CENTER DRIVE
Benchmark "D" Mag Nail In Utility Pole ELEV.=325.63'
N/F
Michael A. Lamb
#670 Colonel Ledyard Highway
N/F
Andrew And
Donna P. Romanofski
#668 Colonel Ledyard Highway
N/F
Kyle Lewis Demkar
#662 Colonel Ledyard Highway
N/F
Wayne R. Champlin
#656 Colonel Ledyard Highway
12" EPOXY RESIN PAVEMENT MARKINGS
DETECTABLE WARNING STRIP (TYP.) (CONCRETE PAID FOR UNDER "CONCRETE SIDEWALK RAMP")
SIGN 41-4810 "PEDESTRIAN SYMBOL" SIGN 41-2607 "DOWNWARD DIAGONAL LEFT ARROW"
INSTALL LUMINAIRE ON EXISTING UTILITY POLE
SIGN 31-0510 "YIELD HERE TO PEDESTRIANS"
METAL BEAM RAIL (R-B MASH)
R-B END ANCHORAGE - TYPE II
SEDIMENTATION CONTROL SYSTEM (TYP.)
SLOPE LIMITS (TYP)
10' WIDE MULTI-USE PATHWAY (TYP)
ADJUST GATE BOX
BIT CONC DWY (TYP)
ADJUST GATE BOX
INSTALL LPS BELOW EXISTING WATER SERVICE LINE (TYP)
5" HDPE LPS (TYP. 5' BELOW PROPOSED GRADE.)
REMOVE TREE
REMOVE EXISTING WOODEN CURB (PAID FOR UNDER CLEARING AND GRUBBING)
Benchmark "E" Mag Nail In Utility Pole ELEV.=302.87'
APPROX. R.O.W.
MATCHLINE G-G (SEE THIS DRAWING)
39+00
40+00
41+00
CONST. B
42+00
43+00
44+
MATCHLINE H-H (SEE DRAWING HWY-6)
233 LF 12" RCP (CLASS V)
COLONEL LEDYARD HIGHWAY
SAWCUT BIT CONC PAVEMENT INSTALL FULL DEPTH ROADWAY STRUCTURE OVER NEW STORM PIPE (TYP.) (SEE SHEET DET-02)
END BIT CONC CURB STA. 42+65
489 LF 15" RCP (CLASS V)
24.0
51.5
TYPE 'C' CB STA:38+68.9 OFF:10.0 RT TF:307.39 INV IN:304.39 12" HDPE INV OUT:304.39 12" RCP (CLASS V)
BIT CONC CURB (TYP)
TYPE 'C' CB STA:41+05.6 OFF:9.8 RT TF:299.57 INV IN:297.57 12" RCP (CLASS V) INV OUT:297.32 15" RCP (CLASS V)
EPOXY RESIN PAVEMENT MARKINGS, SYMBOLS AND LEGENDS (TYP.)
SIGN 31-0510 "YIELD HERE TO PEDESTRIANS"
EDGE OF PAVEMENT (TYP.)
SIGN 41-4810 "PEDESTRIAN SYMBOL" SIGN 41-6127 "AHEAD"
APPROX. R.O.W.
SIGN 41-4810 "PEDESTRIAN SYMBOL" SIGN 41-2607 "DOWNWARD DIAGONAL LEFT ARROW"
SIDEWALK RAMP (TYPE 10)
BLONDERS BOULEVARD
SIGN 51-2010 "BLONDERS BLVD" SIGN 41-4605 "NO OUTLET"
N/F
The Town of Ledyard
#4 Blonders Boulevard
5'-WIDE CONC. SIDEWALK
CONC. SIDEWALK TO FOLLOW EXISTING EDGE OF PAVEMENT
SIDEWALK RAMP (TYPE 10)
BIT CONC CURB
PLAN
SCALE: 1"=20'
0 20' 40' 60'

SCHEDULE OF RIGHTS AND EASEMENTS

Ⓐ	RIGHT TO GRADE REQUIRED
Ⓑ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) DRIVEWAY REQUIRED
Ⓒ	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
Ⓓ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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L171-0001

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Date:	MAY 2023
Drawn By:	NSD
Reviewed By:	RC
Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

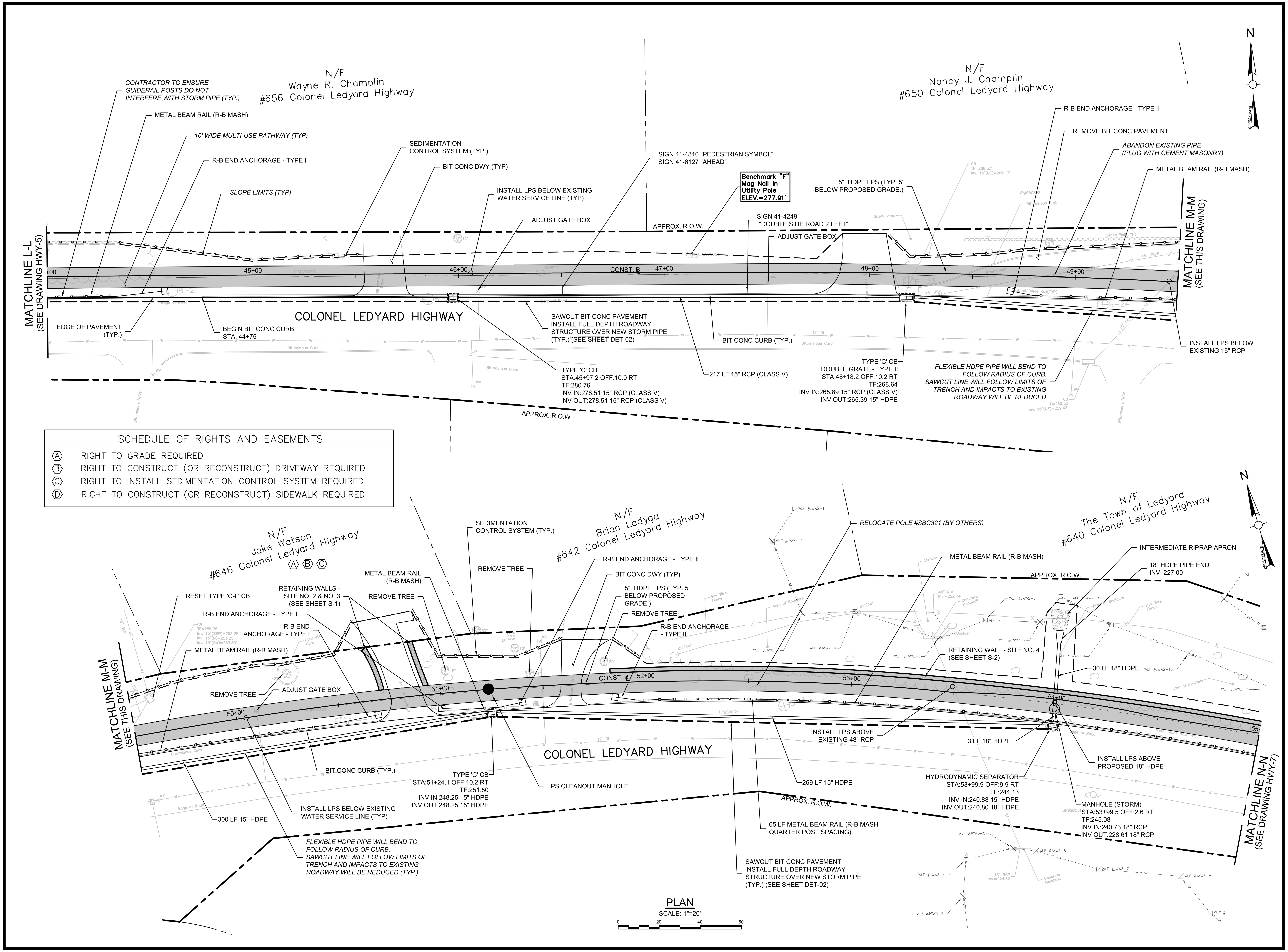
Drawing Title:

MULTI-USE PATHWAY & SIDEWALK PLAN STA. 33+25 TO 44+00

Sheet Number:

HWY-5

Rev. 1.6 Date: 04/10/2019


N/F
Wayne R. Champlin
#656 Colonel Ledyard Highway
N/F
Nancy J. Champlin
#650 Colonel Ledyard Highway
CONTRACTOR TO ENSURE GUIDERAIL POSTS DO NOT INTERFERE WITH STORM PIPE (TYP.)
METAL BEAM RAIL (R-B MASH)
10' WIDE MULTI-USE PATHWAY (TYP)
R-B END ANCHORAGE - TYPE I
SLOPE LIMITS (TYP)
SEDIMENTATION CONTROL SYSTEM (TYP.)
BIT CONC DWY (TYP)
INSTALL LPS BELOW EXISTING WATER SERVICE LINE (TYP)
ADJUST GATE BOX
SIGN 41-4810 "PEDESTRIAN SYMBOL"
SIGN 41-6127 "AHEAD"
Benchmark "F"
Mag Nail In
Utility Pole
ELEV.=277.91'
SIGN 41-4249
"DOUBLE SIDE ROAD 2 LEFT"
ADJUST GATE BOX
5" HDPE LPS (TYP. 5' BELOW PROPOSED GRADE.)
R-B END ANCHORAGE - TYPE II
REMOVE BIT CONC PAVEMENT
ABANDON EXISTING PIPE (PLUG WITH CEMENT MASONRY)
METAL BEAM RAIL (R-B MASH)
APPROX. R.O.W.
MATCHLINE L-L (SEE DRAWING HWY-5)
MATCHLINE M-M (SEE THIS DRAWING)
45+00
46+00
CONST. B
47+00
48+00
49+00
COLONEL LEDYARD HIGHWAY
EDGE OF PAVEMENT (TYP.)
BEGIN BIT CONC CURB STA. 44+75
SAWCUT BIT CONC PAVEMENT INSTALL FULL DEPTH ROADWAY STRUCTURE OVER NEW STORM PIPE (TYP.) (SEE SHEET DET-02)
BIT CONC CURB (TYP.)
INSTALL LPS BELOW EXISTING 15" RCP
TYPE 'C' CB
STA:45+97.2 OFF:10.0 RT
TF:280.76
INV IN:278.51 15" RCP (CLASS V)
INV OUT:278.51 15" RCP (CLASS V)
217 LF 15" RCP (CLASS V)
TYPE 'C' CB
DOUBLE GRATE - TYPE II
STA:48+18.2 OFF:10.2 RT
TF:268.64
INV IN:265.89 15" RCP (CLASS V)
INV OUT:265.39 15" HDPE
FLEXIBLE HDPE PIPE WILL BEND TO FOLLOW RADIUS OF CURB. SAWCUT LINE WILL FOLLOW LIMITS OF TRENCH AND IMPACTS TO EXISTING ROADWAY WILL BE REDUCED
APPROX. R.O.W.
N/F
Jake Watson
#646 Colonel Ledyard Highway
Ⓐ Ⓑ Ⓒ
N/F
Brian Ladyga
#642 Colonel Ledyard Highway
N/F
The Town of Ledyard
#640 Colonel Ledyard Highway
SEDIMENTATION CONTROL SYSTEM (TYP.)
REMOVE TREE
METAL BEAM RAIL (R-B MASH)
RETAINING WALLS - SITE NO. 2 & NO. 3 (SEE SHEET S-1)
REMOVE TREE
RESET TYPE 'C-L' CB
R-B END ANCHORAGE - TYPE II
R-B END ANCHORAGE - TYPE I
METAL BEAM RAIL (R-B MASH)
REMOVE TREE
ADJUST GATE BOX
R-B END ANCHORAGE - TYPE II
BIT CONC DWY (TYP)
5" HDPE LPS (TYP. 5' BELOW PROPOSED GRADE.)
REMOVE TREE
R-B END ANCHORAGE - TYPE II
RELOCATE POLE #SBC321 (BY OTHERS)
METAL BEAM RAIL (R-B MASH)
APPROX. R.O.W.
INTERMEDIATE RIPRAP APRON
18" HDPE PIPE END
INV. 227.00
RETAINING WALL - SITE NO. 4 (SEE SHEET S-2)
30 LF 18" HDPE
MATCHLINE M-M (SEE THIS DRAWING)
50+00
51+00
CONST. B
52+00
53+00
54+00
55+
COLONEL LEDYARD HIGHWAY
BIT CONC CURB (TYP.)
INSTALL LPS ABOVE EXISTING 48" RCP
3 LF 18" HDPE
INSTALL LPS ABOVE PROPOSED 18" HDPE
TYPE 'C' CB
STA:51+24.1 OFF:10.2 RT
TF:251.50
INV IN:248.25 15" HDPE
INV OUT:248.25 15" HDPE
LPS CLEANOUT MANHOLE
269 LF 15" HDPE
HYDRODYNAMIC SEPARATOR
STA:53+99.9 OFF:9.9 RT
TF:244.13
INV IN:240.88 15" HDPE
INV OUT:240.80 18" HDPE
MANHOLE (STORM)
STA:53+99.5 OFF:2.6 RT
TF:245.08
INV IN:240.73 18" RCP
INV OUT:228.61 18" RCP
MATCHLINE N-N (SEE DRAWING HWY-7)
APPROX. R.O.W.
300 LF 15" HDPE
INSTALL LPS BELOW EXISTING WATER SERVICE LINE (TYP)
65 LF METAL BEAM RAIL (R-B MASH QUARTER POST SPACING)
FLEXIBLE HDPE PIPE WILL BEND TO FOLLOW RADIUS OF CURB. SAWCUT LINE WILL FOLLOW LIMITS OF TRENCH AND IMPACTS TO EXISTING ROADWAY WILL BE REDUCED (TYP.)
SAWCUT BIT CONC PAVEMENT INSTALL FULL DEPTH ROADWAY STRUCTURE OVER NEW STORM PIPE (TYP.) (SEE SHEET DET-02)
N
N
PLAN
SCALE: 1"=20'
0 20' 40' 60'

SCHEDULE OF RIGHTS AND EASEMENTS	
Ⓐ	RIGHT TO GRADE REQUIRED
Ⓑ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) DRIVEWAY REQUIRED
Ⓒ	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
Ⓓ	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY & SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

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Drawing Title:

MULTI-USE PATHWAY & SIDEWALK PLAN
STA. 44+00 TO 55+00

Sheet Number:

HWY-6

Rev. 1.6 Date: 04/10/2019

MATCHLINE Q-O
(SEE DRAWING HWY-6)

SIGN 31-5505
"SPEED LIMIT 35"

R-B END ANCHORAGE
- TYPE I

RETAINING WALL - SITE NO. 4
(SEE SHEET S-2)

APPROX. 120 S.F. WETLAND IMPACTS

INSTALL LUMINAIRE ON
EXISTING UTILITY POLE

SEDIMENTATION
CONTROL SYSTEM (TYP.)

REMOVE BIT CONC PAVEMENT

SIGN 31-0553 "STOP"

BIT CONC DWY

ADJUST GATE BOX

PAVED LEAK-OFF
(SEE SHEET DET-06)

BIT CONC CURB (TYP.)

APPROX. R.O.W.

COLONEL LEDYARD HIGHWAY

N/F
Mary Giordano and
Anthony C. Giordano Jr.
#1 Gallup Hill Road

Mid: 300+75.88
N 721464.8743
E 1205831.3642

PC: 300+56.92
N 721452.5361
E 1205817.1069

PT: 300+94.85
N 721471.0553
E 1205849.1769

END FULL DEPTH RECONSTRUCTION
GALLUP HILL ROAD
STA 302+10
N 721487.60
E 1205963.13

4" DOUBLE YELLOW EPOXY
RESIN PAVEMENT MARKINGS

Benchmark "G"
Mag Nail In
Utility Pole
ELEV.=256.79'

CUT BIT CONC PAVEMENT

TYPE 'C' CB
STA:60+58.1 OFF:-10.2 LT
TF:264.45
INV IN:260.85 12" RCP
INV OUT:260.84 15" HDPE

BEGIN BIT CONC CURB
STA. 60+50

10 LF 15" HDPE

MANHOLE (STORM)
STA:60+49.0 OFF:0.8 RT
TF:263.84
INV IN:260.70 15" RCP
INV IN:260.70 15" HDPE
INV OUT:260.69 18" HDPE

MATCHLINE Q-Q
(SEE THIS DRAWING)

SLOPE LIMITS (TYP)

5'-WIDE CONCRETE SIDEWALK

CONCRETE CURBING

SAWCUT BIT. CONC.
PAVEMENT

CONNECT TO
EXISTING SIDEWALK

HIGH SCHOOL
EASTERLY DRIVEWAY

APPROX. R.O.W.

CONST. B

GALLUP HILL ROAD

34 LF 18" HDPE

BIT CONC CURB (TYP.)

MATCHLINE P-P
(SEE THIS DRAWING)

4 LF 24" RCP

TYPE 'C-L' CB (4' SUMP)
STA:57+05.8 OFF:-11.2 LT
TF:251.60
INV IN:245.68 24" RCP
INV OUT:245.68 24" RCP

DETECTABLE WARNING STRIP (TYP.)
(CONCRETE PAID FOR UNDER
"CONCRETE SIDEWALK RAMP")

INSTALL LPS BELOW EXISTING
WATER LINE

4 LF 24" RCP

CUT BIT CONC PAVEMENT

12" WHITE EPOXY RESIN
PAVEMENT MARKINGS (TYP.)

R=36.00
L=57.131
TAN=36.59
Δ=90°55'36"

START FULL DEPTH RECONSTRUCTION
GALLUP HILL ROAD
STA 300+16.5
N 721420.85
E 1205792.12

SIGN 51-2010 "GALLUP HILL RD"

TYPE 'C-L' CB TOP
STA:57+83.3 OFF:-8.6 LT
TF:253.72
INV IN:250.51 24" RCP
INV IN:251.67 4" HDPE
INV OUT:247.31 24" RCP

R=100.00
L=74.712
TAN=39.20
Δ=42°48'24"

4" UNDERDRAIN
(TYP.) (SEE
SHEET DET-02)

REMOVE BIT
CONC PAVEMENT
UNDERDRAIN
CLEANOUT (TYP.)
(SEE SHEET DET-02)

WILDFLOWER ESTABLISHMENT

PROPOSED HYDRANT LOCATION

APPROX. 65 S.F. WETLAND IMPACTS

RELOCATE HYDRANT

RELOCATE PLANTER WITH SIGN
(COORDINATE WITH TOWN FOR LOCATION)

INSTALL LPS BELOW EXISTING 24" RCP

APPROX. 505 S.F. WETLAND IMPACTS

10' WIDE MULTI-USE PATHWAY

SLOPE LIMITS (TYP)

TRIM TREES TO ACHIEVE 12'
MINIMUM HEIGHT CLEARANCE OVER
PATHWAY (PAID FOR UNDER
CLEARING AND GRUBBING)

SIGN 41-2105
"25 MPH SCHOOL ZONE AHEAD"

SIGN 31-5505 "SPEED LIMIT 25"

5" HDPE LPS (TYP. 5'
BELOW PROPOSED GRADE.)

18" HDPE PIPE END
INV. 259.45

INTERMEDIATE RIPRAP
SPLASH PAD

N/F
The Town of Ledyard
#24 Gallup Hill Road

REMOVE WOODEN BOLLARDS
(TYP.) (PAID FOR UNDER
"CLEARING AND GRUBBING")

INSTALL LPS BELOW
PROPOSED 15" HDPE

INSTALL LPS BELOW EXISTING 15" RCP DRAIN

CONNECT TO EXISTING 3" HDPE LPS

LPS "HIGH SCHOOL" MANHOLE

BIT CONC DWY (COMMERCIAL)

INSTALL LPS BELOW
EXISTING DRAIN

*EXISTING HYDRANT
TO REMAIN*

DETECTABLE WARNING STRIP (TYP.)
(CONCRETE PAID FOR UNDER
"CONCRETE SIDEWALK RAMP")

RESET MH (STORM)

BIT CONC CURB (TYP.)

INSTALL SIDEWALK GUY (BY OTHERS)

MATCHLINE P-P
(SEE THIS DRAWING)

GALLUP HILL ROAD

APPROX. R.O.W.

SLOPE LIMITS (TYP)

5" HDPE LPS (TYP. 5' BELOW
PROPOSED GRADE.)

N/F
The Town of Ledyard
#24 Gallup Hill Road

DETECTABLE WARNING STRIP (TYP.)
(CONCRETE PAID FOR UNDER
"CONCRETE SIDEWALK RAMP")

HIGH SCHOOL
WESTERLY DRIVEWAY

REMOVE TREE (4)

10' WIDE MULTI-USE PATHWAY

CONST. B

BICYCLE STAND
BENCH (TYP.)

IMPRESSED PREFORMED
THERMOPLASTIC PAVEMENT (SEE
SHEET DET-06) (PAID FOR UNDER
"DECORATIVE CROSSWALK")

CONNECT TO EXISTING 3" HDPE LPS

RESET
HANDHOLE

END PROJECT
COLONEL LEDYARD HIGHWAY
MULTI-USE PATHWAY
STA 65+90
N 721557.84
E 1206618.01

SAWCUT BIT. CONC.
PAVEMENT

HIGH SCHOOL
EASTERLY DRIVEWAY

Benchmark "H"
Mag In Pole
Elev. 289.86

EPOXY RESIN PAVEMENT MARKINGS,
SYMBOLS, AND LEGENDS (TYP.)

INSTALL LPS BELOW EXISTING
15" RCP DRAIN

INSTALL LPS BELOW
EXISTING 12" RCP DRAIN

5'-WIDE CONCRETE SIDEWALK

CONCRETE CURBING

MATCHLINE Q-Q
(SEE THIS DRAWING)

PLAN
SCALE: 1"=20'
0 20' 40' 60'

N

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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L171-0001

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MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 55+00 TO 65+90

Sheet Number:

HWY-7

Rev: 1.8 Date: 04/10/2019

BEGIN COLONEL LEDYARD HIGHWAY
MULTI-USE PATHWAY CONSTRUCTION
MATCH EXISTING
STA 10+00
ELEV = 305.61

PVI STA: 10+17.49
PVI ELEV: 305.83
K: 14.71
LVC: 25.00
BVCS: 10+04.99
BVCE: 305.67
EVCS: 10+29.99
EVCE: 306.21

PVI STA: 10+61.53
PVI ELEV: 307.16
K: 36.63
LVC: 55.00
BVCS: 10+34.03
BVCE: 306.33
EVCS: 10+89.03
EVCE: 308.39

PVI STA: 11+88.66
PVI ELEV: 312.88
K: 17.17
LVC: 150.00
HIGH PT. STA: 11+90.94
HIGH PT ELEV: 311.24
BVCS: 11+13.66
BVCE: 309.50
EVCS: 12+63.66
EVCE: 309.70

PVI STA: 14+00.91
PVI ELEV: 303.89
K: 21.22
LVC: 85.00
BVCS: 13+58.41
BVCE: 305.69
EVCS: 14+43.41
EVCE: 300.39

PVI STA: 16+01.15
PVI ELEV: 287.39
K: 11.65
LVC: 135.00
BVCS: 15+33.65
BVCE: 292.95
EVCS: 16+68.65
EVCE: 289.65

4.50%
3.00%
1.30%
4.24%
-8.24%

B-1
B-2
EXISTING GROUND ALONG ℄
2.5'
7.5'
REFUSAL
5' (MIN)
PROPOSED LOW PRESSURE SEWER CLEANOUT
PROPOSED 4" LOW PRESSURE SEWER
PROPOSED ℄ GRADE
PROPOSED 4" LOW PRESSURE SEWER ENDCAP
15" D RCP
1' (MIN)

MATCHLINE A-A
(SEE DRAWING PRO-2)

	10+00	11+00	12+00	13+00	14+00	15+00	16+00
EXISTING	305.6	308.9	310.7	308.0	303.7	295.7	288.6
PROPOSED	305.61	308.89	311.22	308.16	303.52	295.72	289.37

320 310 300 290 280

CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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MULTI-USE PATHWAY
PROFILE
STA. 10+00 TO 16+00

Sheet Number:
PRO-01

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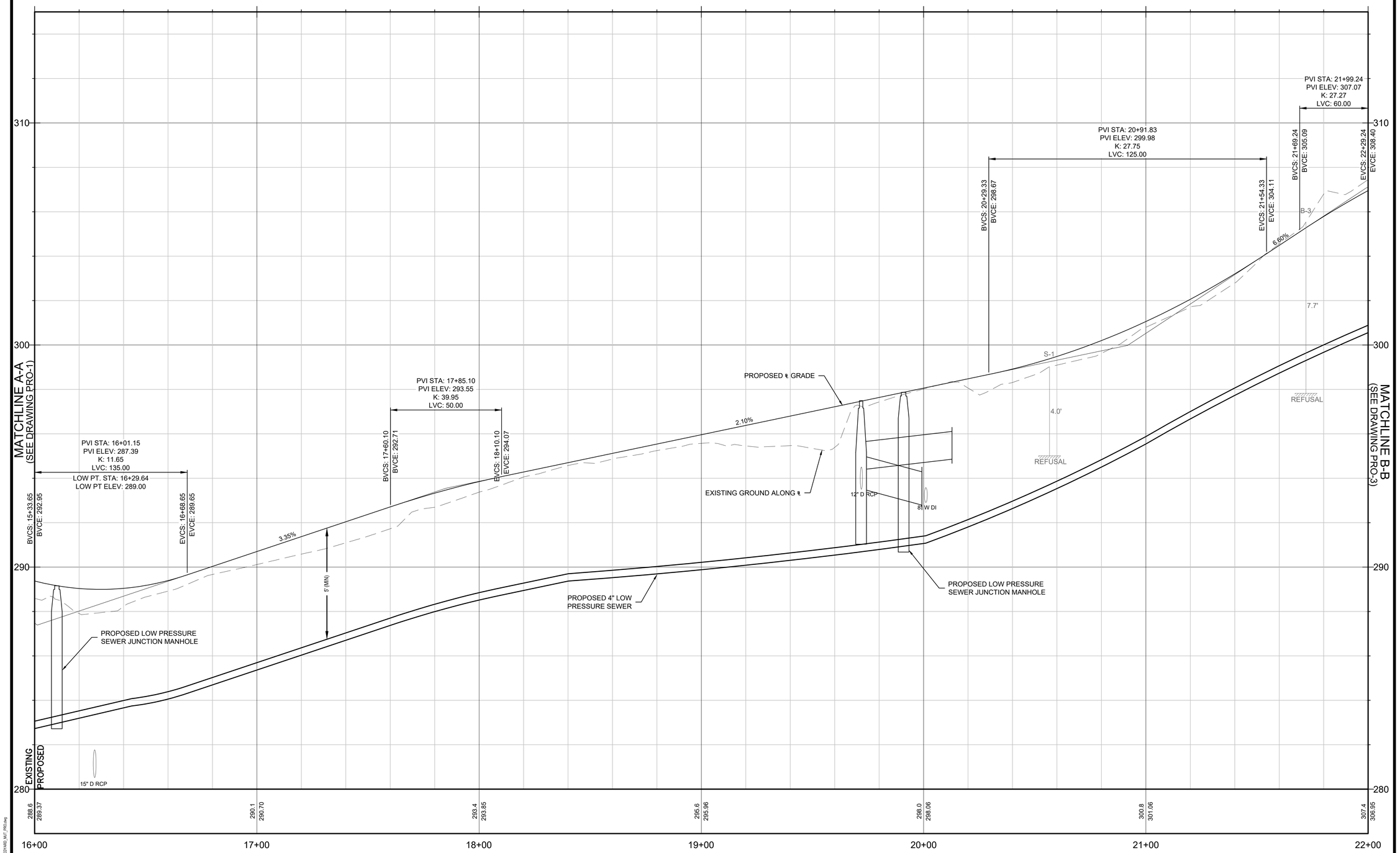

CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT

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MULTI-USE PATHWAY
PROFILE
STA. 16+00 TO 22+00

Sheet Number:

PRO-02

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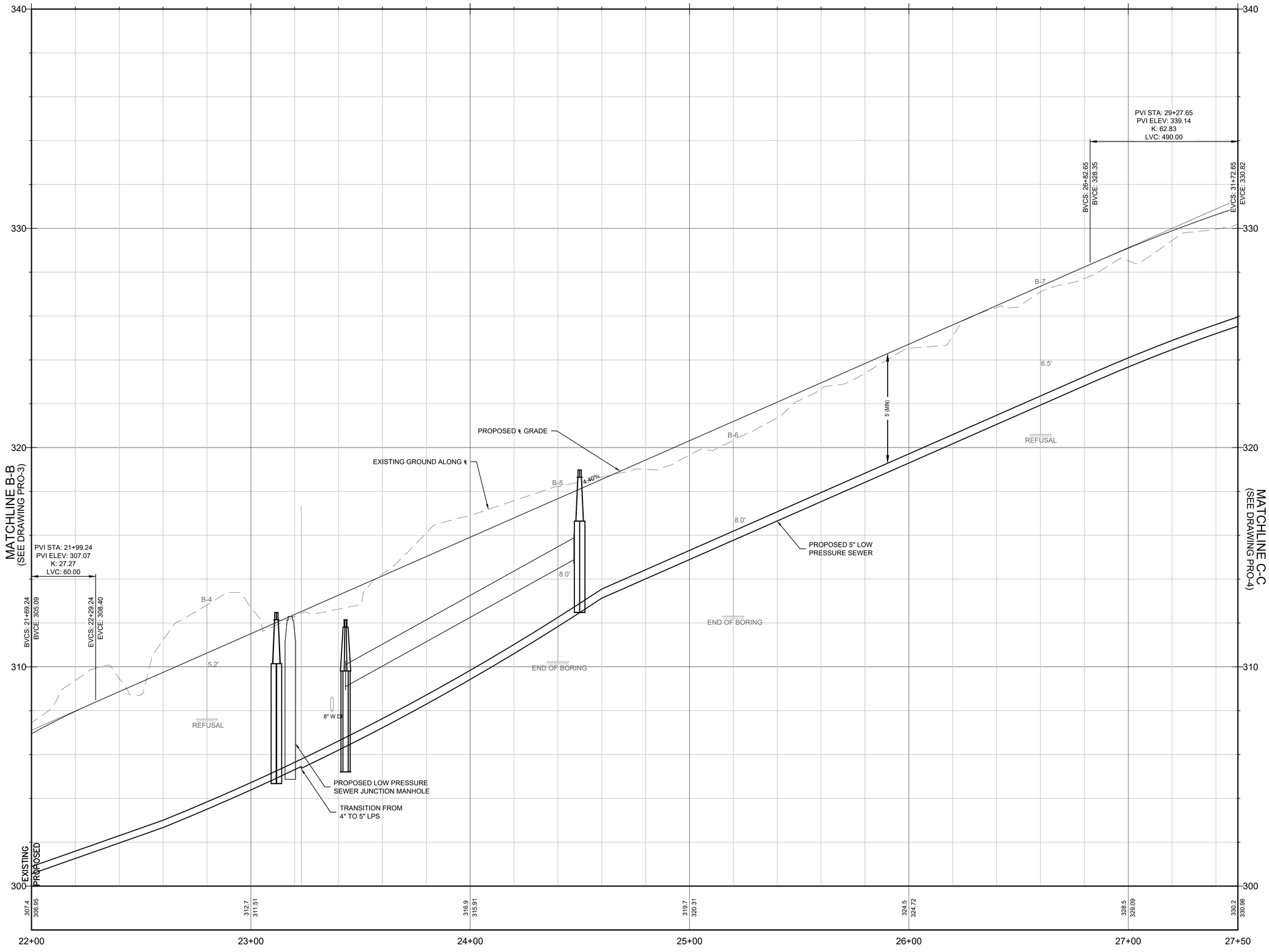

CENTERLINE TRAIL PROFILE

SCALE: 1"=20' HORZ, 1"=2' VERT

Project:

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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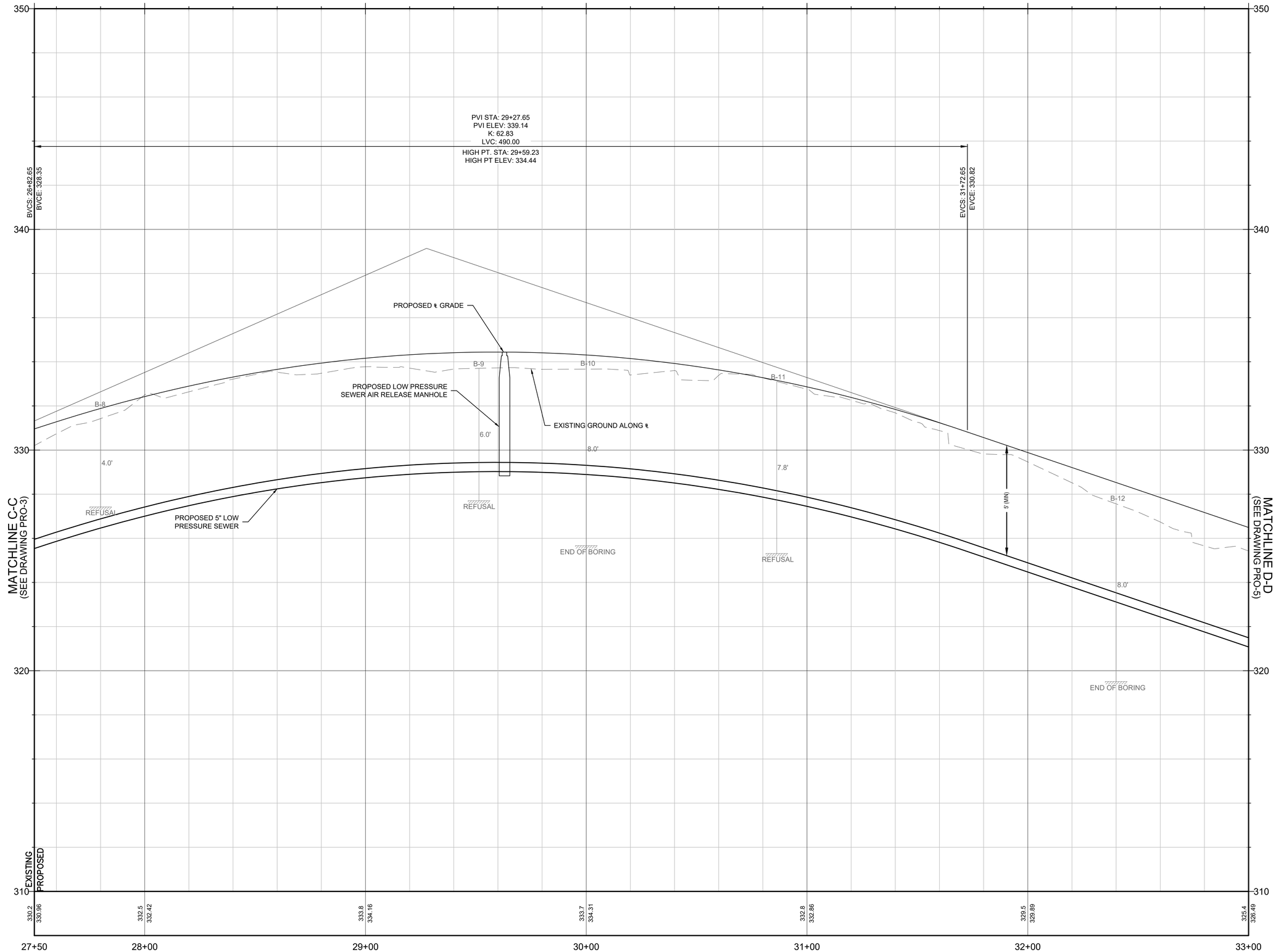
Drawing Title:

MULTI-USE PATHWAY
PROFILE
STA. 22+00 TO 27+50

Sheet Number:

PRO-03

Rev: 1.6 Date: 04/10/2019



CENTERLINE TRAIL PROFILE

SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
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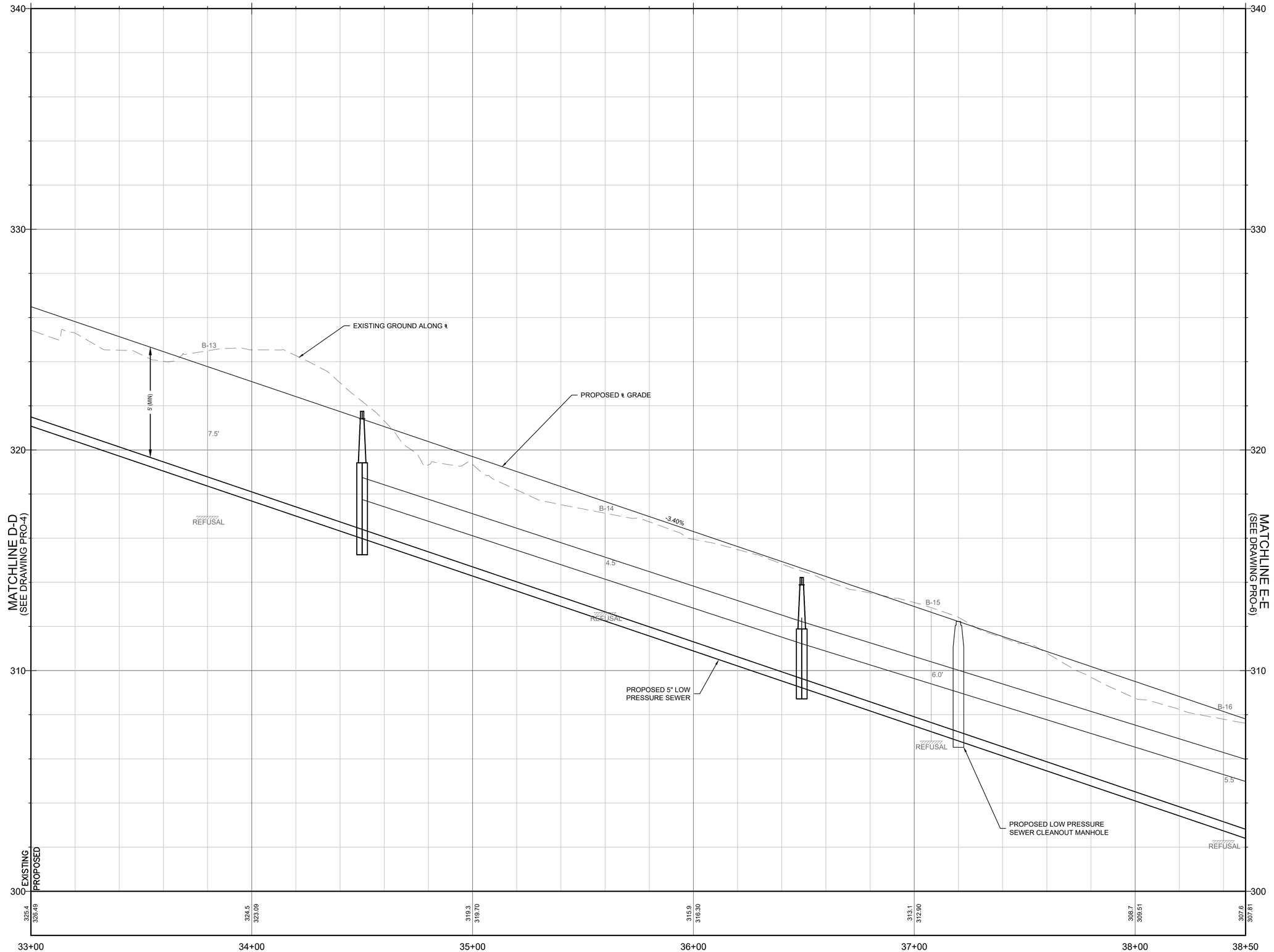
MULTI-USE PATHWAY
PROFILE
STA. 27+50 TO 33+00

Sheet Number:

PRO-04

Rev. 1.6 Date: 04/10/2019



CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
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MULTI-USE PATHWAY
PROFILE
STA. 33+00 TO 38+50

Sheet Number:

PRO-05

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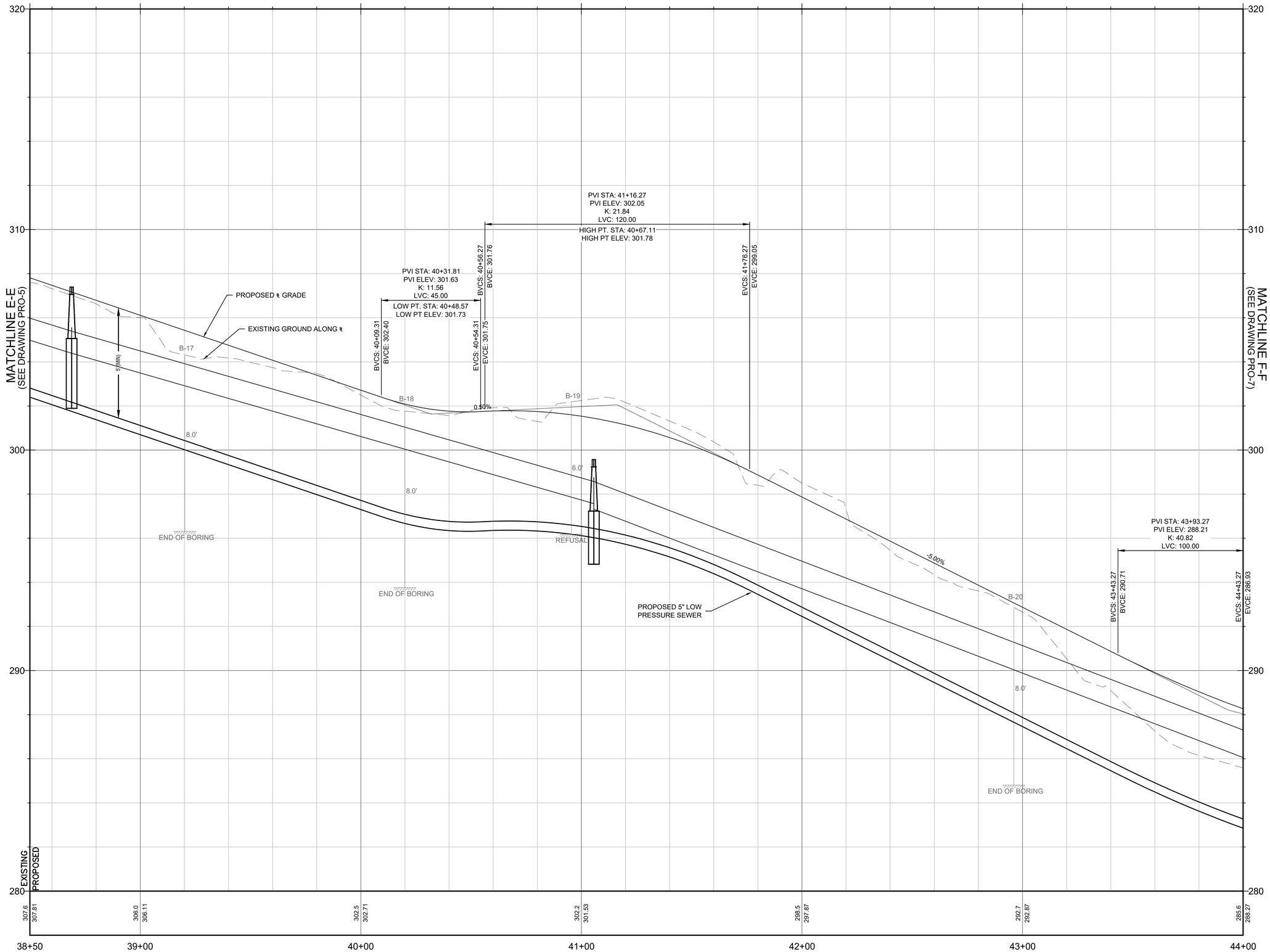

CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

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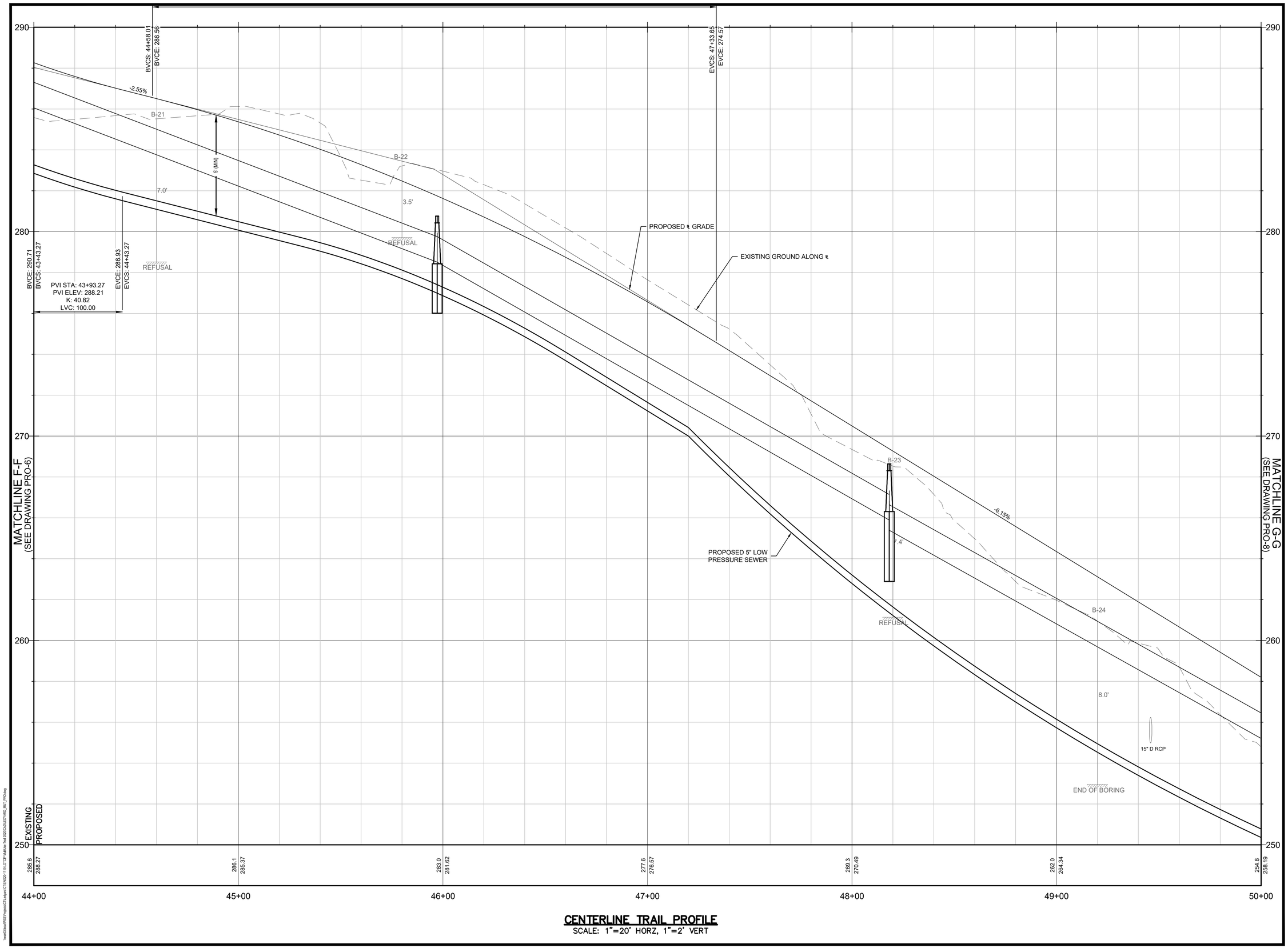
Drawing Title:

MULTI-USE PATHWAY
PROFILE
STA. 38+50 TO 44+00

Sheet Number:

PRO-06

Rev: 1.0 Date: 04/10/2019



CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

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LEDYARD HIGH SCHOOL
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Date:	MAY 2023
Drawn By:	NSD
Reviewed By:	RC
Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

MULTI-USE PATHWAY
PROFILE
STA. 44+00 TO 50+00

Sheet Number:

PRO-07

Rev: 1.8 Date: 04/10/2019

PVI STA: 53+63.63
PVI ELEV: 235.83
K: 65.60
LVC: 705.00
LOW PT. STA: 54+14.49
LOW PT ELEV: 245.11

BVCS: 50+11.13
BVCE: 257.51

EVCS: 57+16.13
EVCE: 252.04

270
260
250
240
230

MATCHLINE G-G
(SEE DRAWING PRO-7)

MATCHLINE H-H
(SEE DRAWING PRO-9)

EXISTING
PROPOSED

S-2
S-3
S-4
S-5

PROPOSED ℄ GRADE

EXISTING GROUND ALONG ℄

5' (MIN)

PROPOSED LOW PRESSURE
SEWER CLEANOUT MANHOLE

PROPOSED 5" LOW
PRESSURE SEWER

7.5'

25.0'

25.0'

REFUSAL

REFUSAL

END OF BORING

END OF BORING

254.8	250.8	244.9	243.3	242.7	243.2	244.1
258.19	252.65	248.62	246.11	245.12	245.67	247.73

50+00 51+00 52+00 53+00 54+00 55+00 56+00

CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

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Consultants:

Revisions:

No.	Date	Description

Seal:

Issued For:

Scale:	AS NOTED
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W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

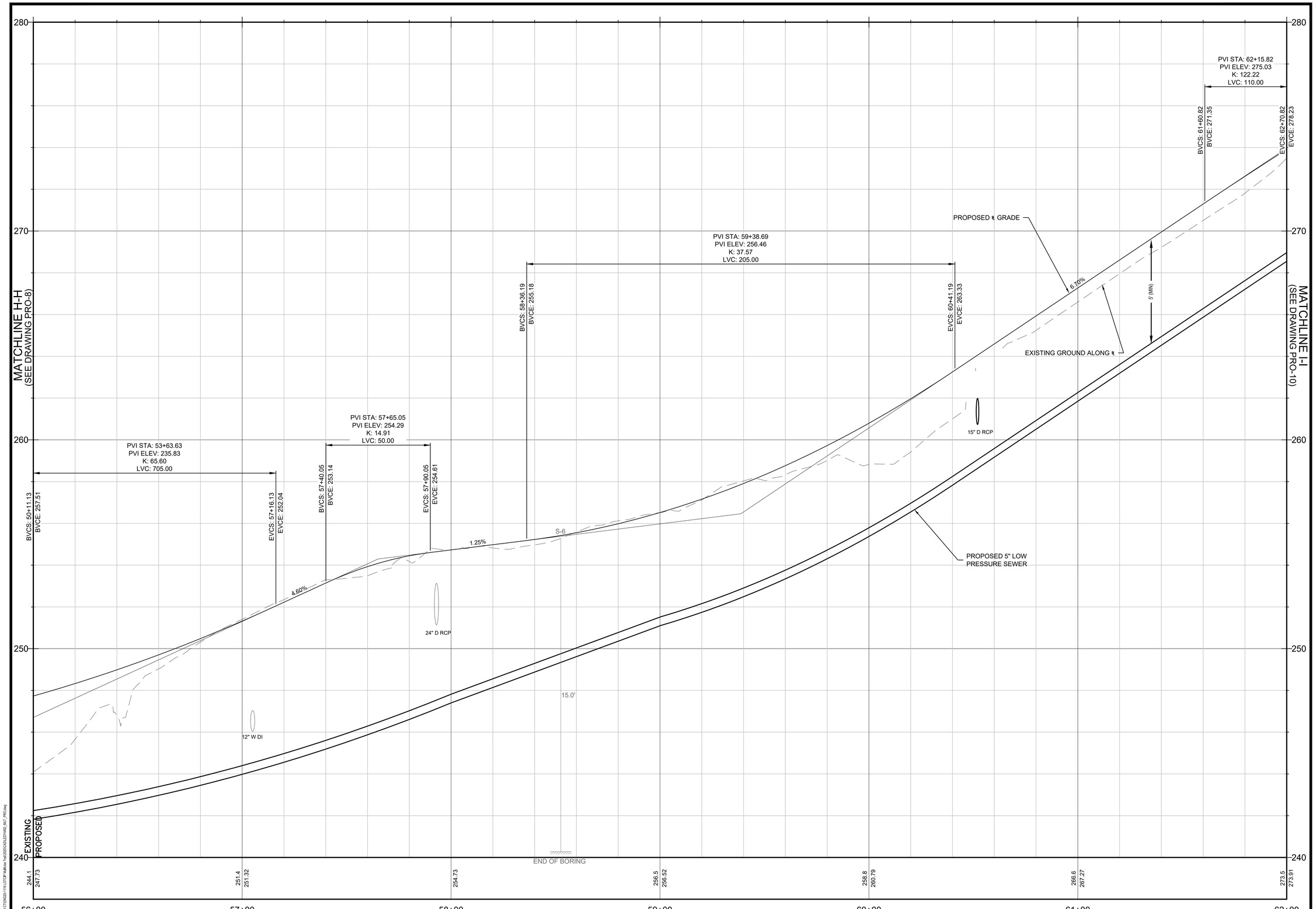
MULTI-USE PATHWAY
PROFILE
STA. 50+00 TO 56+00

Sheet Number:

PRO-08

Rev. 1.6 Date: 04/10/2019

\\wes003.bos\WSProjects\CT\Ledyard CT\ENG20-1119 LOTCP Multiuse Trail\2020\CAD\LEDYARD_MUT_PRO.dwg



CENTERLINE TRAIL PROFILE

SCALE: 1"=20' HORZ, 1"=2' VERT

Project:

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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W&S Project No.:	ENG20-1119
W&S File No.:	

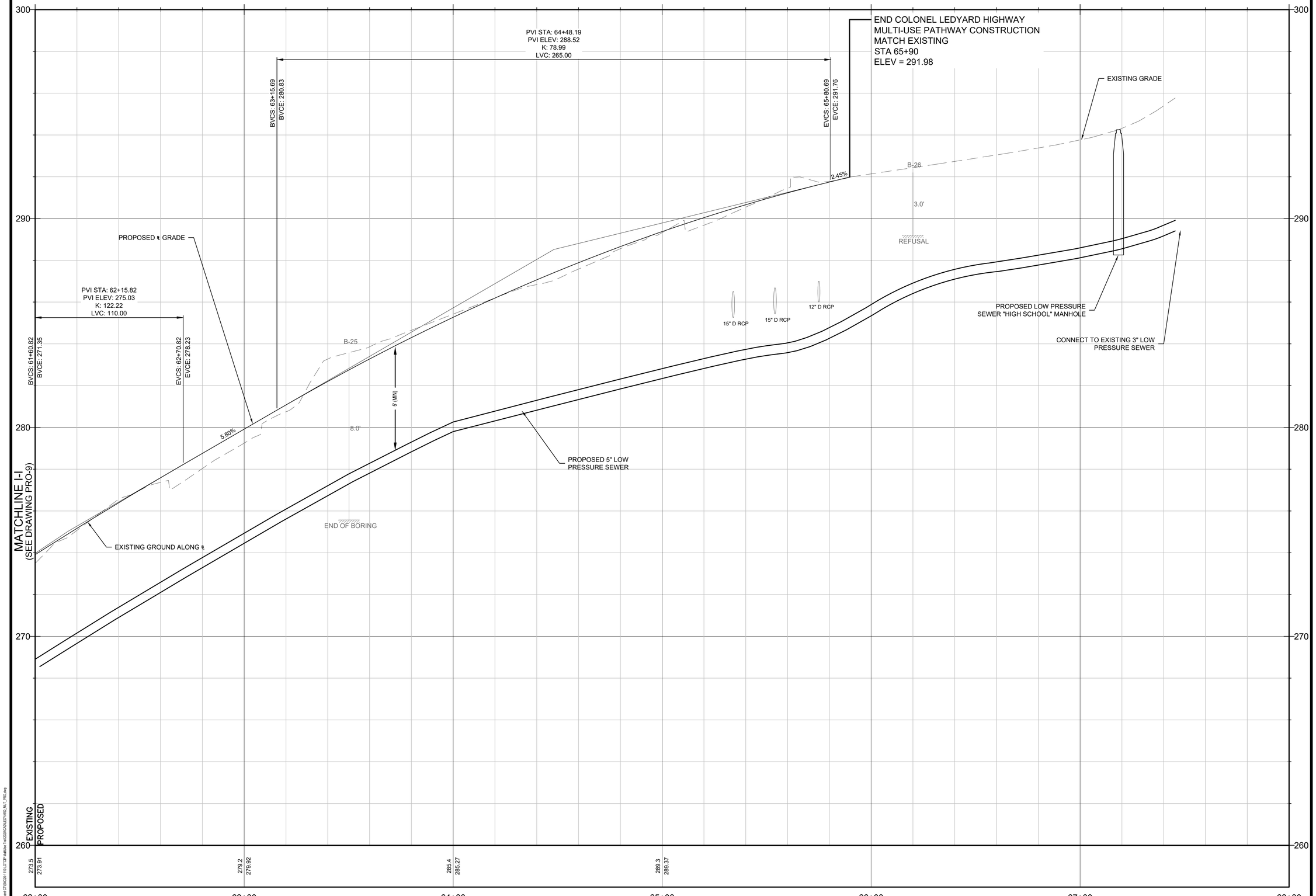
Drawing Title:

MULTI-USE PATHWAY
PROFILE
STA. 56+00 TO 62+00

Sheet Number:

PRO-09

Rev. 1.0 Date: 04/10/2019



CENTERLINE ROAD PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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Reviewed By:	RC
Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

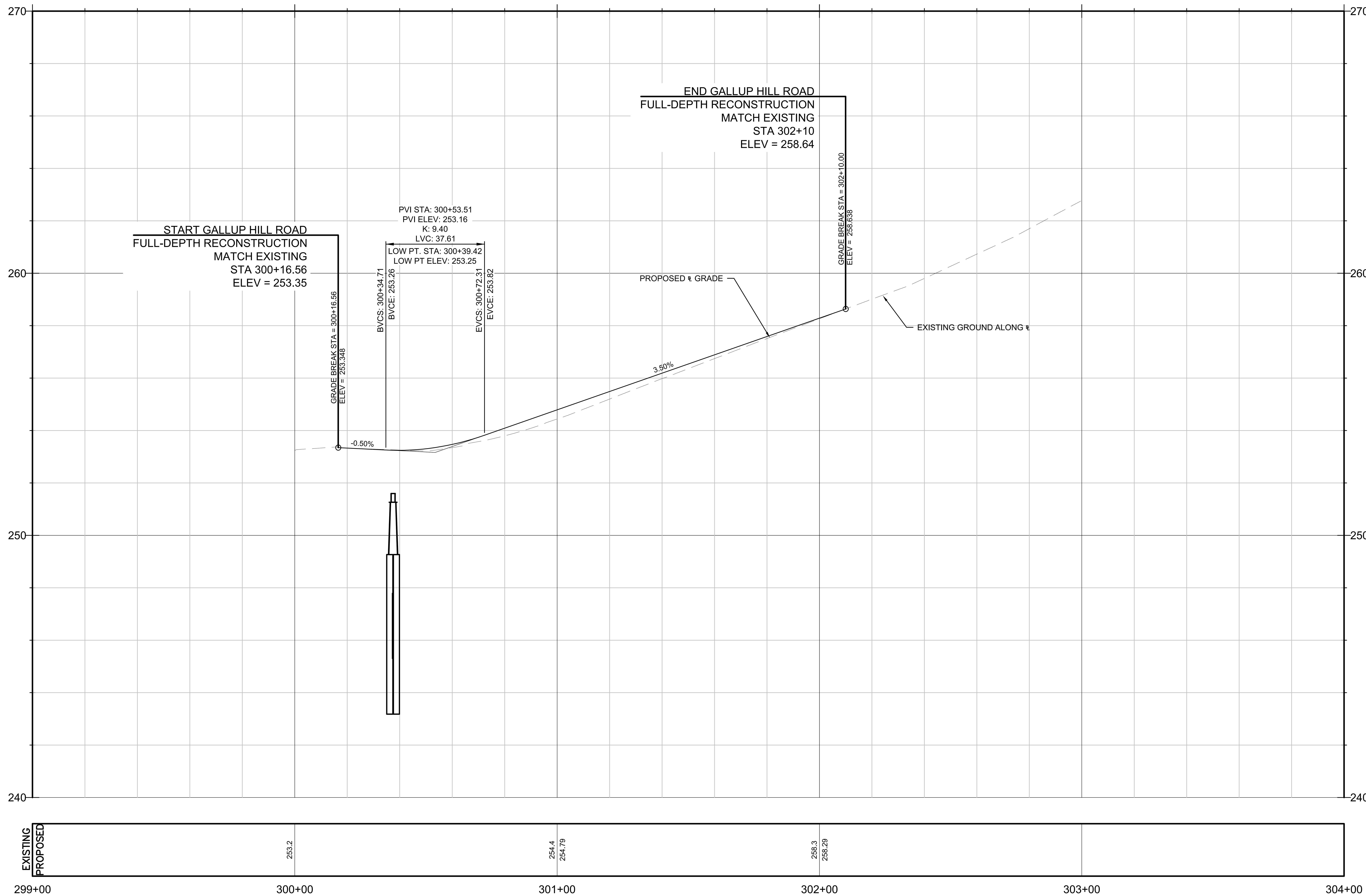
Drawing Title:

MULTI-USE PATHWAY
PROFILE
STA. 62+00 TO 65+90

Sheet Number:

PRO-10

Rev. 1.0 Date: 04/10/2019



CENTERLINE ROAD PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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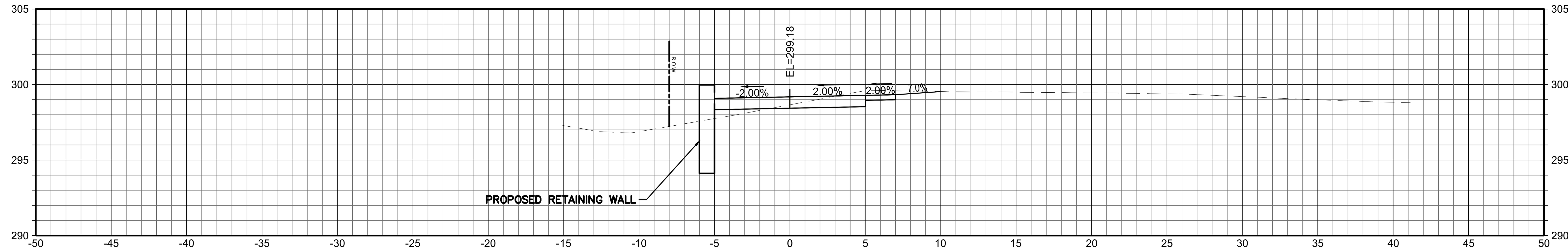
Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:
GALLUP HILL ROAD
PROFILE
STA. 300+00 TO
303+00

Sheet Number:
PRO-11

Rev. 1.6 Date: 04/10/2019

20+50



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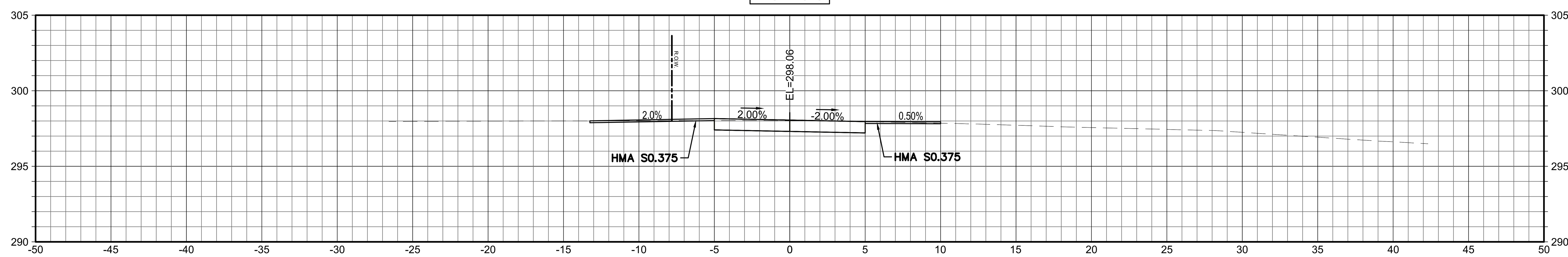

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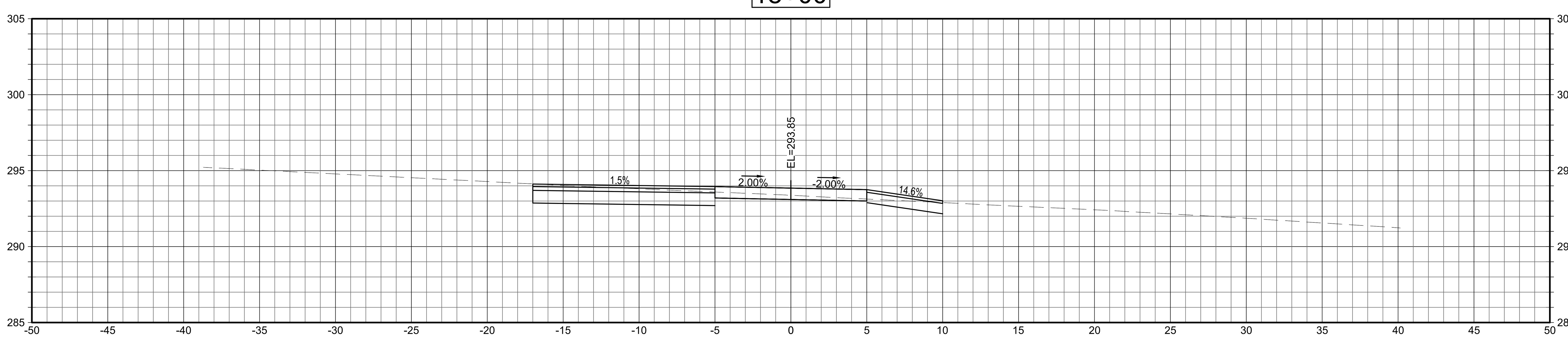
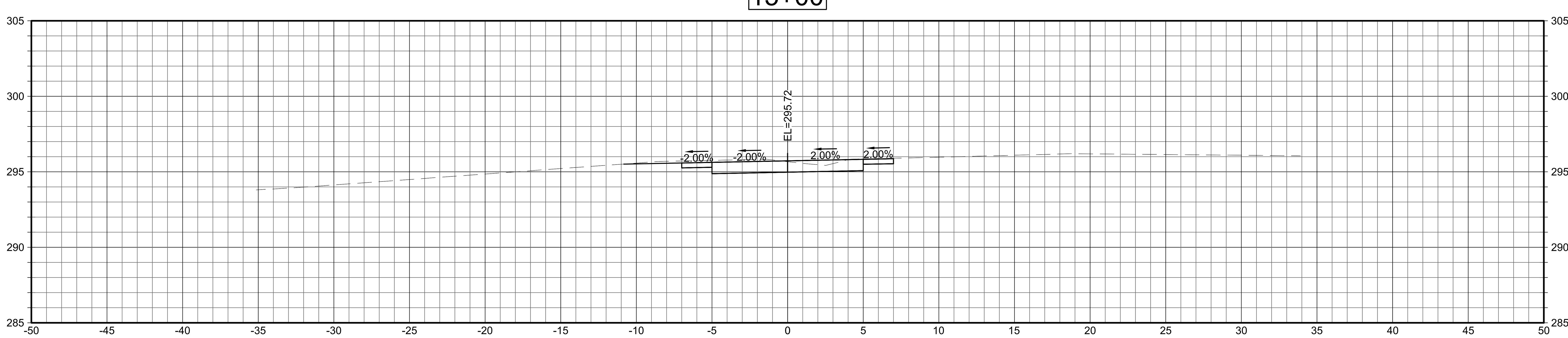
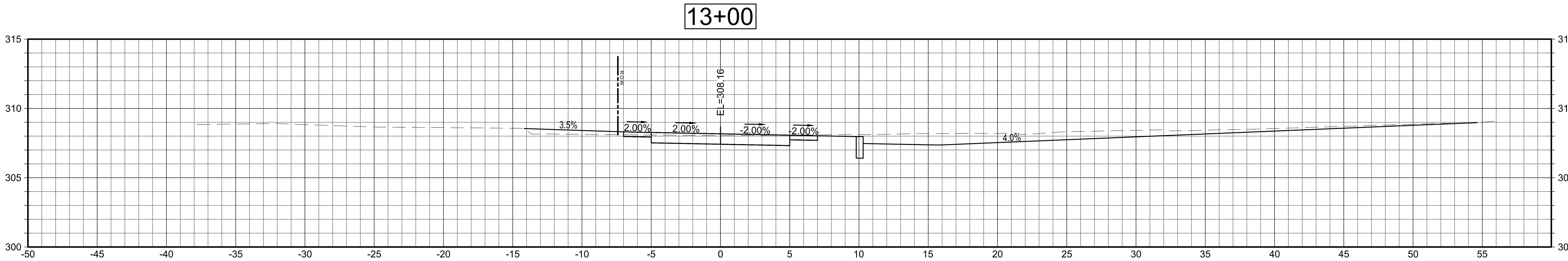


15+00



13+00



SECTIONS

SCALE: 1"=5'

0 5' 10' 15'

Project:

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

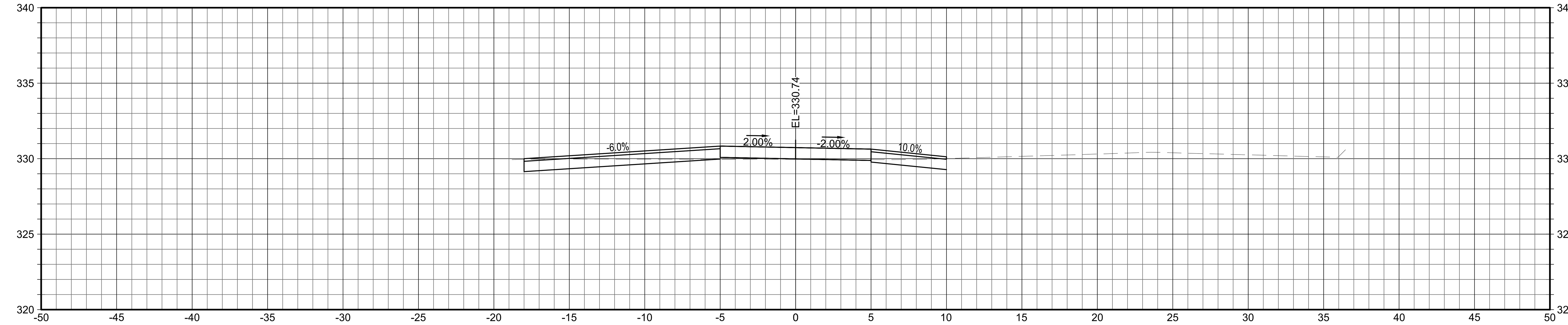
CRITICAL CROSS SECTIONS

Sheet Number:

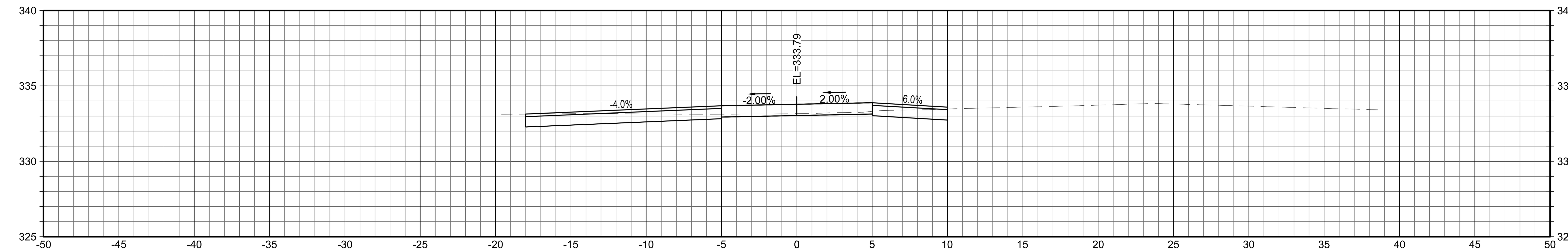
XSC-1

Rev. 1.6 Date: 04/10/2019

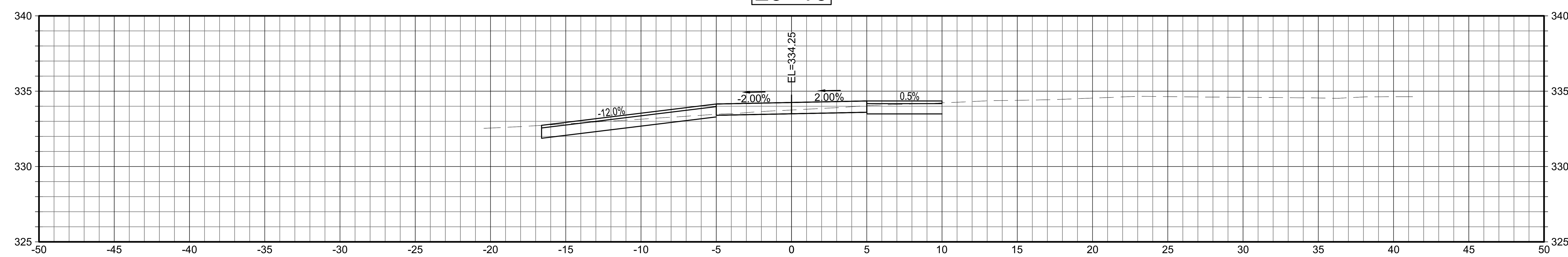
31+75



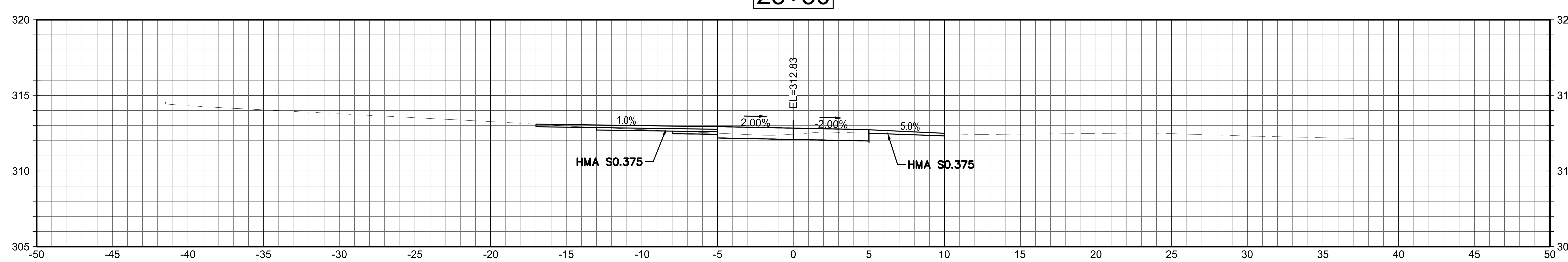
30+50



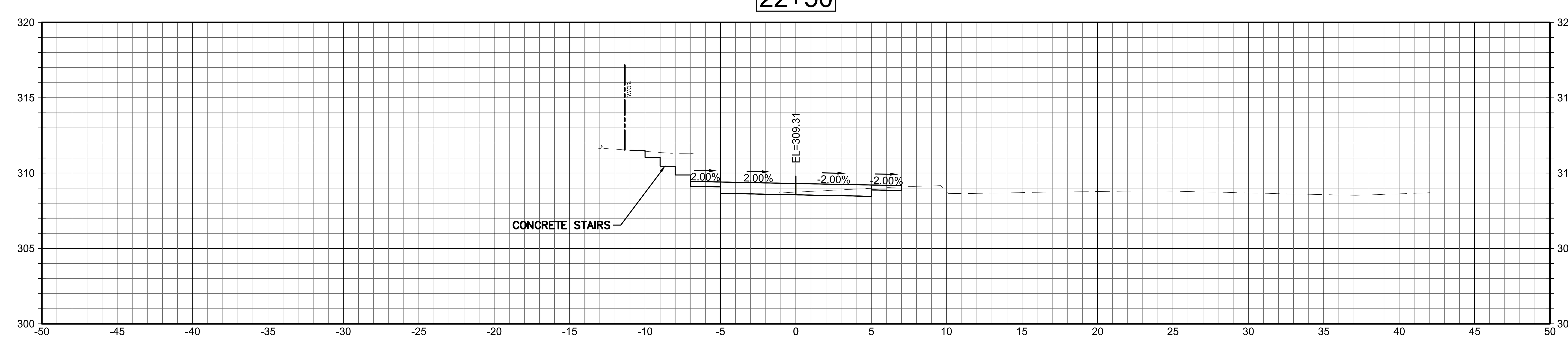
29+10



23+30



22+50



SECTIONS

SCALE: 1"=5'

0 5' 10' 15'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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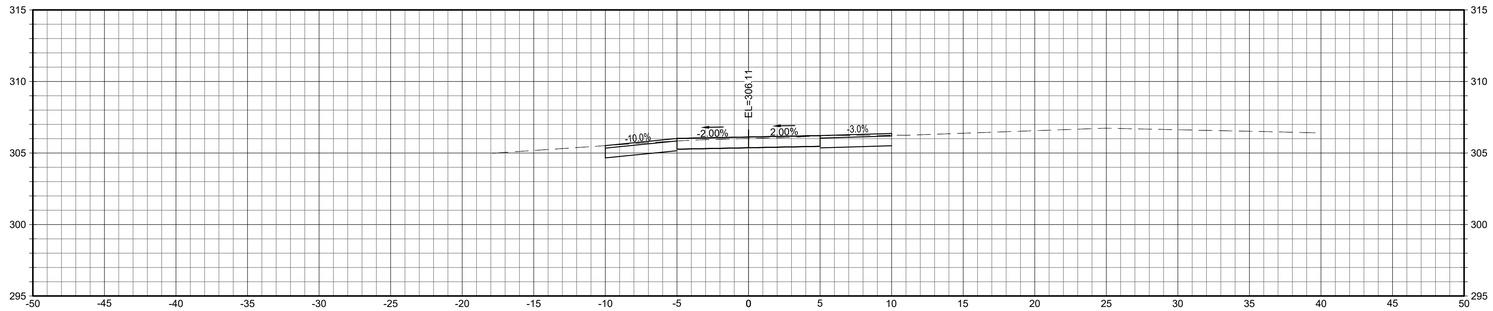
Date:	MAY 2023
Drawn By:	NSD
Reviewed By:	RC
Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:
CRITICAL CROSS SECTIONS

Sheet Number:
XSC-2

Rev. 1.6 Date: 04/10/2019

39+00



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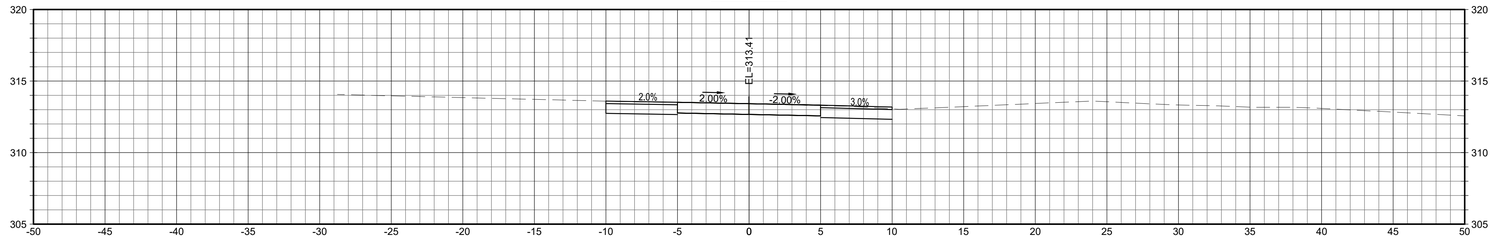

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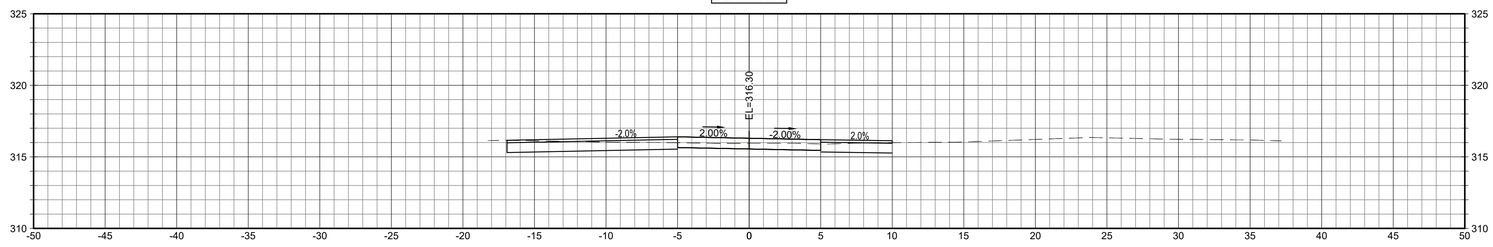

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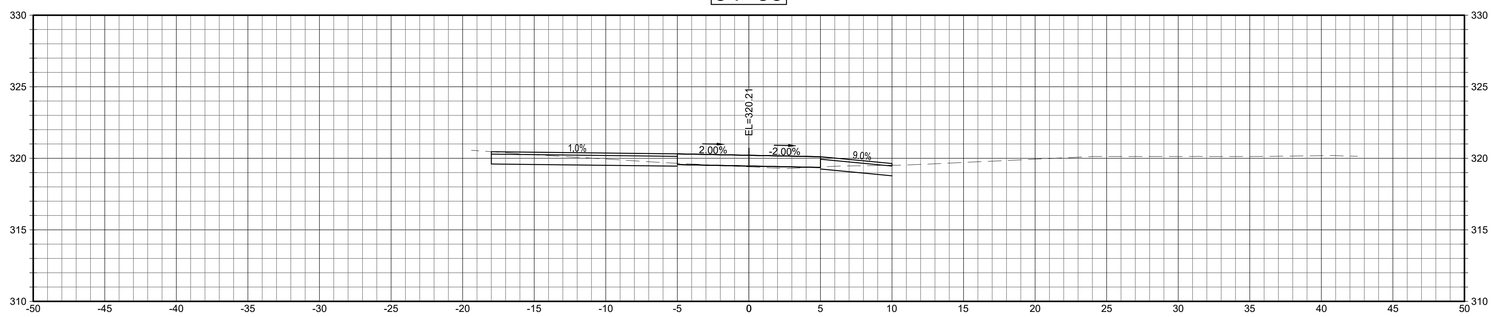

33+00

SECTIONS

SCALE: 1"=5'

0 5' 10' 15'

Project:

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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Scale:	AS NOTED
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W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

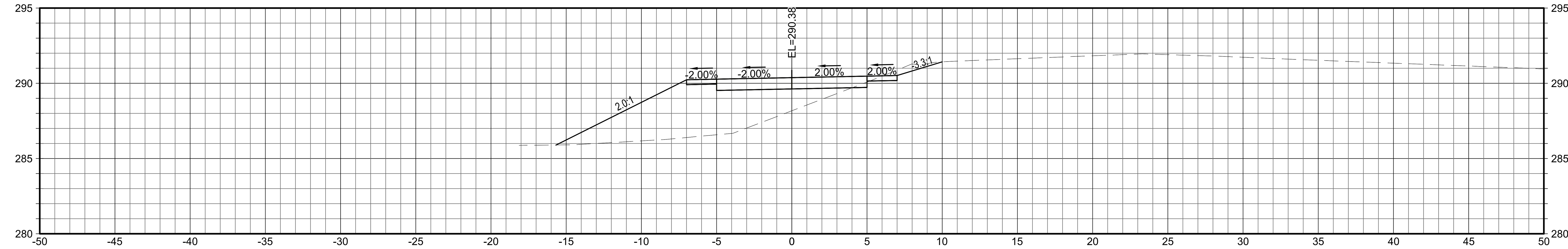
CRITICAL CROSS SECTIONS

Sheet Number:

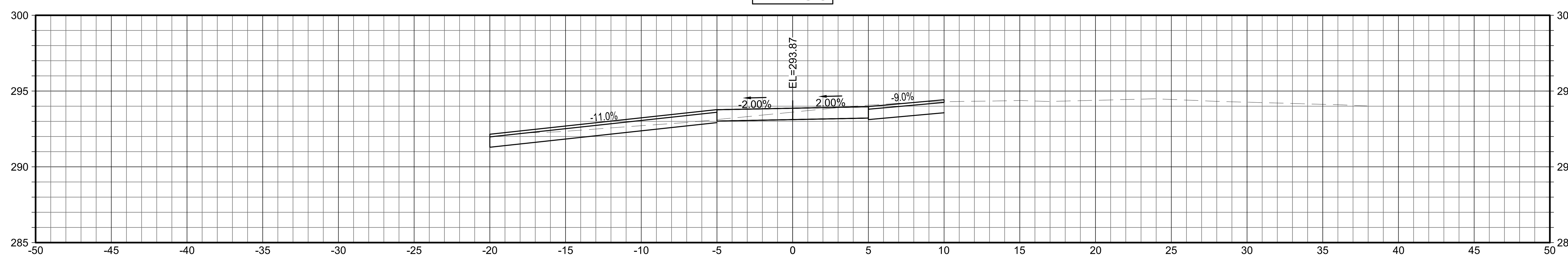
XSC-3

Rev: 1.6 Date: 04/10/2019

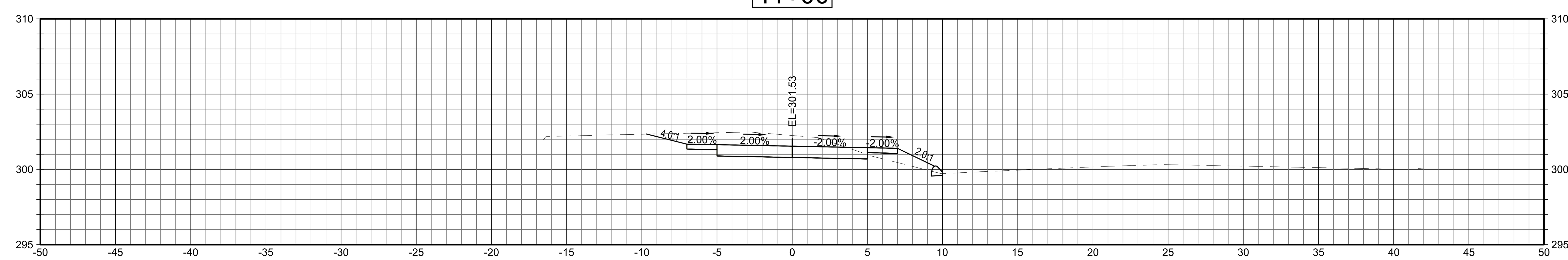
43+50



42+80



41+00



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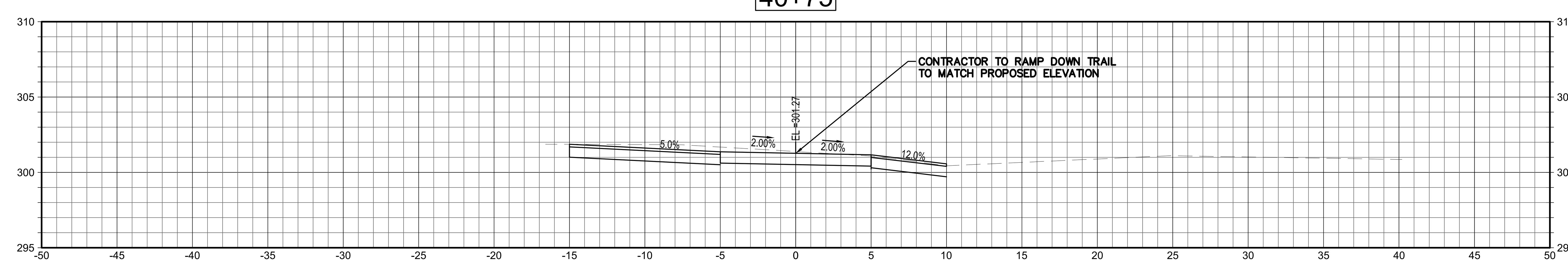

SECTIONS
SCALE: 1"=5'
0 5' 10' 15'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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Seal:

COA:

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Date:	MAY 2023
Drawn By:	NSD
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Approved By:	MJJ
W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

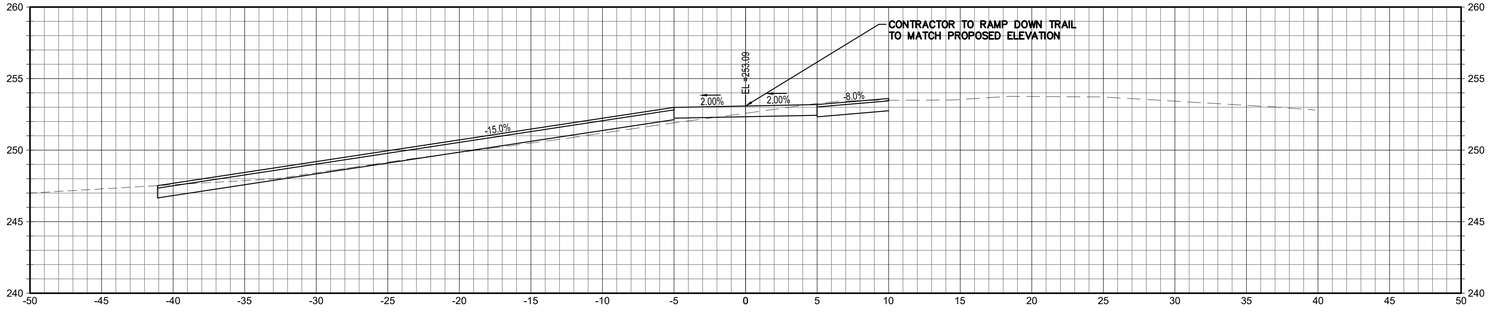
CRITICAL CROSS SECTIONS

Sheet Number:

XSC-4

Rev. 1.6 Date: 04/10/2019

50+81



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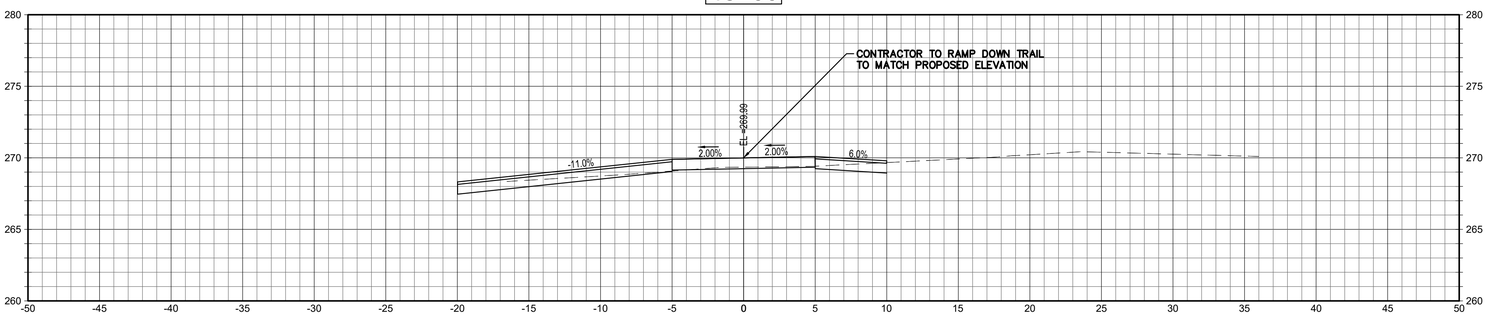

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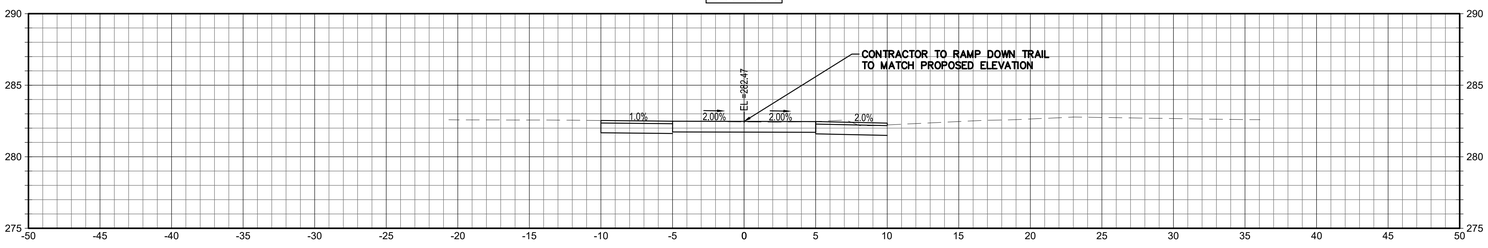

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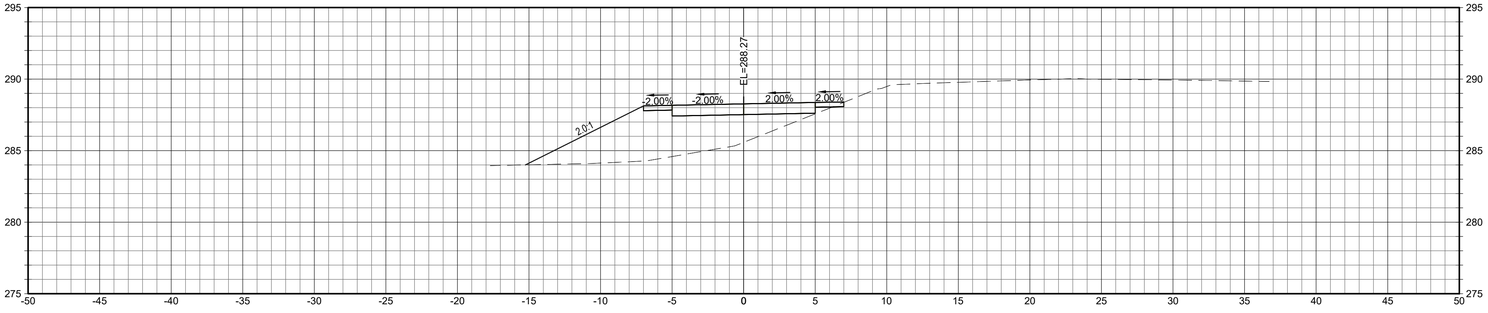

SECTIONS

SCALE: 1"=5'

0 5' 10' 15'

Project:

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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W&S File No.:	

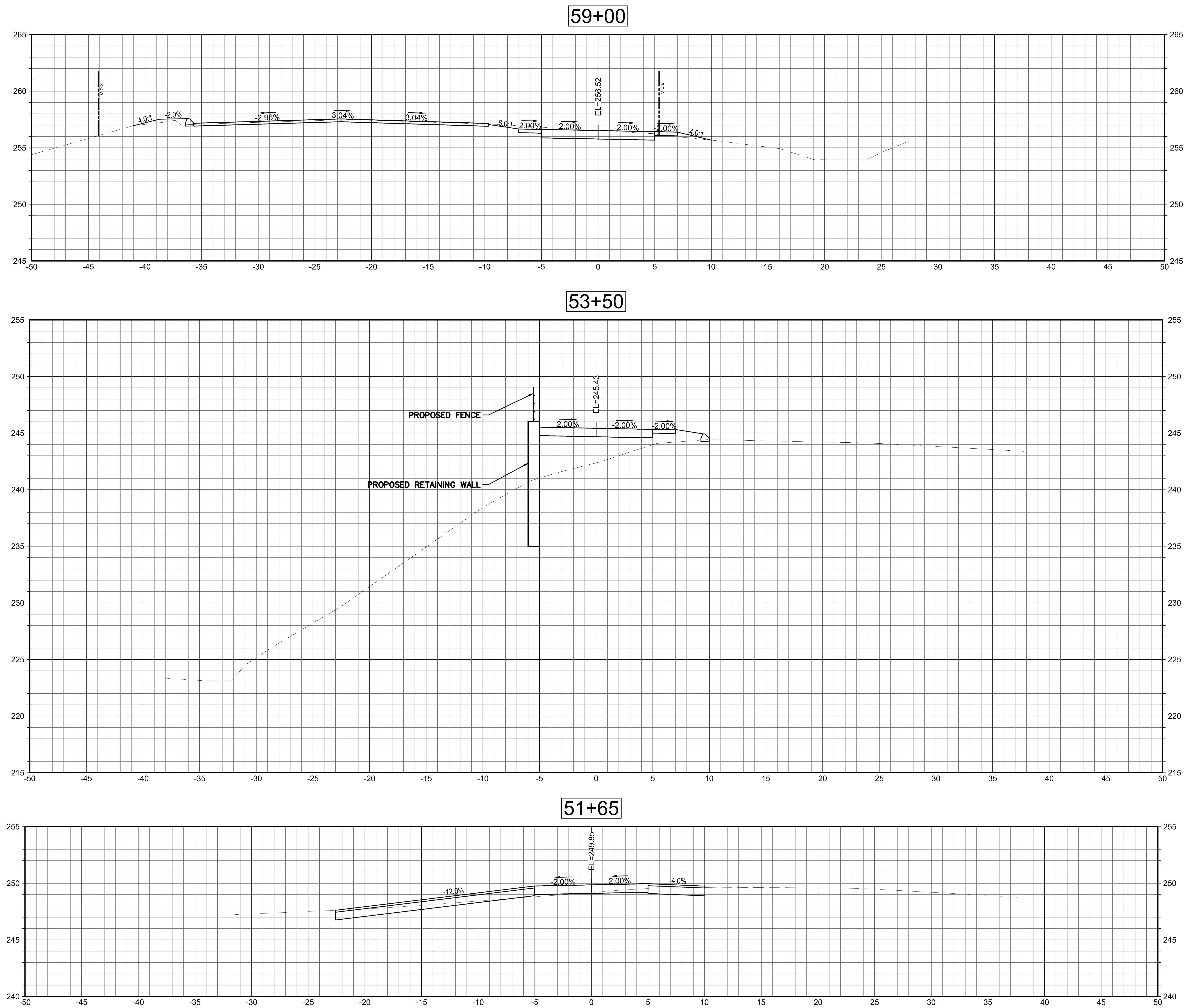
Drawing Title:

CRITICAL CROSS SECTIONS

Sheet Number:

XSC-5

Rev: 1.8 Date: 04/10/2019



SECTIONS

SCALE: 1"=5'

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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W&S File No.:	

Drawing Title:

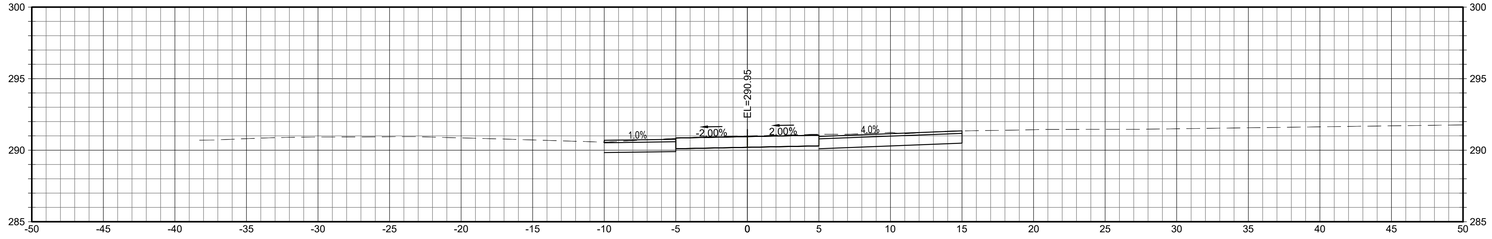
CRITICAL CROSS SECTIONS

Sheet Number:

XSC-6

Rev. 1.6 Date: 04/10/2019

65+50



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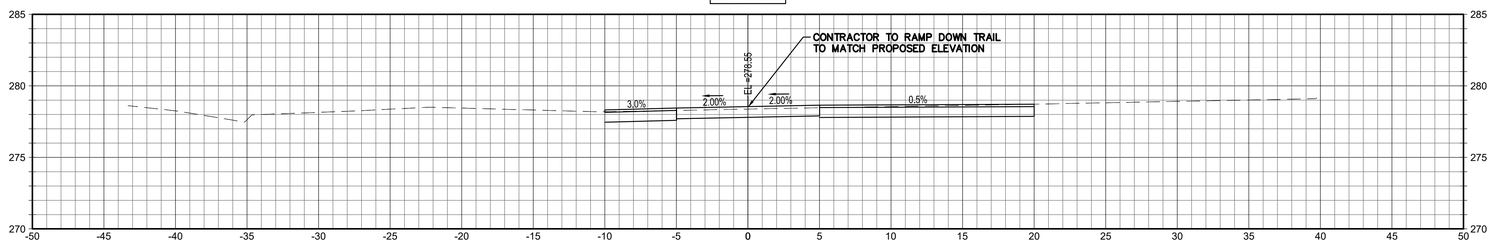

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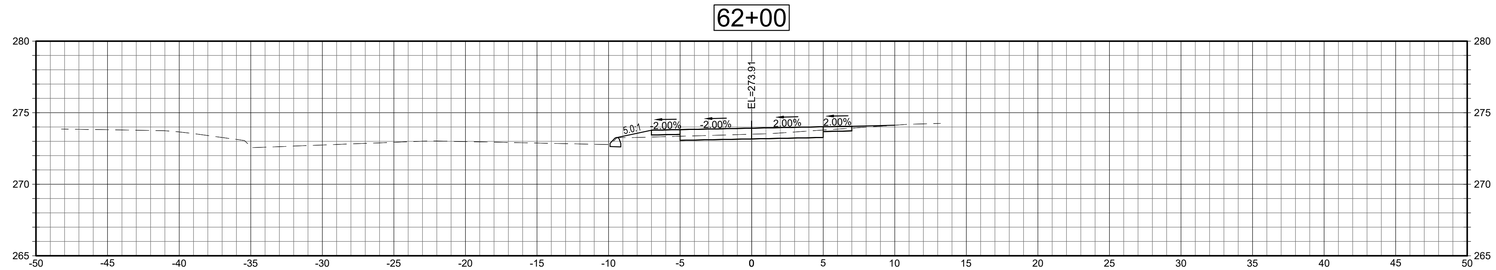

SECTIONS

SCALE: 1"=5'

0 5' 10' 15'

Project:

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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W&S File No.:	

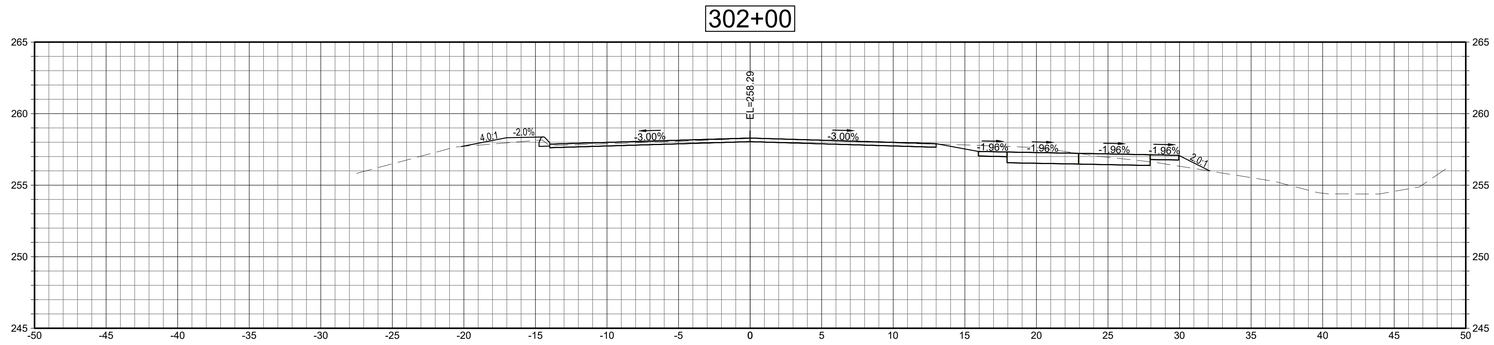
Drawing Title:

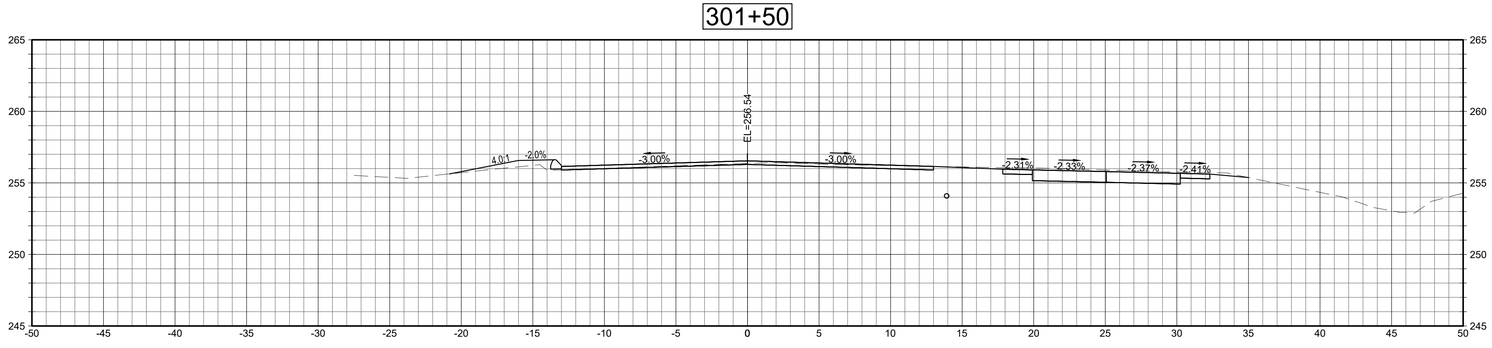
CRITICAL CROSS SECTIONS

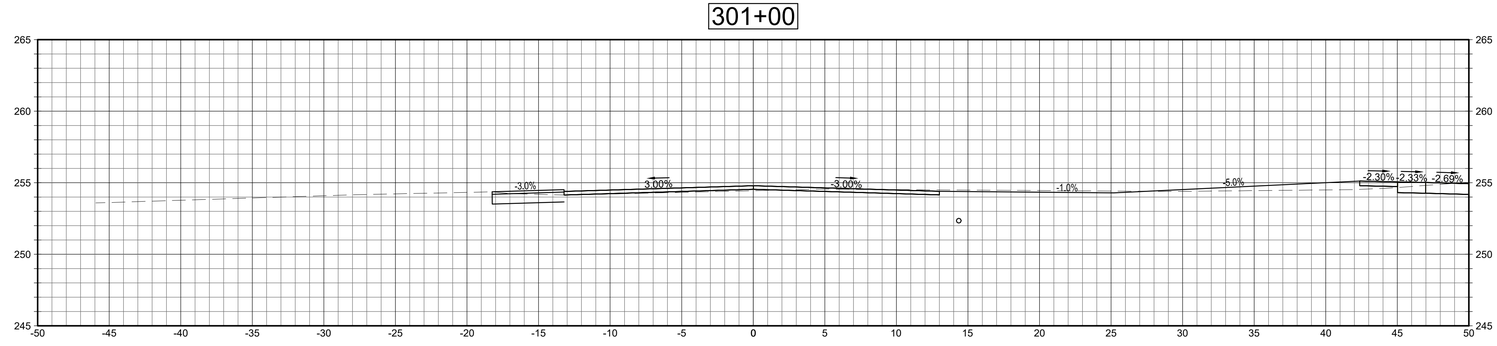
Sheet Number:

XSC-7

Rev. 1.0 Date: 04/10/2019







SECTIONS

SCALE: 1"=5'

0 5' 10' 15'

Project:

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
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W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

CRITICAL CROSS SECTIONS

Sheet Number:

XSC-8

Rev: 1.8 Date: 04/10/2019

GENERAL NOTES:
THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. REFER TO CONTRACT DRAWINGS FOR LOCATION, DIMENSIONS, AND DETAILS, OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.

SPECIFICATIONS:
CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 818 (2020), SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 2021, AND SPECIAL PROVISIONS.

MATERIAL STRENGTHS:
CONCRETE:

CLASS PCC0446Z.....f'c = 4,000 PSI

FUTURE PAVING ALLOWANCE:
NONE

DIMENSIONS:
WHEN DECIMAL DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.

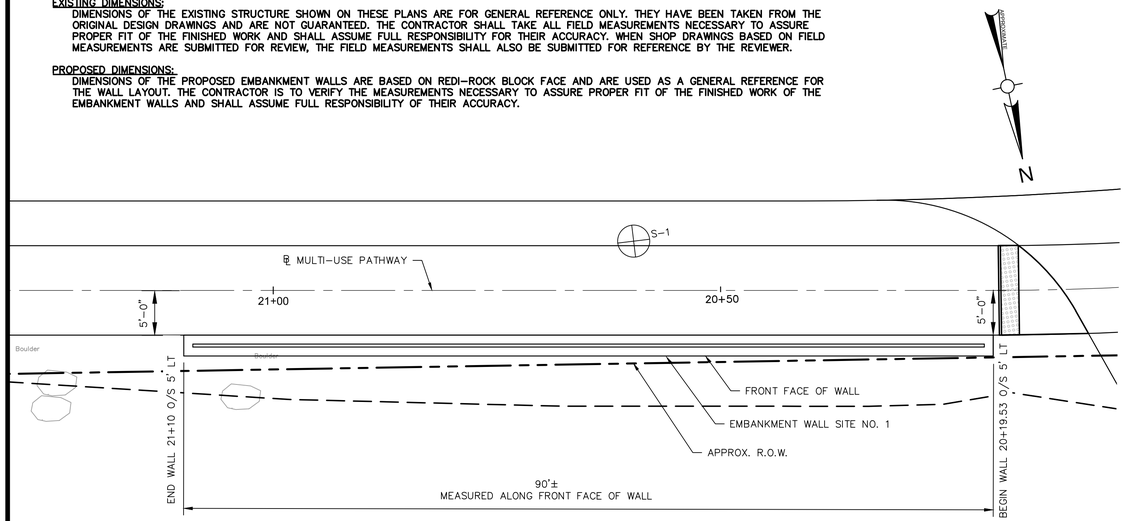
EXISTING DIMENSIONS:
DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR REVIEW, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

PROPOSED DIMENSIONS:
DIMENSIONS OF THE PROPOSED EMBANKMENT WALLS ARE BASED ON REDI-ROCK BLOCK FACE AND ARE USED AS A GENERAL REFERENCE FOR THE WALL LAYOUT. THE CONTRACTOR IS TO VERIFY THE MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK OF THE EMBANKMENT WALLS AND SHALL ASSUME FULL RESPONSIBILITY OF THEIR ACCURACY.

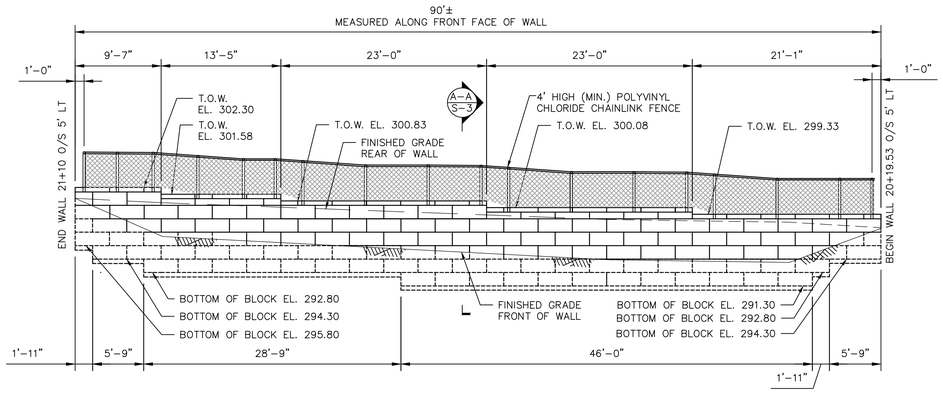
CONCRETE DISTRIBUTION:

THE FOLLOWING PAY ITEMS (AS PART OF THE LUMP SUM COST) AND CONCRETE CLASSES ARE REQUIRED FOR EMBANKMENT WALL COMPONENTS:

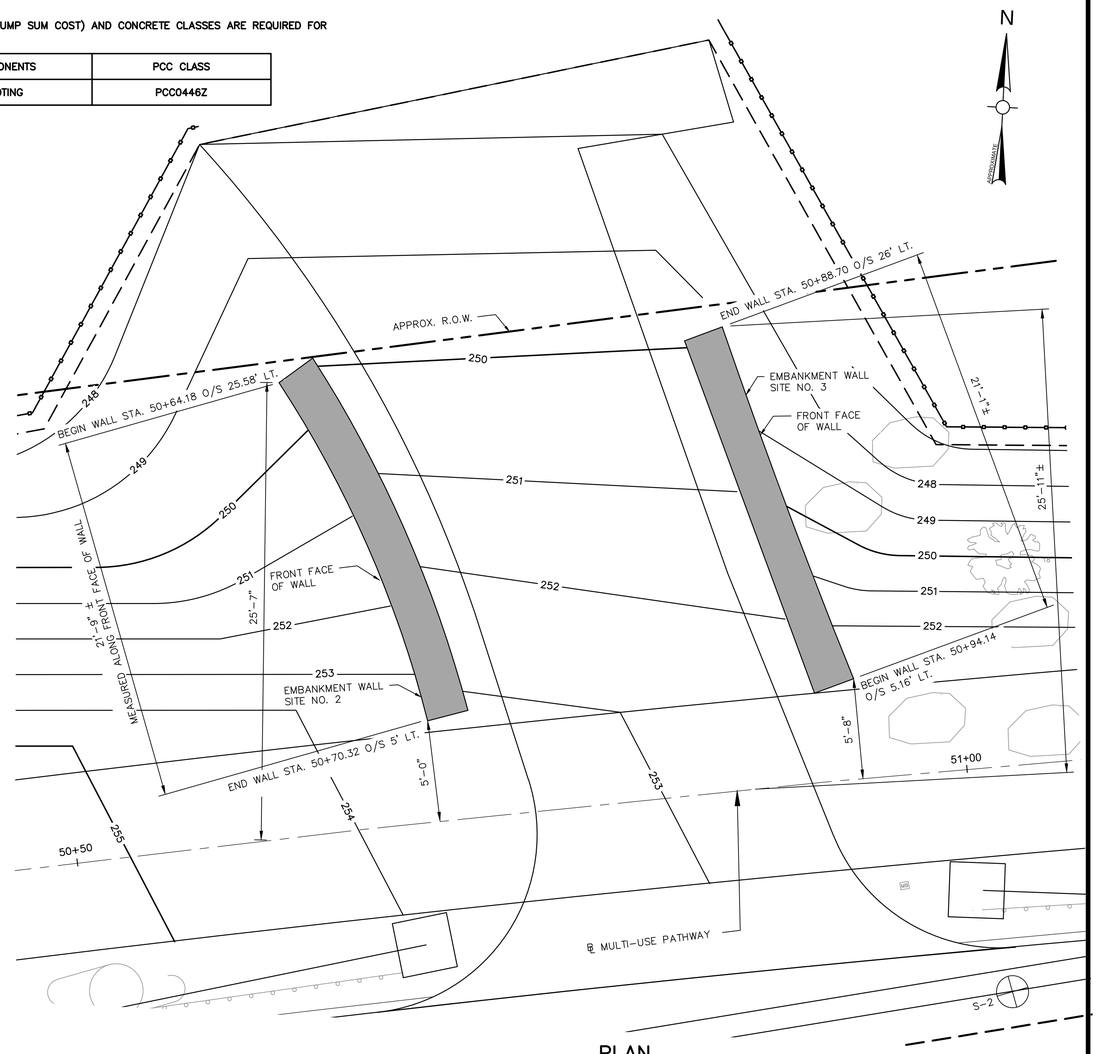
ITEM	COMPONENTS	PCC CLASS
LEVELING PAD	FOOTING	PCC0446Z



PLAN
SCALE 1/8"=1'-0"



ELEVATION – SITE NO. 1
SCALE 1/8"=1'-0"



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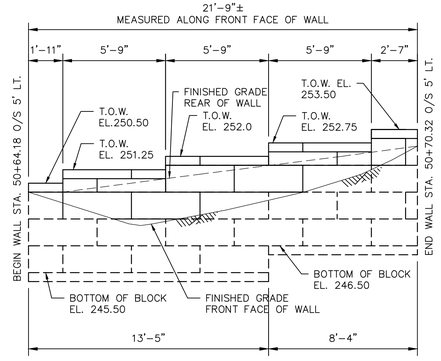

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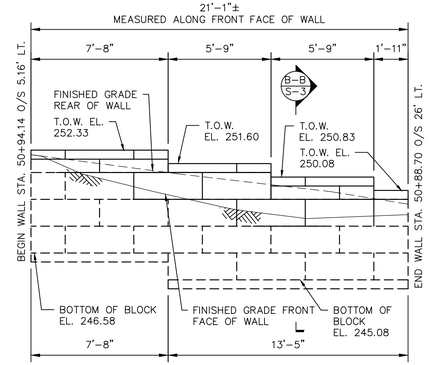

ELEVATION – SITE NO. 3
SCALE 1/4"=1'-0"

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

Weston & Sampson

Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06067
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consultants:

Revisions:

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Drawn By:	JR
Reviewed By:	PJG
Approved By:	LAS
W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:
EMBANKMENT WALL SITE NO. 1, NO. 2, NO.3 PLAN AND ELEVATION

Sheet Number:
S-1

Rev: 1.6 Date: 04/10/2019

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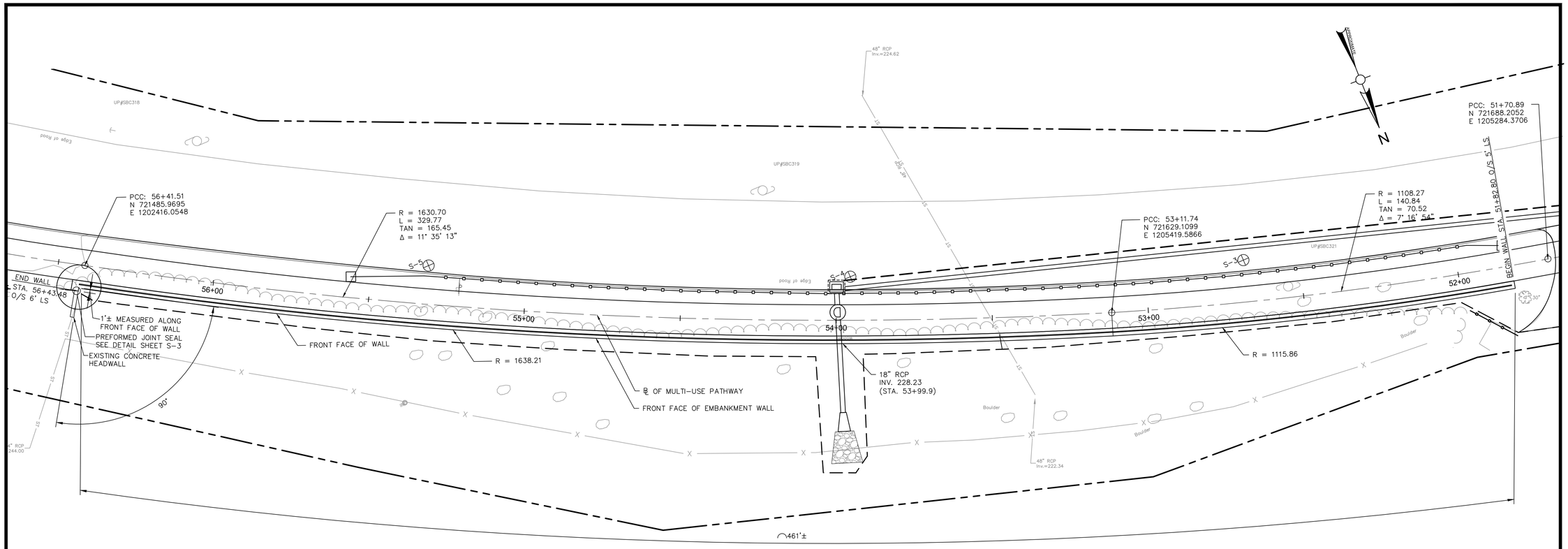
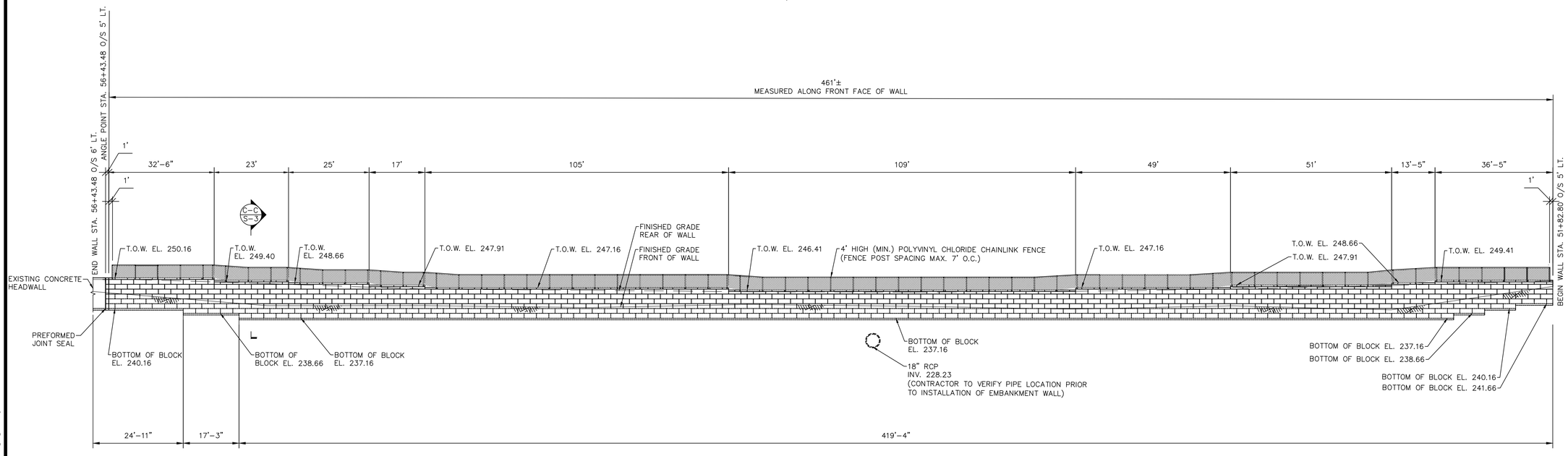


PLAN
SCALE 1/16"=1'-0"



DEVELOPED ELEVATION – SITE NO. 4
SCALE 1/16"=1'-0"

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Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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W&S File No.:	

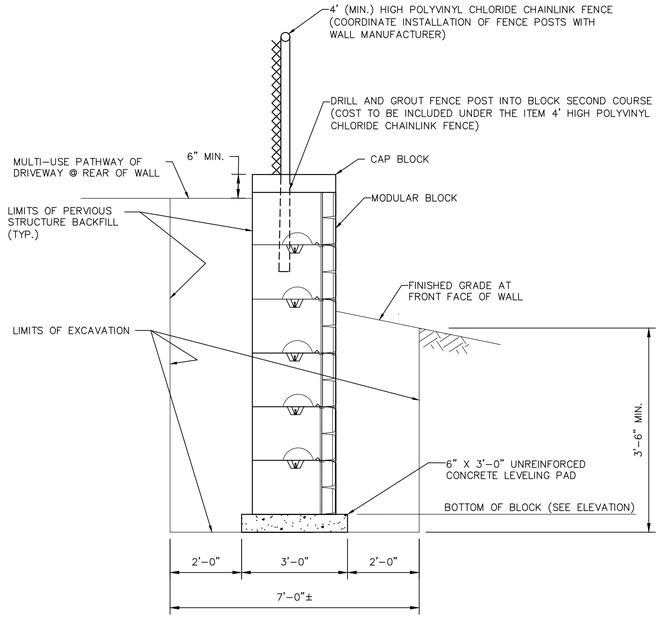
Drawing Title:

EMBANKMENT WALL SITE NO. 4 PLAN, AND ELEVATION

Sheet Number:

S-2

Rev. 1.8 Date: 04/10/2019



SECTION A–A
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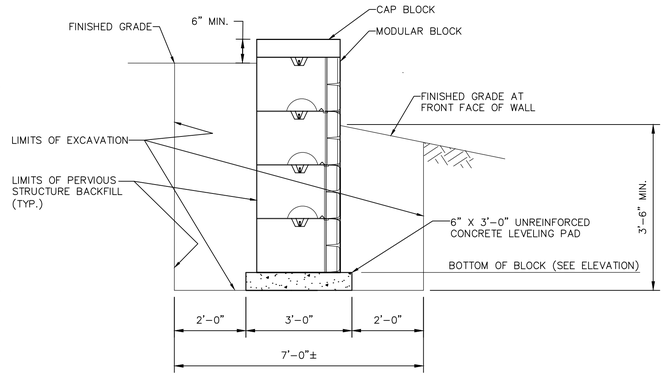
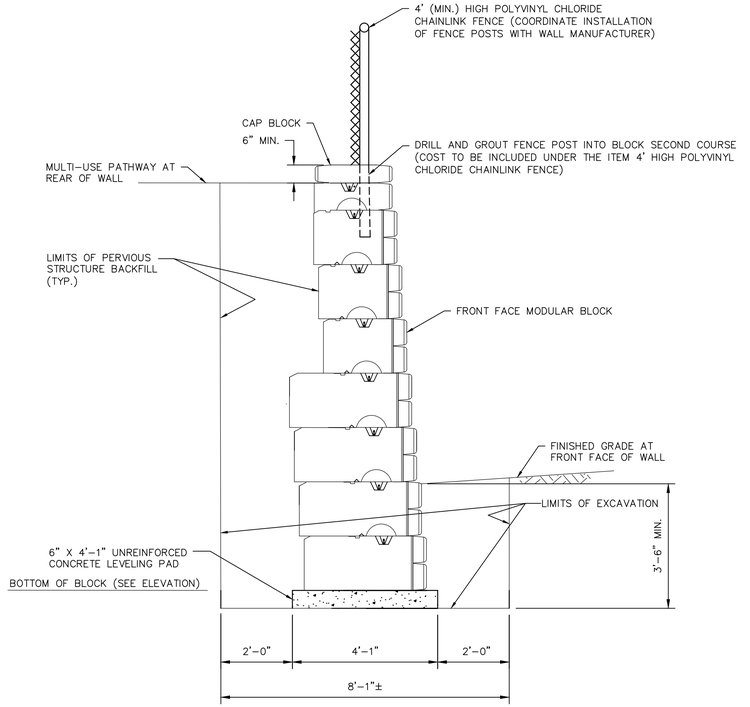


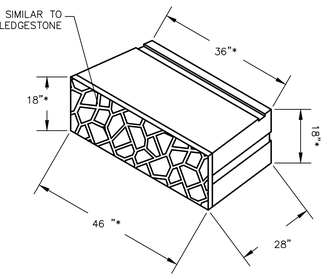
SECTION B–B
SCALE 1/2"=1'-0"



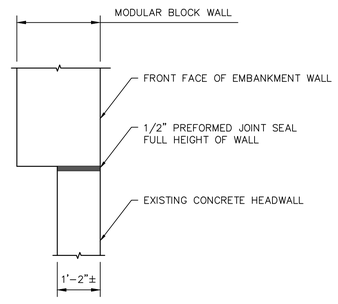
SECTION C–C
SCALE 1/2"=1'-0"

NOTE:

* – CONTRACTOR TO DESIGN MODULAR WALL SYSTEM. BLOCK SHOWN IS REDI–ROCK BLOCK DIMENSIONS. CONTRACTOR MAY USE ALTERNATE BLOCKS PROVIDED ALL THE REQUIREMENTS IN THE PLANS AND SPECIFICATIONS ARE MET.



MODULAR BLOCK
SCALE: N.T.S.



PREFORMED JOINT SEAL DETAIL
SCALE: 1/2"=1'-0"

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY & SIDEWALK EXTENSION

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

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W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

EMBANKMENT WALL SECTIONS AND DETAILS

Sheet Number:

S-3

Rev: 1.6 Date: 04/10/2019

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Client:	Weston & Sampson			**SEABOARD DRILLING, INC.**	**Test Boring B-1, B-2, S-1, B-3, B-4, B-5, B-6, B-7, B-8**
Location:	Ledyard , CT			**649 Meadow St., Chicopee, MA 01013**	
Project:	Colonel. Ledyard Hwy			**DRILLING/SOIL LOG**	**Sheet No. 1 of 1**
Contractor:	**Seaboard Drilling, Inc.**			**Hammer (Weight-lb./fall-30")**	**Start:** 5/31/2022
	Casing		**Core Barrel**	**140/30 300/24**	**Finish:** 5/31/2022
Type	**HSA**	**SS**	**N/A**	**Rig Type: Mobile B-53**	**Driller: Doug Feeley**
O.D. Inch	**8-1/2"**				
I.D. Inch	**4-1/4"**				

Depth (ft.) Range	Blows	Sample No.	Recovery	FIELD CLASSIFICATIONS AND REMARKS
0-8'	N/A	**B-1**		HSA probe to 8", Auger Refusal @ 2.5' Silty Loam, some Sand and Gravel (0-3') No water observed
0-8'	N/A	**B-2**		HSA probe to 8", Auger Refusal @ 7.5' Silty Loam, some Sand and Gravel (0-2') some Clay/Gravel (2-8') No water observed
0-15'	5-3-3-5	**S-1**		HSA probe to 15', Auger refusal @ 4' Sandy Loam/Clay (0-2') Silty Sand/clay Gravel (2-4') No water observed
0-15'	N/A	**B-3**		HSA probe to 15', Auger refusal @ 7.7' Silty loam (0-2'), Sandy Loam (2-8')
0-15'	N/A	**B-4**		HSA probe to 15', Auger refusal @ 5.2' Silty Loam (0-2'), Sand. Loam some Gravel (2-8')
0-8'	N/A	**B-5**		HSA probe to 8' Silty Loam (0-2') Sandy Loam (2-8') No Refusal No water observed
0-8'	N/A	**B-6**		HSA probe to 8' Silty Loam (0-2') Sandy Loam (2-6'), Sand, No Refusal No water observed
0-8'	N/A	**B-7**		HSA probe to 8', Auger refusal @ 6.5' Silty Loam (0-3'), Sandy Loam (3-7') No water observed
0-8'	N/A	**B-8**		HSA probe to 8', Auger refusal @ 4' Loam/Silty Loam (0-4') No water observed

SAMPLE PENETRATION RESISTANCE - 140 lb. Wt. Falling 30" on 2" O.D. sampler

Density (# Hammer Blows)		Cohesive Consistence (# Hammer Blows)				PROPORTIONS	
0-4	Very Loose	0-2	Very Soft	3-4	Soft	Trace	0 to 10%
5-9	Loose	5-8	Medium-Stiff	9-15	Stiff	Little	10 to 20%
10-29	Medium-Dense	16-30	Very Stiff	31+	Hard	Some	20 to 35%
30-49	Dense					and	30 to 50%
50+	Very Dense						

BORING LOG S-1

Client:	Weston & Sampson			**SEABOARD DRILLING, INC.**	**Test Boring/ S-2**
Location:	Ledyard, Ct			**649 Meadow St., Chicopee, MA 01013**	**Monitor Well ID:**
Project:	Colonel Ledyard Hwy			**DRILLING/SOIL LOG**	**Sheet No. 1 of 1**
Contractor:	**Seaboard Drilling, Inc.**			**Hammer (Weight-lb./fall-30")**	**Start:** 7/12/2022
	Casing		**Core Barrel**	**140/30 300/24**	**Finish:** 7/12/2022
Type	**HSA**	**SS**	**N/A**	**Rig Type: Mobile B-53**	**Driller: Dale Griffin**
O.D. Inch	**8-1/2"**				
I.D. Inch	**4-1/4"**				

Depth (ft.) Range	Blows	Sample No.	Recovery	FIELD CLASSIFICATIONS AND REMARKS
1-3'	12-14-10-7	S-1	12"	6" Asphalt Brown coarse to medium sandy loam and gravel
5-7'	3-4-6-4	S-2	4"	Brown coarse to medium sandy loam and gravel
10-12'	8-11-20-45	S-3	10"	Brown coarse to medium sandy loam and gravel Cobble noted in last 2in of sample
15-17'	N/A	N/A	No Rec	Note: rock and boulder @ 15', attempted core through to next benchmark
20-22'	N/A	N/A	No Rec	End of Boring @ 20' no water observed

SAMPLE PENETRATION RESISTANCE - 140 lb. Wt. Falling 30" on 2" O.D. sampler

Density (# Hammer Blows)		Cohesive Consistence (# Hammer Blows)				PROPORTIONS	
0-4	Very Loose	0-2	Very Soft	3-4	Soft	Trace	0 to 10%
5-9	Loose	5-8	Medium-Stiff	9-15	Stiff	Little	10 to 20%
10-29	Medium-Dense	16-30	Very Stiff	31+	Hard	Some	20 to 35%
30-49	Dense					and	30 to 50%
50+	Very Dense						

BORING LOG S-2

Client:	Weston & Sampson			**SEABOARD DRILLING, INC.**	**Test Boring/ S-3**
Location:	Ledyard, Ct			**649 Meadow St., Chicopee, MA 01013**	**Monitor Well ID:**
Project:	Colonel Ledyard Hwy			**DRILLING/SOIL LOG**	**Sheet No. 1 of 1**
Contractor:	**Seaboard Drilling, Inc.**			**Hammer (Weight-lb./fall-30")**	**Start:** 7/11/2022
	Casing		**Core Barrel**	**140/30 300/24**	**Finish:** 7/11/2022
Type	**HSA**	**SS**	**N/A**	**Rig Type: Mobile B-53**	**Driller: Dale Griffin**
O.D. Inch	**8-1/2"**				
I.D. Inch	**4-1/4"**				

Depth (ft.) Range	Blows	Sample No.	Recovery	FIELD CLASSIFICATIONS AND REMARKS
1-3'	17-17-14-17	S-1	5"	6" Asphalt Brown coarse to medium sandy loam and gravel
5-7'	35-19-4-5	S-2	2"	Brown coarse to medium sandy loam and gravel
				Note: rock and boulder @ 10' attempted core through
10-12'	N/A	N/A	N/A	No sample recovery, rock coring Penetrated rock/boulder @ ~16'
15-17'	9-5-6-8	S-3	8"	Grey medium loamy sand and gravel
20-22'	5-14-13-10	S-4	8"	Grey medium loamy sand and gravel
25-27'	9-8-14-13	S-5	8"	Grey Sand and gravel End of Boring @ 27' no water observed

SAMPLE PENETRATION RESISTANCE - 140 lb. Wt. Falling 30" on 2" O.D. sampler

Density (# Hammer Blows)		Cohesive Consistence (# Hammer Blows)				PROPORTIONS	
0-4	Very Loose	0-2	Very Soft	3-4	Soft	Trace	0 to 10%
5-9	Loose	5-8	Medium-Stiff	9-15	Stiff	Little	10 to 20%
10-29	Medium-Dense	16-30	Very Stiff	31+	Hard	Some	20 to 35%
30-49	Dense					and	30 to 50%
50+	Very Dense						

BORING LOG S-3

Client:	Weston & Sampson			**SEABOARD DRILLING, INC.**	**Test Boring/ S-4**
Location:	Ledyard, Ct			**649 Meadow St., Chicopee, MA 01013**	**Monitor Well ID:**
Project:	Colonel Ledyard Hwy			**DRILLING/SOIL LOG**	**Sheet No. 1 of 1**
Contractor:	**Seaboard Drilling, Inc.**			**Hammer (Weight-lb./fall-30")**	**Start:** 6/3/2022
	Casing		**Core Barrel**	**140/30 300/24**	**Finish:** 6/3/2022
Type	**HSA**	**SS**	**N/A**	**Rig Type: Mobile B-53**	**Driller: Doug Feeley**
O.D. Inch	**8-1/2"**				
I.D. Inch	**4-1/4"**				

Depth (ft.) Range	Blows	Sample No.	Recovery	FIELD CLASSIFICATIONS AND REMARKS
1-3'	18-13-11-11	S-1	10"	2" Asphalt Brown SAND and Gravel
5-7'	28-50/2"	S-2	1"	Brown SAND and Gravel
5-7' a	22-10-11-15	S-3	1"	Brown fine to coarse SAND and Gravel (Cobbles 5.5' offset)
10-12'	11-11-6-8	S-4	0	No recovery, casing refusal, no water return End of Boring @ 12'

SAMPLE PENETRATION RESISTANCE - 140 lb. Wt. Falling 30" on 2" O.D. sampler

Density (# Hammer Blows)		Cohesive Consistence (# Hammer Blows)				PROPORTIONS	
0-4	Very Loose	0-2	Very Soft	3-4	Soft	Trace	0 to 10%
5-9	Loose	5-8	Medium-Stiff	9-15	Stiff	Little	10 to 20%
10-29	Medium-Dense	16-30	Very Stiff	31+	Hard	Some	20 to 35%
30-49	Dense					and	30 to 50%
50+	Very Dense						

BORING LOG S-4

Client:	Weston & Sampson			**SEABOARD DRILLING, INC.**	**Test Boring/ S-5**
Location:	Ledyard, Ct			**649 Meadow St., Chicopee, MA 01013**	**Monitor Well ID:**
Project:	Colonel Ledyard Hwy			**DRILLING/SOIL LOG**	**Sheet No. 1 of 1**
Contractor:	**Seaboard Drilling, Inc.**			**Hammer (Weight-lb./fall-30")**	**Start:** 6/2/2022
	Casing		**Core Barrel**	**140/30 300/24**	**Finish:** 6/3/2022
Type	**HSA**	**SS**	**N/A**	**Rig Type: Mobile B-53**	**Driller: Doug Feeley**
O.D. Inch	**8-1/2"**				
I.D. Inch	**4-1/4"**				

Depth (ft.) Range	Blows	Sample No.	Recovery	FIELD CLASSIFICATIONS AND REMARKS
1-3'	16-19-43-21	S-1	6"	2" Asphalt Brown coarse SAND and Gravel
5-7'	10-23-26-48	S-2	4"	Grey to Brown fine to med SAND and Gravel
				Note: rock and boulder @ 8' reset casing offset, washout to 10'
10-12'	9-5-2-3	S-3	3"	Brown fine Sand and Silt
15-17'	26-35-29-30	S-4	10"	Brown fine Sand and Silt
20-22'	16-15-24-21	S-5	12"	Brown coarse SAND and Gravel
25-27'	11-13-13-17	S-6	8"	Grey Sandy SILT and Gravel End of Boring @ 27' no water observed

SAMPLE PENETRATION RESISTANCE - 140 lb. Wt. Falling 30" on 2" O.D. sampler

Density (# Hammer Blows)		Cohesive Consistence (# Hammer Blows)				PROPORTIONS	
0-4	Very Loose	0-2	Very Soft	3-4	Soft	Trace	0 to 10%
5-9	Loose	5-8	Medium-Stiff	9-15	Stiff	Little	10 to 20%
10-29	Medium-Dense	16-30	Very Stiff	31+	Hard	Some	20 to 35%
30-49	Dense					and	30 to 50%
50+	Very Dense						

BORING LOG S-5

Client:	Weston & Sampson			**SEABOARD DRILLING, INC.**	**Test Boring/ S-6**
Location:	Ledyard, Ct			**649 Meadow St., Chicopee, MA 01013**	**Monitor Well ID:**
Project:	Colonel Ledyard Hwy			**DRILLING/SOIL LOG**	**Sheet No. 1 of 1**
Contractor:	**Seaboard Drilling, Inc.**			**Hammer (Weight-lb./fall-30")**	**Start:** 6/2/2022
	Casing		**Core Barrel**	**140/30 300/24**	**Finish:** 6/2/2022
Type	**HSA**	**SS**	**N/A**	**Rig Type: Mobile B-53**	**Driller: Doug Feeley**
O.D. Inch	**8-1/2"**				
I.D. Inch	**4-1/4"**				

Depth (ft.) Range	Blows	Sample No.	Recovery	FIELD CLASSIFICATIONS AND REMARKS
1-3'	12-16-15-8	S-1	8"	2" Asphalt Brown coarse Loamy SAND and Gravel
5-7'	30-18-16-16	S-2	8"	Brown med to coarse SAND, some loam and Gravel
10-12'	12-12-15-25	S-3	6"	Brown fine to med Sand, some Clay and Gravel
15-17'	21-18-31-30	S-4	3"	Grey fine to med SAND and loam and Gravel
20-22'	16-15-24-21	S-5	12"	Brown coarse SAND and Gravel
25-27'	11-13-13-17	S-6	8"	Grey Sandy SILT and Gravel End of Boring @ 17'
				No water observed, borehole filled with wash water.

SAMPLE PENETRATION RESISTANCE - 140 lb. Wt. Falling 30" on 2" O.D. sampler

Density (# Hammer Blows)		Cohesive Consistence (# Hammer Blows)				PROPORTIONS	
0-4	Very Loose	0-2	Very Soft	3-4	Soft	Trace	0 to 10%
5-9	Loose	5-8	Medium-Stiff	9-15	Stiff	Little	10 to 20%
10-29	Medium-Dense	16-30	Very Stiff	31+	Hard	Some	20 to 35%
30-49	Dense					and	30 to 50%
50+	Very Dense						

BORING LOG S-6

Project:
TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

Weston & Sampson

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Consultants:

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Drawn By:	JR
Reviewed By:	PJG
Approved By:	LAS
W&S Project No.:	ENG20-1119
W&S File No.:	

Drawing Title:

BORING LOGS

Sheet Number:

S-4

Rev: 1.8 Date: 04/10/2019

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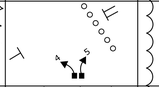
MOVEMENT DIAGRAM

NTOR	PHASE 1 PRE-EMPT 1	PHASE 2	PHASE 3	PHASE 4 PRE-EMPT 2	PHASE 5	PHASE 6	PHASE 7	PHASE 8
NONE								

FACE #		FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	LPI	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
	1	Y	←G	←G	G	G	Y	R				R	R	R	R															
	2	Y	G	G	G	G	Y	R				R	R	R	R															
	3	Y	R	R	R	G	Y	R				R	R	R	R															
	4	R	R	R	R	R	R	R				R	G	Y	R															
	5	R	R→	R→	R	R	R	R				R	G	Y	R															
	P	OFF	← DW →			← DW →						WØ	← DW →																	

INTERVALS	PHASE 1 PRE-EMPT 1	PHASE 2	PHASE 3	PHASE 4 PRE-EMPT 2	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		9				
WALK				4 ① 3 ①				
PED CLR				11 ② ACCESSIBLE PEDESTRIAN SIGNAL				
VEH EXT	2.0	2.5		2.0				
MAX 1	10	40		17				
MAX 2	15	50		25				
YELLOW	3.0	4.2		3.3				
RED	1.0	1.5		1.0				
ADD INIT								
MAX INIT				COUNTDOWN PEDESTRIAN SIGNAL				
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MIN RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE						

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
1. PERCUSSIVE TONE ONLY DURING LPI AND PEDESTRIAN WALK INTERVAL.
2. COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL.
3. LPI AND CONCURRENT PED PHASE ONLY COMES IN WHEN ACTUATED BY PUSHBUTTON.

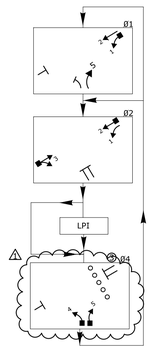
PHASE 2 ON TO OMIT PHASE 1

OFFICE RECORD

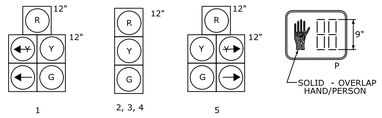
REV #	TIR # N/A	SM # N/A	SIGNAL REVISED:

REPLACED TRAFFIC CONTROL SIGNAL EQUIPMENT AND ADDED EMERGENCY VEHICLE PRE-EMPTION UNDER STATE PROJECT NO. 0172-0476.

PHASING DIAGRAM



SIGNAL FACES



ALL INDICATIONS HAVE LED LAMPS.

ALL VEHICULAR SIGNAL FACES HAVE BACKPLATES WITH YELLOW RETROREFLECTIVE BORDER.

CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W PRIOR TO EXCAVATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

INSTALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREAS.

⚠
(E) CONSTRUCT TYPE 10 SIDEWALK RAMP PER GUIDE SHEETS.

(F) TRIM TREE BRANCHES/VEGETATION TO IMPROVE AND MAINTAIN SIGHT LINE OF SIGNAL HEAD 2 AND VIDEO DETECTION ZONES FROM CAMERAS. WORK TO BE PAID UNDER ITEM NO. 0952001A SELECTIVE CLEARING AND THINNING.

(G) INSTALL SPAN POLE FOUNDATION ADJACENT TO AND WITHIN R.O.W.

⚠
(H) INSTALL PEDESTAL DIRECTLY BEHIND GUIDE RAIL. USE EXTENSION BRACKET TO MAKE PUSHBUTTON ACCESSIBLE FROM CONCRETE SIDEWALK RAMP.

(W) INSTALL 30" X 30" HANDHOLE.

(X) VIDEO DETECTION BY USE OF VIDEO-THERMAL AND 360 DEGREE CAMERAS WITH 3' VERTICAL RISER MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(Y) VIDEO DETECTION BY USE OF VIDEO-THERMAL CAMERA MOUNTED ON SPAN POLE 071-212-B.

INSTALL RISER ON UTILITY POLE SNET 5650.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER:
* REPLACE UTILITY POLE AT&T #6241 WITH A 45' CLASS 2 POLE.
* REPLACE UTILITY POLE SNET #5650 WITH A 45' CLASS 2 POLE.
* REPLACE UTILITY POLE SNET #5649 WITH A 45' CLASS 2 POLE.
* ATTACH HANGING COMMUNICATION WIRES TO UTILITY POLE FRONTIER 7328

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY EVERSOURCE:
* RELOCATE OVERHEAD FACILITIES ON UTILITY POLE AT&T #6241 AFTER FRONTIER POLE CHANGES.
* RELOCATE OVERHEAD FACILITIES ON UTILITY POLE SNET #5650 AFTER FRONTIER POLE CHANGES.
* RELOCATE OVERHEAD FACILITIES ON UTILITY POLE SNET #5649 AFTER FRONTIER POLE CHANGES.
* RAISE SECONDARY CABLES ON UTILITY POLE AT&T #6241 BY APPROXIMATELY 6'
* RAISE SECONDARY CABLES ON UTILITY POLE SNET #5649 BY APPROXIMATELY 1' 4"
* RAISE SECONDARY CABLES ON UTILITY POLE SNET #5650 TO ACCOMMODATE FOR HEIGHT INCREASES ON OTHER UTILITY POLES.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE CONTROLLER CABINET.

CONTRACTOR TO REVISE PAVEMENT MARKINGS AS INDICATED BELOW

INSTALL NEW CROSSWALK ON ON RT. 117 NORTH LEG.

INSTALL DOUBLE YELLOW LINES TO CREATE PAINTED ISLAND AS SHOWN ON THE ROUTE 117 SOUTH LEG

REPAINT LEFT TURN PAVEMENT ARROWS ON RT. 117 NORTH LEG.

REPAINT ALL STOP BARS.

INSTALL 150' OF SOLID WHITE LANE LINE ON RT. 117 NORTH LEG LEFT TURN LANE.

DETECTORS			
IDENT	SIZE (WXL)	TYPE	MODE
D1	7' X 40'	VIDEO 360	PRESENCE
D2	6'X6'	VIDEO-THERM	PRESENCE
D2A	6'X6'	VIDEO-THERM	PRESENCE
D2B	6'X6'	VIDEO-THERM	PRESENCE
D2C	6'X6'	VIDEO-THERM	PRESENCE
D4	7'X63'	VIDEO 360	PRESENCE
D4A	SEE PLAN	VIDEO 360	8" DELAY
SD2	8'X39'	VIDEO 360	PRESENCE
SD2A	7'X40'	VIDEO 360	PRESENCE

SYSTEM LOC: MASTER

COORDINATION TYPE: NONE

PROGRAM			CYCLE	OFFSET	
FUNCTION	TIME	DAYS		SEC	%
FLASH	NONE				
MAX 1	ALL OTHER TIMES				
MAX 2	0700-0900	M-SAT			
	1530-1800				

SIGN LEGEND:

(A) INSTALL NEW 31-1625 — TURNING VEHICLES YIELD TO

(B) REPLACE EXISTING — ONLY — WITH 31-0222 — ONLY

(C) REPLACE EXISTING — ONLY ONLY — WITH 31-0290 (Z) — ONLY ONLY

(D) SPAN MOUNT 31-0183 — ONLY

(E) INSTALL 51-5202 — CENTER GROTON

(F) INSTALL 51-5202 — COL. LEDYARD

(G) INSTALL 41-4207

NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 117 (CENTER GROTON RD. & COLONEL LEDYARD HWY) AND ALL STOP BARS.

TOWN OF LEDYARD TO MAINTAIN SIGNS AND ALL OTHER PAVEMENT MARKINGS ON COLONEL LEDYARD HIGHWAY.

OTHERS TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON RETAIL AND PRIVATE DRIVEWAY.

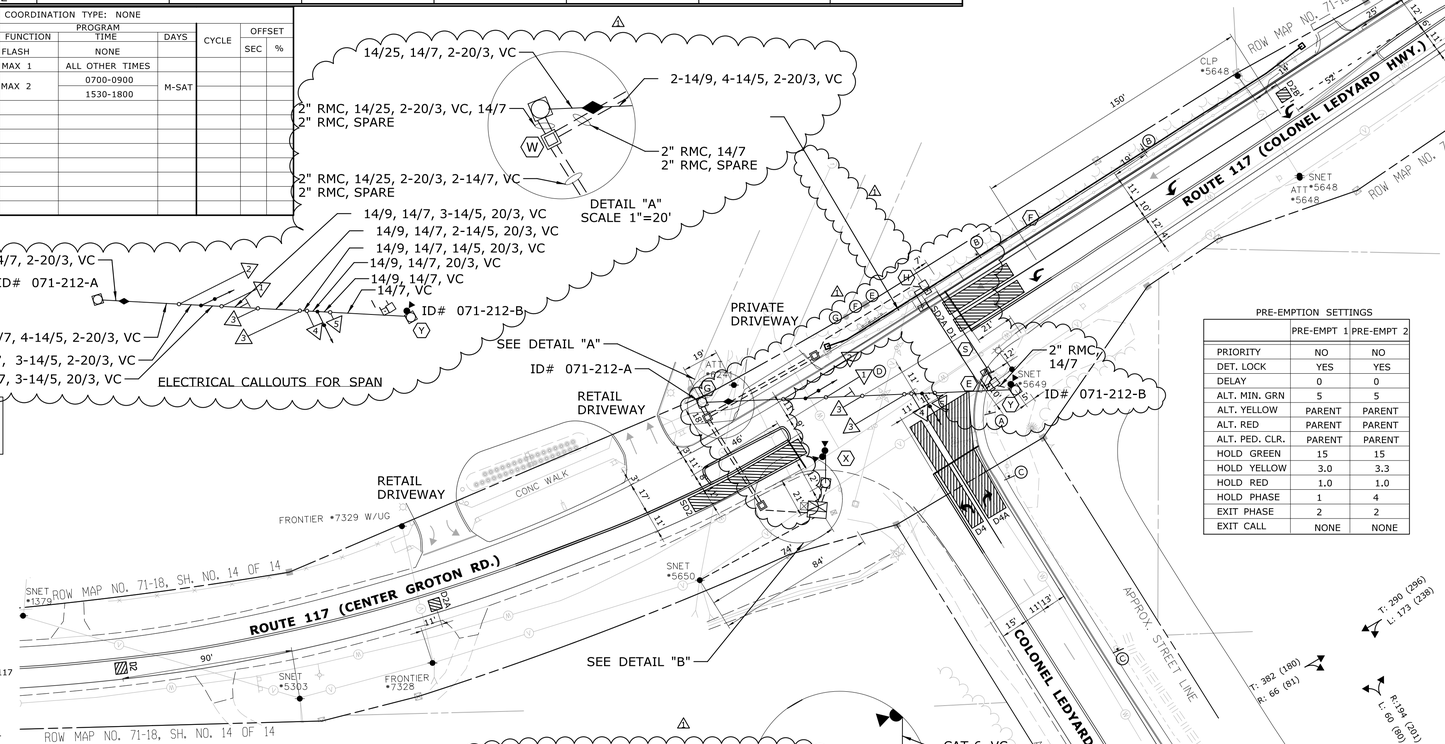
TOWN OF LEDYARD TO OWN AND MAINTAIN THE PRE-EMPTION EQUIPMENT.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED.

(W) 30" X 30" HANDHOLE.

(X) VIDEO DETECTION BY USE OF VIDEO-THERMAL AND 360 DEGREE CAMERAS WITH 3' VERTICAL RISER MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(Y) VIDEO DETECTION BY USE OF VIDEO-THERMAL CAMERA MOUNTED ON SPAN POLE 071-212-B.



SPAN POLE INFORMATION					
ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	VERTICAL RISER FOR 360 CAMERA	YEAR INSTALLED
071-212-A	34'	24"	N/A	N/A	-
071-212-B	30'	24"	N/A	N/A	-
-	-	-	-		-
-	-	-	-		-

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	PARENT	PARENT
HOLD GREEN	15	15
HOLD YELLOW	3.0	3.3
HOLD RED	1.0	1.0
HOLD PHASE	1	4
EXIT PHASE	2	2
EXIT CALL	NONE	NONE

T: 290 (286)
L: 173 (238)
T: 382 (180)
R: 66 (81)
R: 194 (201)
L: 60 (80)

2019 TRAFFIC COUNTS
P.M. PEAK HOUR (AM PEAK HOUR)

EMERGENCY PRE-EMPTION NOTES

INSTALL AUXILIARY EQUIPMENT CABINET ON LEFT SIDE OF CONTROLLER CABINET. INSTALL PRE-EMPTION EQUIPMENT IN AUXILIARY CABINET.

CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

DESIGN INITIATED CHANGE ORDER NO. 1 02/18/22

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	JONAS LUCCEUS	WALEED TELLAWI
DRAWN BY	JONAS LUCCEUS	WALEED TELLAWI
CHECKED BY	DANIEL VERONESI	RAJA POLINENI
SUBMITTED BY	GREGORY PALMER	JORGE M. KULJIS
APPROVED BY	MARK F. MAKUCH	MARK F. MAKUCH
APPROVED DATE	02/05/2021	02/05/2021

REV # — INTERSECTION # 071-212

ENERGY BY - TOWN | ADDRESS #
MAINT LEVEL 5 | SERVICE POLE SNET #5650
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION
⚠	02/22	RELOCATED CROSSWALK TO NORTH LEG

LEGEND:
R, Y, G RED, YEL, GRN
◄R RED ARROW
◄Y YELLOW ARROW
◄— GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

VC VIDEO CAMERA CABLE
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSCEIVER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 5/3/2023 P:\CT\Ledyard CT\ENG20-1119 LOTCIP MultiUse Trail 2020\Data From Others\DOT\2023_0410 - TCS DGNs\TR_TCS_MSH_071_212_XXXpending DICO No. 1.dgn

Weston & Sampson
712 Brook Street Suite 103, Rocky Hill, CT 06067
860.513.1473 800.SAMPSON
www.westonandsampson.com

ROUTE 117 (CENTER GROTON ROAD AND COLONEL LEDYARD HIGHWAY) AT COLONEL LEDYARD HIGHWAY

SCALE 1" = 40'

TOWN: **LEDYARD**

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

PROJECT NO. 0172-0476
DRAWING NO. TCS-07
SHEET NO.

File #: 23-1543 **Agenda Date:** 7/25/2023 **Agenda #:** 2.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Rules and Regulation review and possible changes continued.

Background:
From the June 27, 2023 meeting:
Recommendation to name the updated policy manual the "Customer handbook" and to combine the rules and regulations and the policies into one handbook

Department Comment/Recommendation:
(type text here)

Policy Manual

of the

Ledyard, CT

Water Pollution Control Authority

Table of Contents

Policy	Page Number
Application for Water Service Pipe Construction	
Cross-Connection and Backflow Prevention Inspection Program	
Installation of Water Mains at Customer Request on Public Streets	
Multiple Service Connections to Private Water Mains	
Ownership of Water Mains	
Swimming Pool Filling	
Thawing Frozen Water Services	
Water Main and Service Definitions	
Water Meters and Services per Premise	
Water Services – Installation and Maintenance Responsibilities	

APPLICATION FOR WATER SERVICE PIPE CONSTRUCTION

1. Scope:

This policy shall cover the installation of any water service pipe whether domestic or fire. It shall also cover customer owned mains on private property (whether or not they are to be eventually turned over to the WPCA) but exclude those on proposed streets. It shall not cover the installation of fire hydrants.

2. Water Service / Water Main Definition:

a. Any water pipe serving two or more buildings or one building with two or more separate service branches (such as a shopping center or condominium) shall be considered a main.

b. Any main serving only one property shall be considered a private main and title shall remain in the name of the property owner.

c. Any main serving two or more properties under separate ownerships shall be considered a public main and the WPCA may require transfer of ownership to the WPCA.

3. Applications:

a. The customer shall completely fill out and sign an "Application for Water Service Pipe", available from the WPCA's service provider, for any permanent installation of any new water service pipe or for the renewal of an existing water service pipe in our franchised service area.

b. Completed applications shall be submitted to the service provider's Project Management Office in order for engineering orders and construction work orders required to initiate the work to be prepared.

c. The "Application for Water Service Pipe construction" should not be confused with the "Application for Service", which is a separate application for service that establishes responsibility for charges for water used. This application is made at the service provider's Customer Service Center.

4. Service Proposal and Estimate:

Upon receipt of an application from a prospective customer setting forth the location of the premises to be served, the extent of service to be required, and other pertinent information, the WPCA's service provider will review the application, prepare a proposal for providing the service, together with a written estimate of cost, and submit same to the applicant in writing. No verbal estimates will be given.

5. Security Deposits:

The WPCA may require a security deposit, equal to the estimated cost of any work to be done, to be paid in advance. When the final figures of cost are known, the deposit will be applied to the bill. If the security deposit is insufficient, the difference will be billed. If the security deposit is in excess of costs, the excess will be refunded.

6. Separate Applications:

A separate application must be made for each separately owned, metered service, each fire sprinkler service if not in combination with a metered service, and each unmetered private main through which water is supplied to separately metered buildings in a complex of buildings on one privately owned property.

7. Availability of Existing Mains:

Applications for service connections will be accepted subject to there being existing mains in the streets or right of ways abutting the premises to be served. The WPCA shall in no way be obligated to extend its mains to serve the premises.

8. Adequacy of Existing Pipe:

Upon receipt of an application for a new service installation, a service installation renewal, or for the restoration of a supply to an existing service, the WPCA will assume that the piping and fixtures which the service will supply are in proper order and the WPCA will not be liable in the event of any accident, break, leakage, or damage to the owner's premises or property resulting from a failure of said piping or fixtures.

9. Changes in Existing Services:

Any changes in location of existing meters or services must first have approval of the WPCA and, if approved, shall be made only at the expense of the owner.

10. Scheduling of Work:

Due to workloads and scheduling requirements, deposits should be made as soon as possible. It is recommended that deposits be made no later than one week in advance of the construction date.

11. Inspection of Installation:

The WPCA's service provider will inspect the installation of the water service pipe. When the installation has been approved, the service provider will oversee the backfill over the water service pipe and will install the water meter. The Ledyard Building Inspector will inspect and approve the water system downstream of the meter.

Approved By: Ledyard WPCA

Date: _____

Supersedes: N/A

CROSS CONNECTION AND BACKFLOW PREVENTION INSPECTION PROGRAM

1. Purpose

The purpose of this Policy is to establish a Cross Connection and Backflow Prevention Inspection Program to:

A. Protect the public potable water supply served by the Ledyard Water Pollution Control Authority (WPCA) from the possibility of contamination or pollution by isolating, within its customers' internal distribution system, such contaminants or pollutants which could backflow or back-siphon into the public water system.

B. Promote the elimination or control of existing cross-connections, existing or potential, between its customers' potable water systems and non-potable systems.

C. Provide for the maintenance of a continuing program of cross-connection control, which will effectively prevent the contamination, or pollution of all potable water systems by cross-connection.

2. Authority

This Program shall be regulated under the authority of:

A. The Federal Safe Drinking Water Act of 1974 as amended and the Regulations of Connecticut State Agencies (RCSA) as they pertain to the Public Health Code, which state the water purveyor has the primary responsibility for preventing water from unapproved sources, or any other substances, from entering the public potable water system.

3. Responsibility

A. The WPCA shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or back-siphonage of contaminants or pollutants through the water service connection. If, in the judgment of the WPCA, an approved backflow device is required at the water service connection to any customer's premises, the WPCA or its service provider shall give notice in writing to said customer to install an approved backflow prevention device at each service connection to his premises. The customer shall, within 90 days, install such approved device or devices at his own expense. Failure or refusal or inability on the part of the customer to install said device or devices

within ninety (90) days shall constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

1. ***Definitions***

A. Approved –
Accepted by the WPCA as meeting an applicable specification stated or cited in policy or as suitable for the proposed use.

B. Auxiliary Water Supply –
Any water supply, on or available, to the premises other than the WPCA's approved public potable water supply.

C. Backflow –
The flow of water or other liquids, mixtures, or substances under positive or reduced pressure in the distribution pipes of a potable water supply from any source other than its intended source.

D. Backflow Preventer –
A device or means designed to prevent backflow or back-siphonage. Most commonly categorized as air gap, reduced pressure principle device, double check valve assembly, pressure vacuum breaker, spill resistant vacuum breaker, atmospheric vacuum breaker, breaker, residential dual check, double check with intermediate atmospheric vent, hose bibb vacuum breaker, and barometric loop.

1.) Air Gap
A physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system. Physically defined as a distance equal to twice the diameter of the supply side pipe diameter but never less than one (1) inch.

2.) Atmospheric Vacuum Breaker
A device which prevents back-siphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in a water system.

3.) Barometric Loop
A fabricated piping arrangement rising at least thirty-five (35) feet at its topmost point above the highest fixture it supplies. It is utilized in water supply systems to protect against back-siphonage.

4.) Double Check Valve Assembly
An assembly of two (2) independently operating spring loaded check valves with tightly closing shut off valves on each side of the check valves, plus properly located test cocks for the testing of each check valve.

5.) Double Check Valve with Intermediate Atmospheric Vent

A device having two (2) spring loaded check valves separated by an atmospheric vent chamber.

6.) Hose Bibb Vacuum Breaker
A device which is permanently attached to a hose bibb and which acts as an atmospheric vacuum breaker.

7.) Pressure Vacuum Breaker, Spill Resistant Vacuum Breaker
A device containing one or two independently operated spring loaded check valves and an independently operated spring loaded air inlet valve located on the discharge side of the check or checks. Device includes tightly closing shut-off valves on each side of the check valves and properly located test cocks for the testing of the check valve(s).

8.) Reduced Pressure Principle Backflow Preventer
An assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between the two (2) check valves, tightly closing shut-off valves on each side of the check valves plus properly located test cocks for the testing of the check valves and the relief valve.

9.) Residential Dual Check
An assembly of two (2) spring loaded, independently operating check valves without tightly closing shut-off valves and test cocks. Generally employed immediately downstream of the water meter to act as a containment device.

E. Backpressure –
A condition in which the owner's system pressure is greater than the supplier's system pressure.

F. Back-siphonage –
The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

G. Commission –
The State of Connecticut, Department of Public Health; 34 – Cross-Connection Control Manual

H. Containment –
A method of backflow prevention which requires a backflow preventer at the water service entrance.

I. Contaminant –
Any physical, chemical, biological, or radiological foreign substance that tends to degrade water quality so as to constitute a hazard or to impair its usefulness.

J. Cross-Connection –

Any actual or potential connection between the public water supply and a source of contamination or pollution.

K. Fixture Isolation –

A method of backflow prevention in which a backflow preventer is located to correct a cross connection at an in-plant location rather than at a water service entrance.

L. Owner –

Any person who has legal title to, or license to operate or habitat in, a property upon which a cross-connection inspection is to be made or upon which a cross-connection is present.

M. Person –

Any individual, partnership, company, public or private corporation, political subdivision or agency of the State, agency or instrumentality of the United States, or any other legal entity.

N. Permit –

A document issued by the WPCA that allows the use of a backflow preventer.

O. Pollutant –

A foreign substance that if permitted to get into the public water system will degrade its quality so as to constitute a moderate hazard, or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably effect such water for domestic use.

P. Water Service Entrance –

That point in the owner's water system beyond the sanitary control of the WPCA; generally considered to be the outlet end of the water meter and always before any unprotected branch.

2. ***Administration***

A. The WPCA will operate a cross-connection control program, to include the keeping of necessary records, which fulfills the requirements of the Commission's Cross-Connection Regulations and is approved by the Commission.

B. The Owner shall allow his property to be inspected for possible cross-connections and shall follow the provisions of the WPCA's program and the Commission's Regulations if a cross-connection is permitted.

C. If the WPCA requires that the public supply be protected by containment, the Owner shall be responsible for water quality beyond the outlet end of the containment device and should utilize fixture outlet protection for that purpose.

The Owner shall utilize the WPCA's service provider personnel to assist in the survey of his facilities and to assist in the selection of proper fixture outlet devices and the proper installation of these devices.

3. ***Requirements***

A. WPCA

1.) On new installations, the WPCA's service provider will provide onsite evaluation and/or inspection of plans in order to determine the type of backflow preventer, if any, that will be required, and will issue the permit and perform inspection and testing services as required with the cost of any testing to be the responsibility of the Owner.

2.) For premises existing prior to the approval of this program, the WPCA's service provider will perform evaluations and inspections of plans and/or premises and inform the Owner by letter of any corrective action deemed necessary, the method of achieving the correction, and the time allowed for the correction to be made. Ordinarily, ninety (90) days will be allowed; however, this time period may be shortened depending upon the degree of hazard involved and the history of the device(s) in question.

3.) The WPCA will not allow any cross-connection to remain unless it is protected by an approved backflow preventer and which will be regularly tested to insure satisfactory operation.

4.) The WPCA's service provider shall inform the Owner by letter of any failure to comply by the time of the first re-inspection. The WPCA will allow an additional fifteen (15) days for the correction. In the event the Owner fails to comply with the necessary correction by the time of the second re-inspection, the WPCA will inform the Owner by letter that the water service to the Owner's premises will be terminated within a period not to exceed five (5) days. In the event that the Owner informs the WPCA of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the WPCA but in no case will exceed an additional thirty (30) days.

5.) If the WPCA determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

6.) The WPCA will continue premise inspections to determine the nature of existing or potential hazards during the calendar year.

B. Owner

1.) The Owner shall be responsible for the elimination or protection of all cross-connections on his premises.

2.) The Owner, after having been informed by a letter from the WPCA, shall at his expense, install, maintain, and test, or have tested, any and all backflow preventers on his premises.

3.) The Owner shall correct any malfunction of the backflow preventer that is revealed by periodic testing.

4.) The Owner shall inform the WPCA of any proposed or modified cross-connections and also any existing cross-connections of which the Owner is aware but has not been found by the WPCA.

5.) The Owner shall not install a bypass around any backflow preventer unless there is a backflow preventer of the same type on the bypass. Owners who cannot shut down operations for testing of the device(s) must supply additional devices necessary to allow testing to take place during the normal working hours.

6.) The Owner shall install backflow preventers in a manner approved by the WPCA

7.) The Owner shall install only backflow preventers approved by the WPCA or the Commission.

8.) Any Owner having a private well or other private water source shall be required to install a backflow preventer at the service entrance if a private water source is maintained, even if it is not cross-connected to the WPCA's system.

9.) Plumbing installed by the Owner to provide potable water for domestic purposes must have its own backflow preventer installed.

10.) The Owner shall be responsible for the payment of all fees for permits, annual device testing, retesting in the case that the device fails to operate correctly, and second re-inspections for non-compliance with WPCA or Commission requirements.

4. ***Degree of Hazard***

The WPCA recognizes the threat to the public water system arising from cross-connections. All threats will be classified by degree of hazard and will require the installation of approved reduced pressure principle backflow prevention devices or double check valves.

5. ***Cross Connections***

The WPCA shall not permit a cross-connection within the public water supply system.

6. ***Existing In-Use Backflow Prevention Devices***

Any existing backflow preventer shall be allowed by the WPCA to continue in service unless the degree of hazard is such as to supersede the effectiveness of the present backflow preventer, or result in an unreasonable risk to the public health. Where the degree of hazard has increased, as in the case of a residential installation converting to a business establishment, any existing backflow preventer must be upgraded to a reduced pressure principle device, or a reduced pressure principle device must be installed in the event that no backflow device was present.

7. ***Periodic Testing***

A. If an Owner has an operational well on the premises, it must be inspected at least every five years to ensure that there is an air gap between the well piping and the potable water service provided by the WPCA.

B. Reduced pressure principle backflow devices shall be tested and inspected at least annually.

C. Periodic testing shall be performed by the WPCA's service provider. This testing will be done at the owner's expense.

D. The testing shall be conducted during regular business hours. When at the request of the owner, exceptions to this may require additional charges to cover the increased costs to the WPCA.

E. Any backflow preventer that fails during a periodic test will be repaired or replaced. When repairs are necessary, the device will be re-tested at the owner's expense upon completion of repairs to insure correct operation. High hazard situations will not be allowed to continue unprotected if the backflow preventer fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than fifteen (15) days after the test date will be established. The owner is responsible for spare parts, repair tools, or a replacement device. Parallel installation of two (2) devices is an effective means of insuring uninterrupted water service during testing or repair of devices and is strongly recommended when the owner desires such continuity.

F. Backflow prevention devices will be tested more frequently than specified in paragraph 7.B. above in cases where there is a history of test failures and the WPCA feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional tests will be borne by the owner.

8. ***Records and Reports***

A. Records –

The WPCA's service provider will initiate and maintain the following:

1.) Master files of customer cross-connections and backflow prevention devices.

2.) Master files of cross-connection tests and/or inspections.

3.) Copies of permits and permit applications.

4.) Copies of lists and summaries supplied to the Commission.

B. Reports

The WPCA's service provider will submit the following to the Commission:

1.) Initial listing of low hazard cross-connections to the State.

2.) Initial listing of high hazard cross-connections to the State.

3.) Annual update lists of items 1 and 2 above.

4.) Annual summary of cross-connections inspections to the State.

9. ***Fees and Charges***

The WPCA will publish a list of fees or charges for the following services:

A. Testing fees

B. Re-testing fees

C. Fee for re-inspection

D. Charges for after-hours inspections or tests.

1. Strainers

The WPCA strongly recommends that all new retrofit installations of reduced pressure principle devices and double check valve backflow preventers include the installation of strainers located immediately upstream of the backflow device. The installation of strainer will preclude the fouling of backflow devices due to both foreseen and unforeseen circumstances occurring to the water supply system such as water main repairs, water main breaks, fires, periodic cleaning and flushing of mains, etc. The occurrences may "stir up" debris within the water main that will cause fouling of backflow devices installed without the benefit of strainers.

Approved By: Ledyard Water Pollution Control Authority

Date: _____

Supersedes: N/A

INSTALLATION OF WATER MAINS AT CUSTOMER REQUEST ON PUBLIC STREETS

1. Scope

This Policy is intended to cover the installation of water mains, by the Ledyard WPCA if so requested, or by others authorized by the WPCA to do so within the public right-of-way of streets, either as accepted or as proposed for acceptance, providing that any proposed street has received approval of the responsible municipal governmental authority where subdivision regulations and/or requirements for road acceptance are involved. It will not install mains on private property under the conditions of this Policy, unless the mains are intended to be incorporated into, and accepted into, the WPCA's water system.

2. Application

All requests for installation of water mains that are intended to become part of the WPCA's water system shall be made in writing to the WPCA's service provider. When a group of two or more customers are involved in one application, one of the group shall be designated as the person responsible for all negotiations and for accepting billing. When a business firm is involved, a duly authorized officer shall be designated as the person responsible. No construction will take place until an agreement is signed by all responsible parties representing the customer(s) and the WPCA.

3. Allocation of Work and Costs

a.

Work to be done	Accepted Street		Proposed Street	
	By	Cost	By	Cost
Review of Customer's request to determine relationship to system requirements, size of facilities to be built, and procedures to be followed.	WPCA's service provider	WPCA	WPCA's service provider	WPCA
Design for construction	WPCA's service provider	Cust.	Cust.	Cust.
Review of Customer Design	---	---	WPCA's service provider	WPCA

Construction to existing mains	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Construction	WPCA's service provider	Cust.	Cust.	Cust.
Construction Inspection	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Work to be done	**Accepted Street**		**Proposed Street**	
	By	**Cost**	**By**	**Cost**
Testing	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Supervision of Testing	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Sanitizing	WPCA's service provider	Cust.	Cust.	Cust.
Hydrants, Tees, Branches, Valves --Where required by agency accepting annual charges	WPCA's service provider	WPCA	Cust.	Cust.

b. The WPCA's service provider shall determine, or approve, the size, type, and location of all water mains. The minimum main size shall be 8 inches. Should a pipe in excess of the minimum be required in order to serve the projected system requirement in excess of the size required by the customer, the WPCA will be responsible for the added cost of the pipe and fittings subject to the availability of public funds. In order to prevent the installation of water mains designed solely to serve only an individual customer's needs, it will be required that where no public funds are available, the customer shall be required to install pipe which is consistent with the projected system requirement.

c. Benefit assessments will be derived in accordance with approved ordinances.

d. Where the work is done by the WPCA's service provider, a deposit prior to construction equal to 100 percent of the estimated costs, or an adequate payment bond, will be required. Any excess of deposit over cost will be refunded; any deficit will be billed to the customer.

e. The amount paid by the customer for construction by the WPCA's service provider shall be considered a "Contribution in Aid of Construction", and all rights and title to

the water main shall remain with the WPCA with all future maintenance at the expense of the WPCA. Where a water main is installed by a customer under private contract, all rights and title to the main shall be transferred in writing to the WPCA after testing and acceptance of the test by the WPCA's service provider and before any water is allowed to enter the new facilities for customer use.

4. Easements

a. Although this Policy is not intended to cover water mains on private property, where necessary, connections on easements in subdivisions will be allowed in order to provide optimum flow characteristics. Easement documents satisfactory to the WPCA must be submitted prior to construction of any facilities.

5. General Requirements

a. All work shall be done to Ledyard WPCA specifications. All testing shall be done in accordance with, and meet the requirements of, the WPCA.

b. The cost of all work required for disinfection and water analysis shall be at the expense of the customer. Water analysis testing can be performed by either the WPCA's service provider or by a certified laboratory. All sample collection must be by a certified operator.

Approved By: Ledyard WPCA

Date: _____

Supersedes Previous Policy Dated: N/A

MULTIPLE SERVICE CONNECTIONS TO PRIVATE WATER MAINS

1. No water service shall be connected to a water main or water service owned and controlled by a second party, including lessees or separate property owners, except condominiums where the main is owned by an Association composed of all owners of units in the complex.

2. The Ledyard WPCA cannot maintain a safe and adequate water supply and may have no legal right to use the pipes to deliver water to a customer when the pipes are controlled by a second party.

3. Privately owned water mains serving two or more separately owned properties are prohibited.

Approved By: Ledyard WPCA

Date:

Supersedes: N/A

OWNERSHIP OF WATER MAINS

1. Water mains installed within the limits of a Proposed Public Highway, such as an approved subdivision, by persons other than the Ledyard WPCA, shall have their ownership transferred to the Ledyard WPCA by virtue of a Water Main Extension Agreement entered into by, and signed by, the owner and a representative of the Ledyard WPCA prior to the construction, with the effective date of acceptance by the WPCA and ownership transfer being the date that the agreement is recorded in the Land Records of the Town of Ledyard.

2. Water mains installed within the limits of an Existing Public Highway by the Ledyard WPCA or its assignees as an extension of its system at the request of a second party paying for such extension, shall remain the property of the Ledyard WPCA in accordance with a Water Main Extension Agreement entered into by, and signed by, The Second Party and a representative of the Ledyard WPCA prior to construction, with the effective date of ownership rights vested in the Ledyard WPCA being the date of signing of the Agreement by both parties.

3. Water mains installed within the limits of a Private Right-or-Way by persons other than the Ledyard WPCA, such as tie lines across private property, may be considered for acceptance by the Ledyard WPCA as a public water main if, in the opinion of the Ledyard WPCA, there is sufficient justification to include the main as a system improvement. Consideration shall be given to such factors as flow characteristics, an evaluation of the main's contribution to the grid in support of a significant number of customers including fire protection customers, location on an accessible Right-of-Way, conformance to the WPCA's construction standards, absence of water contaminating factors including backflow potential, etc. Transfer of ownership shall be by virtue of a Water Main Extension Agreement covering the development or by a separate transfer of facilities document. Approval for the transfer shall be by the director of public works and the chairman of the WPCA.

Approved By: Ledyard WPCA

Date:

Supersedes: N/A

POLICY FOR RATE ADJUSTMENTS FOR SWIMMING POOL FILLING

In the past, Ledyard Water Pollution Control Authority (WPCA) customers could apply for and receive an adjustment for the cost of water used to fill a swimming pool one time each year.

Ledyard now purchases 100% of its water from the City of Groton as a result of recent upgrades to Ledyard's infrastructure including the Route 12 and Route 117 water mains All water used by Ledyard is sourced from Groton as part of a long term regional interconnection strategy for the long term preservation of sustainable water sources.

Since Ledyard pays the cost of treating and pumping all water purchased from Groton, the past practice of providing discounts for large quantities of water used to fill swimming pools can not be continued. Any and all requests for adjustments (rate reductions or credits) for water used to fill swimming pools will not be accepted. This practice would unfairly shift the cost of swimming pool water to other WPCA rate payers.

However, any Ledyard WPCA customer that has sewer service can avoid having the sewer fee applied to the water used for swimming pool filling by obtaining a meter from Groton Utilities (GU) and measuring the actual volume of water used. The meter is to be promptly returned to GU in order to have the sewer fee waived for the pool water.

Alternate sources of commercially available water for such purposes include local bulk pool water supply companies. As always, Ledyard water customers have the option of purchasing water in bulk from these companies.

Approved by the WPCA:

THAWING FROZEN WATER SERVICES

1. It is the policy of the Ledyard WPCA not to thaw customer-owned frozen water facilities.

2. It will be the responsibility of the customer to have the water service thawed by a plumber at the customer's expense. If it can be satisfactorily demonstrated to the WPCA's service provider that the water service is frozen between the water main and the property line, the service provider will reimburse the property owner's plumber for the expense of thawing only this portion of the service.

Approved By: Ledyard WPCA

Date:

Supersedes Previous Policy Dated: N/A

WATER MAIN AND SERVICE DEFINITIONS AND MAINTENANCE RESPONSIBILITIES

1. Water Main:
   Any water pipe serving two or more buildings, or one building with two or more separate service branches (such as a shopping center or condominium), shall be considered a main.

2. Public Water Main:
   Any main on a public highway whether title has been transferred or not (including water mains that were installed by developers in new streets for which the Ledyard WPCA assumed ownership), or any main on public or private property whose title has been transferred to the Ledyard WPCA, or which was installed at Ledyard WPCA expense, shall be considered a public water main with maintenance by the WPCA.

3. Private Water Main:
   Any main on private property serving only one property shall be considered a private water main and title and maintenance responsibility for all pipe on private property shall remain in the name of the property owner. Pipe within the public highway shall be maintained by the Ledyard WPCA in accordance with service policy.

   Any main on private property which serves two or more separate properties but whose title has not been transferred to the Ledyard WPCA will be considered a private water main with cost of maintenance billed to the original property owner who installed the main, or the current property owner of record as indicated by the Town of Ledyard Land Records, as ownership of the pipe goes with ownership of the land on which it is located.

4. Water Service:
   Water Service is the branch piping connecting the building to the main.

5. DPUC Water Service
   For purposes of reporting to DPUC, "services" shall refer to pipes serving private property, i.e., pipes connecting to a public water main, or private water mains connecting to a public water main (with services off private water mains considered as part of the "service" and not counted separately).

Approved By: Ledyard WPCA_____

Date: _____

Supersedes: N/A_____

NUMBER OF WATER METERS AND SERVICES PER PREMISE

1. In general, separate premises (individually owned buildings or residential units) shall be metered separately.

2. Separate meters are required for each of the following:

   a. Each separate residential dwelling.

   b. Each separate commercial building. Contiguous units are considered one building.

   c. Each separate residential or commercial unit in a condominium or apartment building, except as noted in 3.c. below. A separate meter is required for common facilities.

3. Master meters are permitted only for the following:

   a. A combination of buildings owned or leased and occupied by one customer/ corporation on one contiguous property as a place of business, "Contiguous Property" being property not bounded by facilities allowing public access, such as state highways or city streets.

   b. Government and non-residential complexes where metered facilities extend to and through contiguous properties only.

   c. In a condominium complex conversion where due to the physical layout of the existing building, or in an apartment building where the installation of separate meters would cause an unreasonable burden on the owner, the owner may request in writing giving sufficient justification that the separate meter requirement be waived.

      Billing will be calculated by dividing the total consumption of each meter by the number of units on the meter; applying the rate to the result; adding a "Readiness to Serve" charge equivalent to a normal ¾-inch residential meter for each unit; and rendering one bill equal to the total for all units on the meter. Separate buildings require separate meters.

   d. Wholesale for resale customers

4. Separate services from a main are required for separate buildings. A condominium building may have one service line with a common header within or outside the building in accordance with the Construction Standards of the Ledyard WPCA. Interconnection of the buildings is not permitted.

Approved By: Ledyard WPCA

Date:

Supersedes Previous Policy Date: N/A

WATER SERVICES: INSTALLATION AND MAINTENANCE RESPONSIBILITIES

1. Control and Supervision

   a. The Ledyard Water Pollution Control Authority (WPCA) shall have control and supervision of any installation, maintenance, or renewal of any water service pipe installed on its system, with ownership in accordance with succeeding sections of this policy.

2. Compliance with Ordinances

   a. Before the WPCA will furnish service, the customer shall comply with all applicable ordinances, codes, and requirements of Federal, State, or Municipal bodies and may be required to furnish to the WPCA satisfactory evidence of such compliance. Persons, firms, or corporations performing installation work may be required to show evidence of compliance with state licensing requirements.

3. Inspection

   a. All work on facilities serving large industrial or commercial installations which are master metered, located up to and including the meter, shall be done in accordance with WPCA specifications and shall be subject to the WPCA inspection, testing, and acceptance before water is provided for use.

   b. All work on facilities other than large industrial or commercial installations as covered under 3a of this policy, located from main to building, shall be subject to WPCA inspection, testing, and acceptance before water is provided for use.

   c. Prior to backfilling trenches, the customer shall make arrangements for inspection by the WPCA's service provider at least two hours in advance. Any facility backfilled without inspection, either intentionally, as an expediency, or in error, may be required to be uncovered for inspection. Notice may also be given to the property owner or notice placed on records of the WPCA and Town of Ledyard Land Records which may result in a cloud on the property title and inability to mortgage or resell the property.

   d. Water service will not be turned on or will be discontinued provided any defects are found in materials or workmanship or in case of any noncompliance with the WPCA construction standards until such defects have been remedied to the complete satisfaction of the WPCA. Backflow prevention devices where required must be in place.

e. The cost of inspection required under this policy shall be borne by the property owner or his agent.

4. Changes in Customer's Service Installation

The customer shall give advance notice to the WPCA of any proposed change in location of his installation. No change in the customer's service installation shall be made until notice has been given and permission has been received from the WPCA. Failure to give notice of such changes shall render the customer liable for any damage to the meters or other apparatus and equipment of the WPCA caused by the changed installation.

5. Protection of Facilities

All customers must keep their service pipes, house pipes, and fixtures in good order and protected from freezing, and they shall be liable for any damage which may result from their failure to do so. The responsibility for thawing frozen water services shall be as outlined in the policy on thawing frozen water services .

6. Responsibility for Installation Work and Costs

All Town-owned or non-metered privately-owned mains which are in service will be tapped and service connections made by the WPCA or its contractors. New construction which does not involve tapping in-service facilities may be done by the property owner, providing suitable application and arrangements for future ownership and maintenance have been made with the WPCA.

Metered, privately-owned mains which are in service may be tapped and service connections made by the owner or by the WPCA at the owner's expense.

Excavation for service installations within a public highway may be done by the property owner or the Town, providing that if the property owner does the work, he obtains a road opening permit from either the State of Connecticut or the Town of Ledyard Public Works Department, depending on whether the public highway is under State or Town jurisdiction.

Excavation on private property may be done by the property owner or by the WPCA and/or its contractors.

The laying of service pipe may be done by the property owner or by the WPCA and/or its contractors.

Property owners will be responsible for the total cost of any installation or renewal of a service from the main to the building. The WPCA will maintain at its expense (but not replace or make any capital improvement to) any service from a Town-owned main to the property line. Ownership will remain with the property owner.

The installation of meter pits may be done by the property owner or by the WPCA at the property owner's expense.

The cost of all work required for disinfection and water analysis shall be at the expense of the customer. Water analysis testing can be performed by either the WPCA's service provider or by a certified laboratory. All sample collection must be by a certified operator.

7. Locations

Water services shall not be installed so that they run along a right-of-way in front of other properties, or in a similar manner so as to be, in effect, an extension of the main. Such construction shall be in accordance with the WPCA's requirements for extension of water mains.

Water services may cross intervening lots owned by others providing that each service to each separate building extends from the building to the main, serves no other property owned by others, and suitable easement rights are obtained which include the WPCA's right to provide service.

8. An authorized agent of the property owner may act in the property owner's place within the scope of this policy.

Approved By: Ledyard Water Pollution Control Authority_____

Date:_____

Supersedes Previous Policy Dated: N/A_____

Draft Policy Proposal for Ledyard WPCA Water Leak Investigations

The following policy procedures are to be used for customers petitioning high water bills due to leaks:

1. It should be emphasized here that the customer is reponsible for all water usage between the meter and the dwelling. As a nonprofit entity, the WPCA pays Groton Utilities for all water usage.

2. If the customer is also tied into WPCA sewer and the leak is outside the sewer system such an outside fawcet, then the WPCA commissioners may waive the sewer cost that is a result of the leak.

3. Upon a customer request, our service provider, GU will pull the meter to check for accuarcy and report back to the customer the state of the meter.

4. No determination will be done until the following conditions are met:

   a. Meter has been checked

   b. Leak has been fixed with proof of repair (either a plumber, parts receipt or other documentation that shows leak repair)

   c. A formal request has been made to the WPCA commisioners at their monthly meeting

5. The WPCA review officer will present all the infomation to the commissioners for review and a determination of relief based on their analysis of the information.

TOWN OF LEDYARD

741 Colonel Ledyard Highway
Ledyard, CT 06339-1511

File #: 23-1793 **Agenda Date:** 7/25/2023 **Agenda #:** 3.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Route 12/Baldwin Hill Road hydrant relocation.
Status on recent public hearing held on July 13, 2023.

Background:
See attached minutes from the Planning and Zoning Commission meeting held on July 13, 2023.

Department Comment/Recommendation:
(type text here)

water pollution control authority

To:

- Juliet Hodge

Wed 6/7/2023 11:40 AM

Hi Juliet - my intention was to attend the public hearing in person however I must be in New Haven on the 8th so I thought I would submit this email into the record concerning Application PZ#2306SUP in the capacity for the commissioners of the Ledyard WPCA (Water Pollution Control Authority).

The WPCA commissioners are neither for or against this application under the special use permit at 1340 Baldwin Hill Road, Gales Ferry, CT 06335 for the continued processing of earth materials and removal of ledge material. However, the commissioners would like to request that a formal review of the hydrology and the effects of blasting and material removal has on local wells in the area. Although the application states that there is no impact that blasting has on local wells, it has come to our attention that a well at 1347 Baldwin Hill Road has gone dry and the residents (Kyle Singleton family) must use public or friend's shower facilities and use bottled water for drinking and cooking activities for over a year. Now it is not the intention of the commissioners to accuse the blasting activities to the well water lose but it seems reasonable that a formal study of the geology and water table in the area might indicate such as impact.

The WPCA has been working with Groton Utilities to determine if city water can economically be installed to 1347 Baldwin Road. There is a water main located approximately 200 feet on the town road which is estimated to cost about $80,000 to install. The WPCA is pursuing grants to facilitate the cost - but this takes time - possibly years - to receive a grant. The WPCA is also working with adjacent neighbors seeking a utility easement to install a 2-inch line to the property with an estimate of $20,000 to install. It should be noted that due to the existing topology a drilling rig cannot reach or be set up to drill a well.

There may be other solutions to this problem, but the commissioners wanted to put into the public record the effect blasting might have on surrounding wells and the impact this might have on the town's responsibility (DPH requirements) to provide city water as a result of well failure.

Thank you for your attention on this matter. I am available at any time to answer any questions you might have concerning our challenges for providing water to the town of Ledyard community.

Ed Lynch, P.E. WPCA
Mobile 646-732-9224

TOWN OF LEDYARD

Planning & Zoning Commission

Meeting Minutes

741 Colonel Ledyard Highway
Ledyard, Connecticut 06339

Chairman
Tony Capon

Regular Meeting

Thursday, July 13, 2023 **6:00 PM** **Council Chambers - Hybrid Format**

I. CALL TO ORDER

Chairman Capon called the Regular Meeting of the PZC to order at 6:00 PM. The meeting was hybrid with some attending in person and others via Zoom.

II. PLEDGE OF ALLEGIANCE

III. ROLL CALL APPOINTMENT OF ALTERNATES

The following Staff was present: Juliet Hodge, Director of Planning and Development, Makenna Perry, Admin Asst. and Alex
Samalot, Zoning Enforcement Officer (training).

Present Commissioner Marcelle Wood
Chairman Tony Capon
Alternate Member Thomas Baudro
Commissioner Paul Whitescarver
Commissioner Howard Craig
Commissioner Gary St. Vil

Excused Alternate Member Jessica Cobb

IV. CITIZENS PETITIONS (LIMITED TO NON-AGENDA ITEMS)

None.

V. APPROVAL OF ADDITIONS TO AND/OR CHANGES TO ORDER OF THE AGENDA

Without objection, Chairman Capon reordered the agenda to move Application PZ#23-6SUP before Application PZ#23-4SUP.

VI. PRE APPLICATION OR WORKSHOP

None.

VII. PUBLIC HEARINGS/APPLICATIONS

Item C as noted below was addressed at this point in the meeting:

Application PZ#23-6SUP of Dieter and Gardner, Inc, 1641 Route 12, Gales Ferry, CT

06335, for a special use permit at 1340 Baldwin Hill Road, Gales Ferry, CT 06335, for continued processing of earth materials and removal of ledge material. (Please see Public Hearing/Applications (C) for the text noted below).

A. Application PZ#23-4SUP of Gales Ferry Intermodal LLC / Heller, Heller, McCoy, 549 South Street, Quincy, MA 02169, for a special use permit for the construction of an industrial building with appurtenant facilities on a portion of the property located at 1761 Route 12, Gales Ferry, CT 06335.

Chairman Capon re-opened the public hearing for the Application at 6:28 PM.

Planning Director, Juliet Hodge identified all the new exhibits received since the last meeting to be incorporated into the record.

Atty. Harry Heller, 736 Route 32, Uncasville was present on behalf of the applicant, Gales Ferry Intermodal.
Alan Perrault, Gales Ferry Intermodal, presented the background and history of the Quincy site to give the Commission a better understanding of the activities that are conducted at their properties.

Atty. Heller described the changes to the plans and other documents that were submitted since the previous meeting. Changes included a Spill Control and Countermeasures Plan, which includes a response protocol if a spill were to occur. Atty. Heller also stated that the applicant addressed The Director of Public Works, Steve Masalin's, concerns regarding an error in the changes made to the Stormwater system when the industrial building was rotated including an error in the narrative, and concerns about repairs being performed in the lay-down area and a lack of Spill Control Plan.

Atty. Heller noted that the industrial building is now between 160 feet from the northerly property line. On the revised plans the applicant has submitted, they have committed to a 100 foot, vegetated, non disturbance area along the northerly property line. The applicant provided Cross-section Elevations showing the views between the two closest residences to the north and the proposed industrial building. Atty. Heller explained that they are willing to plant a row of arborvitaes close to the northerly property line to better block the view from the abutting residents.

Submissions from the applicant also include a letter from Groton Utilities stating that there is sufficient water available and sufficient pressure to serve the needs of the property; and a letter from Lourerio Engineering responding to staff comments provided during the June 29th, 2023 Special Meeting. Atty. Heller also noted that a bond estimate in the amount of approximately $300,000 was provided for erosion and sediment controls, and site restoration and stabilization.

Atty. Heller concluded his comments stating that he feels the application complies with the staff's interpretation of the regulations as well as the evaluation criteria for Special Permits. Heller stated that the town has very little Industrially Zoned properties and that all the Industrial Zones are surrounded by residential properties. He believes that the buffering

proposed is adequate to address the concerns raised about potential adverse effects.

The Commission members asked several questions to determine exactly what uses would occur in the lay down area and in the proposed buildings.

Atty. Heller and Alan Perrault explained that equipment such as cranes and crane buckets, excavators or other vehicles for loading and unloading material/equipment, and pumps would be stored in the area, and that repair work on these types of equipment might also be conducted in the lay down area. Commissioner Wood stated that he would prefer that there not be any doors on the North side of the 10,000sf. building. Mr. Perault stated that they needed to have the ability to drive through the building or access through a second door if the other door is blocked by a piece of equipment. He did state that the doors could be kept closed when activity was occurring. He state that there were limitations as to where buildings could be located due to environmental constraints.

When questioned about what they might expect for future development, the hours of operation and what kind of noise would be generated. Atty. Heller explained that Connecticut has adopted daytime and nightime sound level limits, and any activity conducted by Gales Ferry Intermodal is anticipated to meet those requirements, however if they are not met, modifications will have to be made.

The Commission stated that they appreciated the work that Cashman had done to address the concerns and comments of staff and residents. Commissioner Whitescarver commented of the value of the property given its location and ability to support off-shore industry. Commissioner St. Vil asked questions about the lighting on site when foliage disappears and how it will affect residents on River Road - particularly security lighting. Atty. Heller stated that a Lighting Plan was submitted that demonstrated that there would be no light migration into the buffer area or at any property line.

Commissioner St. Vil questioned if the approval of the current application would include approval for the possible future expansion of the 10,000 square foot building. Atty. Heller stated that it did not. Commissioner St. Vill asked why the building could not be shifted farther to the south to provided a bigger buffer.Atty. Heller noted that the area in which the second proposed industrial building is located in an A1 protected area, where activity is limited until the remediation activity is complete. He noted that if the applicant moved the building location thirty feet to the south, they would be encroaching the restricted area.

Mr. Perrault explained that the 6,000sf and 10,000sf buildings may satisfy the company's needs and that they may submit an application to have a third building that is closer to the water.

Planning Director, Juliet Hodge asked if the proposed 6,000 square foot building was located on the protected area.
Atty. Heller explained that the 6,000sf building was and that the protected area extends to the southern wall of the proposed 10,000 extension of the proposed industrial building.

Planning Director, Juliet Hodge also questioned where the discharge from the existing catch basins in the lay down area, go. She asked what would stop oil, etc. from getting into the basins. Ms. Hodge expressed concern about runoff draining into the basins in the lay down area.
George Andrews stated that the catch basins discharge directly into Allyn's Pond. The applicant agreed that they would install a hydrodynamic separator in the system in the lay-down area with the oversight of a Licensed Engineering Practitioner (LEP) in addition to providing Spill Kits in the area.
J. Hodge asked about the ways noise could be reduced within the industrial building - such as insulation or keeping the door closed in the area proposed for heavy equipment repair.

Chairman Capon open the floor to public comment.

Eric Treaster, 10 Huntington Way, was impressed with the information in which the applicant has provided for staff and residents. Mr. Treaster expressed concern about volatile organic compounds, paint chips, and odors from painting. He asked whether painting would be conducted inside or outside, and how the neighbors be protected from odors.

Dave Harned, 13 River Dr, spoke on behalf of the CALU group. He was not in support of the application. Mr. Harned read his prepared remarks. He was most concerned about potential nuisances caused by noise and dust. He believed the applicant has given a lot of info that is not relevant to making a determination as to whether the application meets the zoning regulations and should not used as a reason to approve the application.
He asked whether the operation was required to meet state noise regulations, or not? Or whether fugitive dust or fumes are allowed to leave the property. Mr. Harned believed that the applicant did not provide enough tangible evidence related to what kind of activity would be conducted or stored on site, and what the impact would be. He asked the Commission to examine the testimony provided by the applicant as he feels that there is not a lot about noise and dust. He also stated that some of the testimony is erroneous. He, on behalf of CALU, believed that the application should be denied until the applicant satisfies concerns related to noise and dust as they have the burden of proof to do so. He asked if the Commission were to approve the application, to consider the following conditions.
1. A later starting time, 6:30 AM is too early.
2. Additional vegetation to further reinforce the 100 ft landscape buffer.
3. Request a wall or greater buffer to help with noise.
4. Ongoing monitoring paid for by the applicant, bond paid for by applicant to know the regulations are being complied with (noise and dust monitoring).
5. Request more evidence to determine if the site is too noisy/dusty, the applicants current information is not sufficient.

Atty. Russell Stewart, 9 Billings Lake, North Stonington (Representing Amy Harned), believed that the published notice for the meeting, previously published, was insufficient given the subsequent proposal to add an additional building in a different area.
Atty. Stewart expressed concern about the proposed buffer and explained why it is not reasonable, as the applicants assert - given the particular industrial use proposed so close to a residential neighborhood. He stated that it is the applicant's burden of proof to show that a

100' buffer is reasonable versus the existing 300' buffer that was apparently deemed reasonable for all this time. He explained that the Commission should not be receiving information about what the potential uses will be at this point, and that it should be a red flag that Commission members still have to ask what is going on in the lay down area. Atty. Stewart urged the Commission to deny the application given the lack of information provided. He feels the Applicant has not met the burden of proof to show that the activities proposed will not negatively impact the residents.

Attorney Stanley Lucus, 35 River Dr, and owner of 3 River Dr. was in support of the application. Mr. Lucus believed that changing the 25' buffer to 100' was sufficient. He also appreciated the applicant changing the building orientation and size and placing a line of arborvitaes on the northerly property line near his property. Mr. Lucus stated that those changes were significant enough to approve the application.

Atty. Heller explained that the state has noise regulations that the applicant will abide by. Atty Heller explained if there are complaints, then the applicant will demonstrate they are in compliance, or take steps to come into compliance. The applicant stated that the use was not a dust generator. It is a repair facility. He stated that they will not move equipment on dirt or gravel surfaces which will address the dust concern. Atty. Heller noted the hours of operation starting at 6:30 AM. Employees arrive at 6:30, but the operation typically starts at 7. There are no third shift operations. Atty. Heller disagreed with the comment that the public hearing notification was not sufficient as the change was not significant enough and part of the iterative process and evaluation of a proposal for approval. He requested that Ms. Hodge add the written opinion about the notice he provided (at staff's request) into the record. The proposal has been modified to reduce the scope of the project with respect to total building size and location near the residential zone. Atty. Heller was confident that the area was vegetated enough to reduce the visual impact of the development.
Atty. Heller pointed out that there are other non-residential uses across the street that are not buffered at all.
He believes the Application complies with the regulations including the general evaluation criteria for Special Permits and that it will not have an adverse impact on the residential neighborhood.
He stated that the project is a critical component of economic development for the town.

Chairman Capon closed the public hearing at 8:35PM without objection.

Chairman Capon explained that the Commission will not be deliberating the proposal at tonight's meeting. The Commission will discuss the proposal of the application at the next Planning and Zoning Meeting on August 10, 2023 at 6:00 PM.

B. Application PZ#23-5CAM of Gales Ferry Intermodal LLC / Heller, Heller, McCoy, 549 South Street, Quincy, MA 02169, for coastal area management approval for the construction of an industrial building with appurtenant facilities on a portion of the property located at 1761 Route 12, Gales Ferry, CT 06335.

The public hearing was closed for this application.

C. Application PZ#23-6SUP of Dieter and Gardner, Inc, 1641 Route 12, Gales Ferry, CT

06335, for a special use permit at 1340 Baldwin Hill Road, Gales Ferry, CT 06335, for continued processing of earth materials and removal of ledge material.

Chairman Capon resumed the public hearing at 6:03 PM.

Peter Gardner, on behalf of the applicant, presented the application. Mr. Gardner explained the provisions requested by the Wetlands Commission on Tuesday, July 11, 2023. He explained that they are working on 6.4 acres of land. There will be 11 trucks which will carry on average, ten loads per day, which equates to about 110 trips per day. He also noted that the applicant has decreased the charge shots from 12,000 yards to 4,000 yard shots.

Commissioner Craig asked Mr. Gardner if he could explain what a 4,000 yard shot was.
Mr. Gardner explained the applicant drills down into the ledge with a drilling rig, fills the hole with dynamite, and blasts the ledge. That is called a "shot."

Commissioner Wood questioned whether the 6AM start time was reasonable.
Gardner explained the hours of operation would be Monday through Friday, from 6 AM to 6 PM, and Saturday 7 AM to 5 PM. Chris McLaughlin, B+R Holding, explained that they don't start blasting until 12:00PM, they arrive at 6 on site to start preparing. He stated there would be no more than one blast on any given day - likely once or twice a week.
Mr. McLauglin also explained that neighbors can get added to a list to get become notified when they blasting will be conducted.
Commissioner Wood also questioned when they would grind stone and Mr. McLauglin answered that that type of activity would not start until around 7:30 AM, but it is not noticeable, nor noisy.

Chairman Capon questioned where the water table was, and how deep the rock and ledge are on site.
Mr. Gardner was unsure how deep, and also explained they would have to get bring a rig onto the site to drill in order to find the water table.

Planning Director, Juliet Hodge, asked for clarification on what the final slopes would be.
Mr. Gardner explained that the slope would not be less than 1% and not more than 4%.
Ms. Hodge also questioned if there would be an impact to public water supply.
Mr. Gardner explained that run off from the site would not pollute the wetlands and that the berm was going to be extended further south.

Ms, Hodge questioned if it was procedural to have a hydraulic analysis conducted when blasting activity is proposed.
Mr. Gardner, was not sure.

Juliet Hodge, summarized the history of the parcel to the Commission. She stated that a Closure Plan was needed and could be a condition of approval. Another condition should be added to limit the blasting to 4,000yard shots.

Mr. Gardner explained that the machinery used on site would include three large excavators, in addition to the trucks mentioned previously. He also noted that to mitigate the dust across

the site, a water truck is present every day to spread water across the parcel to keep dust down.

Chairman Capon expressed concern about the water table and wanted to ensure that the applicant would not impact the water supply. Chairman Capon suggested that the applicant consult with a hydrologist to determine the location of the water table and that there will be no impact to wells or local water supply and that the application would be approved conditional on a favorable report. Applicant stated he would comply with this request.

The Commission determined that the public hearing would close at this meeting, and staff would identify conditions of approval for the next regular Planning and Zoning Meeting on August 10, 2023 at 6:00 PM.

Chairman Capon allowed public comment.

Mike Cherry, 5 Whipporwhill Dr, was in support of the application. He does not have any problem with the blasting times, though he lives close. He explained the noises he hears are crushing stones, and small blasts.

Chairman Capon closed the public hearing at 6:27 PM. The discussion of this application and possible vote was set for the next Planning and Zoning Meeting on Thursday, August 10th, 2023 at 6:00 PM.

D. PZ#23-7RA of The Town of Ledyard, 741 Colonel Ledyard Highway, Ledyard CT, 06339, to add section 8.34 “Cannabis Establishment” and the following uses to the use tables: Cannabis Retailer and Hybrid Retailer (Section 6.4), Cannabis Cultivator and Micro-cultivator (Section 5.3 + 6.4).

Chairman Capon opened the public hearing at 8:38 PM.

Chairman Capon, presented the application on behalf of the Town of Ledyard.

Chairman Capon opened public comment.

Mike Cherry, 5 Whipporwhill Dr, believed that this is an important regulation for the town. He is in support of making the distance between Cannabis Establishments and The Submarine Base a greater distance.

Eric Treaster, 10 Huntington, was not in support of this application. Mr. Treaster does not believe that the Commission should adopt the regulations seeing that it is in violation of federal law. He also does not believe it is good for the general welfare, and not attractive to potential new residents. Mr. Treaster urged the Commission to deny the application.

Commissioner Wood questioned the location restrictions that the Commission could implement. He is in support of limiting the number of Cannabis Establishments in the Town of Ledyard.

The Commission decided that a condition of approval for the application is to add "No more

than one cannabis retailer or hybrid retailer shall be allowed in the Town of Ledyard" after section 8.34.1B.

Chairman Capon closed the public hearing at 9:11 PM.

Commissioner Craig was not in favor of the application. He did not like the idea of Cannabis being sold in Ledyard, and believed it would negatively impact the town.

Commissioner Wood was indifferent to the application, as the residents of the Town voted to allow cannabis sales and retailers in Ledyard.

Commissioner St. Vil agreed with Chairman Capon that the it is up to the Commission to determine framework for Cannabis establishments and retailers to follow.

The effective date of the regulation is August 1, 2023.

RESULT: APPROVED WITH CONDITIONS

AYE: 4 Wood, Capon, Whitescarver, and St. Vil

EXCUSED: 1 Cobb

ABSTAIN: 2 Baudro, and Craig

E. PZ#23-8RA of The Town of Ledyard, 741 Colonel Ledyard Highway, Ledyard CT, 06339 to amend section 3.9A “Cannabis Establishments” to extend existing Moratorium an additional six (6) months to provide time to review and act on proposed regulations.

Without objection the application was withdrawn.

RESULT: WITHDRAWN

VIII. OLD BUSINESS

None.

IX. NEW BUSINESS

A. PZ#23-9SITE of Rustic Boutique Catering and Events LLC, at 39 Military Highway, Gales Ferry, CT 06335, for a an accessory use.

Planning Director, Hodge presented the application. Applicant is proposing to add an accessory use to the property - private weddings. There is no change in parking or building lay-out. Applicant will be providing a tent for the events.
Charlene Rand was present for the application to answer questions. Commission directed staff to act on the application.

RESULT: APPROVED TO ALLOW STAFF TO ACT ON APPLICATION
MOVER: Paul Whitescarver
SECONDER: Marcelle Wood

X. APPROVAL OF MINUTES

A. Draft Meeting Minutes - June 8, 2023

The Draft Meeting Minutes from June 8, 2023 were approved as submitted.

B. Draft Meeting Minutes - PZC Special Meeting, June 29, 2023

The Draft Meeting Minutes from the June 29, 2023 meeting were approved as submitted.

XI. CORRESPONDENCE

None.

XII. REPORTS

A. Planning Director Report

Planning Director, Juliet Hodge met with the contractor from Dollar General on Route 12 in Gales Ferry. She addressed the problems with their landscaping. She also visited Bark n Barley, where she identified erosion issues from the recent rain, and issues with the detention basin.

Ms. Hodge noted that the department will be fully staffed on July 24th.

B. Zoning Enforcement Official (training) Report

Zoning Enforcement Official (in training), Alex Samalot, identified ongoing blight issues. He stated that he is in contact with offenders. Mr. Treaster was appointed as the Citation Officer. He stated that potentially two citation orders will require a hearing.

XIII. ADJOURNMENT

Without objection, the meeting was adjourned at 9:30 PM.

File #: 23-1842 **Agenda Date:** 7/25/2023 **Agenda #:** 4.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Cost of Service quote review and discussion.

Background:

From the June 27, 2023, meeting:
The WPCA discussed assessing a connection fee and credit check. Chairman Lynch asked if charging a connection fee would have to go to Town Council since it is not a rate increase. Mr. Jones said that in the WPCA manual there are provisions that allow for a connection.

Mr. Jones read the Customer Rules and regulation policy:
Section 2.2
A new account fee may be charged to each customer collecting water or sewer services this charge applies all rate classifications and helps to pay the cost of setting up a new account, reading the meter and/or connecting to water services, possibly turning on the meter.

Mr. Jones added that he believes that relating the fee to the efforts required in setting up a new account (ex - 1 or 2 labor hours) collections is better than just having an arbitrary fee.

Councilor Saums said since adding a new account fee would not be a change to the existing policy it would not be necessary to go to the Town Council.

ACTION ITEM - Ms. Juber asked Chairman Lynch to find out what the cost for a credit check and what the actual cost to the Authority would be for the efforts of opening a new account. Chairman Lynch said he would ask Ms. Daniels for a copy of GU's policy and cost for new accounts.

It was stated that standard practice for utility companies is to run a credit check and require a security deposit if the customer's credit score is low.

Mr. Jones asked Mr. Duarte if the Authority could receive a copy of Groton Utilities' current practices on opening a new account.

Department Comment/Recommendation:
(type text here)

Ian Stammel

To:

- water pollution control authority

Cc:

- Matthew Bonin;
- Stephen Banks

Mon 7/3/2023 5:09 PM

Hi Ed,

I spoke with Steve and Matt about this. My opinion is that the WPCA really doesn't have enough free money sitting around to use to pay for this. Ultimately though it is up to the WPCA to make the final decision. If the discussion about GU purchasing the WPCA from the town is serious in the near future I think doing something might be pointless as GU I'm sure is going to restructure all the billing rates and things of that nature anyway.

Ian Stammel

Assistant Finance Director, Town of Ledyard
741 Colonel Ledyard Hwy.
Ledyard, CT 06339
(860) 464-3258
www.ledyardct.org

NOTICE Effective June 11,2018 Town Hall hours will be: 7:30AM-4:45PM Mon-Thursday
CLOSED FRIDAYS

May 2, 2023

Aaron Brooks, General Manager
Groton Utilities
295 Meridian Street
Groton, CT 06340

Utility Financial Solutions, LLC (UFS) is pleased to submit a proposal to provide water and wastewater cost of service studies for Ledyard WPCA on behalf of Groton Utilities. Our proposal is based on years of experience navigating complex financial challenges for municipal utilities around the United States.

We approach challenges strategically, partnering with your team to understand your goals before using innovative processes and in-depth research to determine the best solution to suit your needs. We stay on top of industry trends and anticipate challenges to help you solve existing problems and prepare your utility for long-term success. Our methodology and educational components have earned us a reputation as the preferred provider of rate studies in the United States.

Our project team members are experts in their respective fields and instruct for leading utility groups including the American Public Power Association, Southern Gas Association, and the National Association of Regulatory Utility Commissioners. Our specialized team of accountants, engineers, and economists have years of industry-specific experience to help ensure that you reach your goals. Your team lead will be Mark Beauchamp. A recognized industry leader in utility finance, Mark started UFS in 2001 and brings decades of experience to the team, having conducted thousands of cost of service studies.

For your project, UFS will complete a cost of service and rate design study, as well as develop educational materials to communicate with members of your governing body and community. The goal of these efforts is to:

- Earn positive engagement from members of government
- Obtain rate approval
- Ultimately create long-term financial stability for your utility

We appreciate the opportunity to submit this proposal and look forward to discussing it with you. If you have questions or need additional information, please contact me at (616) 403-5450.

Sincerely,

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

UTILITY FINANCIAL SOLUTIONS, LLC

Detailed Breakout of Scope of Services

Completion of Cost of Service and Financial Projection– Summary of deliverables for each utility

- Cost of Service Analysis
    a. Cost of service identifying cost to serve each class of customers
    b. Minimum system analysis to identify cost to recover in customer charges
    c. Development of component costs to determine how customers use water/wastewater
        i. Base Costs
        ii. Extra-capacity
    d. Distribution/collection breakdown of costs
        i. Customer charge
        ii. Distribution/collection charges
- Financial Projection and long term rate track
    a. Development of five-year financial projection
    b. Identification of long term rate adjustments
    c. Identification of projected debt coverage ratios
    d. Minimum cash reserve for the utility to maintain
    e. Identification of target operating income
- Rate Design for one year
    a. Impact of rate designs at various usage levels within each class
    b. Movement of rate toward cost of service
- Detailed report for Management in PDF format
    a. Identifying process and result of study
- Presentation
    a. Present the findings and recommendations to Management and governing body via WebEx – one presentation included

Financial Projection Summary of Deliverables

- Assessment of Key Financial Targets:
    a. Days Cash on Hand
    b. Rate of Return
    c. Debt Coverage Ratio
    d. Age of System
    e. General adequacy of infrastructure re-investment
    f. General Rate Design observations
    g. General observations on debt vs NBV
    h. Other general financial observations
        i. Separated enterprise funds
        ii. Where applicable, observations about transfer to the City
        iii. Cash VS Utility Basis observations

Proposed Professional Services Agreement

Prices, terms, and conditions are good for a period of 90 days from this proposal date of May 2, 2023.
Payment will be made through submission of invoice which itemizes the work performed.

Fees for Services Provided:

Water Financial Projection, Cost of Service, Rate Design $13,000

(*Onsite meetings will be separately charged at $3,000)

Anticipated Meetings (Online platform):

- Project kickoff
- Data collection summary
- Financial review summary
- Draft report to management
- Final report to management

Hourly Rates *(travel is discounted at 50%)*

Mark Beauchamp	$ 330.00
Dawn Lund	$ 290.00
Dan Kasbohm	$ 255.00
Mike Johnson	$ 255.00
Chris Lund	$ 255.00
Joan Bakenhus	$ 155.00
Jillian Jurczyk	$ 175.00
Robert Blank	$ 120.00

Deliverables in pdf:

1) Long-term financial projection and rate track
2) Cost of service analysis
3) Minimum cash reserve determination
4) Debt service ratio
5) Target operating income (rate of return)
6) One-year rate design & revenue proof

Onsite Meetings

Any requested and approved onsite presentation will be billed at hourly rates with a 50% discount on related travel time. Out of pocket travel expenses are billed at cost. All costs incurred from schedule changes initiated by client after booking will be considered out of pocket.

Out of Scope Pricing

Out of scope items and work hours will be billed at the hourly rates listed on this page.

We look forward to exceeding your expectations. Please sign, date, and return to clund@ufsweb.com at your earliest convenience.

Sincerely,

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Date: _____

Accepted By: _____
Groton Utilities

Proposed Professional Services Agreement

Prices, terms, and conditions are good for a period of 90 days from this proposal date of April 12, 2023. Payment will be made through submission of invoice which itemizes the work performed.

Fees for Services Provided:
Water and Wastewater Financial Projection, Cost of Service, Rate Design $26,000

(*Onsite meetings will be separately charged at $3,000)

Anticipated Meetings (Online platform):

- Project kickoff
- Data collection summary
- Financial review summary
- Draft report to management
- Final report to management

Hourly Rates *(travel is discounted at 50%)*

Mark Beauchamp	$ 330.00
Dawn Lund	$ 290.00
Dan Kasbohm	$ 255.00
Mike Johnson	$ 255.00
Chris Lund	$ 255.00
Joan Bakenhus	$ 155.00
Jillian Jurczyk	$ 175.00
Robert Blank	$ 120.00

Deliverables in pdf for each utility:

1) Long-term financial projection and rate track
2) Cost of service analysis
3) Minimum cash reserve determination
4) Debt service ratio
5) Target operating income (rate of return)
6) One-year rate design & revenue proof

Onsite Meetings

Any requested and approved onsite presentation will be billed at hourly rates with a 50% discount on related travel time. Out of pocket travel expenses are billed at cost. All costs incurred from schedule changes initiated by client after booking will be considered out of pocket.

Out of Scope Pricing

Out of scope items and work hours will be billed at the hourly rates listed on this page.

We look forward to exceeding your expectations. Please sign, date, and return to clund@ufsweb.com at your earliest convenience.

Sincerely,

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Date: _____

Accepted By: _____
Groton Utilities

Ledyard WPCA Cost of Service Study
General Request for Information

Item	Responsible Party
· Electronic trial balance (2020, 2021, 2022)	CUSI / Ledyard Finance
· Audited balance sheet, income statement, cash flow (2020, 2021, 2022)	CUSI / Ledyard Finance
· Fixed asset detail for FYE 6/2022	Ledyard Finance
· Copy of O&M and Capital Budget FY2023 and FY2024	Ledyard Finance
· Anticipated Capital Projects FY2024 - FY2029 (or longer if available)	Ledyard Finance
· Copies of all Outstanding Debt Amortization Schedules	Ledyard Finance
· Anticipated debt issuances (debt issues "in the works")	Ledyard Finance
· Current rate schedule and rate schedules applicable to FY2022 billings	CUSI
· Contribution to City/PILOT basis if any	Ledyard Finance
· FY 2022 Revenues by Class (spreadsheet provided at kickoff)	CUSI
· Monthly Billing data for FY 2022 by Class (spreadsheet provided at kickoff)	CUSI
· Water Plant Information (spreadsheet provided at kickoff)	Groton Utilities
· Minimum System Information (spreadsheet provided at kickoff)	Groton Utilities
· Meter Cost Information (spreadsheet provided at kickoff)	CUSI / Groton Utilities

File #: 23-1839 **Agenda Date:** 7/25/2023 **Agenda #:** 5.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Any Other Old Business to come before the Authority.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)

TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1860 **Agenda Date:** 7/25/2023 **Agenda #:** 1.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Motion to APPROVE Groton Utilities invoice #23512 dated June 30, 2023, in the amount of $1065.43, for labor from May 25, 2023 through June 30, 2023.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)

Authorized to Pay

Signature

PO# 20232883 Date

GROTON UTILITIES

At Your Service

295 Meridian Street - Groton, Connecticut 06340
Tel: 860-446-4025 Fax: 860-446-4075

DATE	INVOICE NO
6/30/2023	0023512

BILL TO
Ledyard, Town of 741 Colonel Ledyard Hwy Ledyard, CT 06339-1511

DUE DATE
7/30/2023

DESCRIPTION	QUANTITY	EFFECTIVE RATE	AMOUNT	DISCOUNT	CREDIT	BALANCE
PREVIOUS OUTSTANDING BALANCE						468.08
WO Billing until 06/30/2023:						
0029242 - Labor	1.00	1,065.43	1,065.43	0.00	0.00	1,065.43
		INVOICE TOTAL:	1,065.43	0.00	0.00	1,065.43

PLEASE DETACH BOTTOM PORTION & REMIT WITH YOUR PAYMENT

For questions please contact us at

DUE DATE	INVOICE NO
7/30/2023	0023512

Customer Name: Ledyard, Town of
Customer No: 000205
Account No: 0015817 - Ledyard LS/LR Inventory

Please remit payment by the due date to:

City of Groton
Groton Utilities 860-446-4025
295 Meridian Street
Groton, CT 06340-

Invoice Total:	1,065.43
Discounts:	0.00
Credit Applied:	0.00
Ending Balance:	1,533.51
INVOICE BALANCE:	$1,065.43
AMOUNT PAID:	

Ledyard LS/LR Inventory						
WO Audit Report						
Until 6/30/2023						
WO Number	Labor	Activity	Units	Date	Description	Notes
0029242	25.86	25.86	0.50	05/25/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	155.16	155.16	3.00	05/24/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	51.72	51.72	1.00	05/31/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	25.86	25.86	0.50	06/02/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	38.79	38.79	0.75	06/05/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0028992	56.89	56.89	1.00	06/13/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	77.58	77.58	1.50	06/14/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	116.37	116.37	2.25	06/15/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	155.16	155.16	3.00	06/22/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	25.86	25.86	0.50	06/28/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	77.58	77.58	1.50	06/29/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
0029242	258.60	258.60	5.00	06/30/2023	Blacker, Katherine	LEDYARD LSL INVENTORY
Report Totals	1,065.43	1,065.43				

File #: 23-1859 **Agenda Date:** 7/25/2023 **Agenda #:** 2.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Motion to APPROVE Groton Utilities invoice #23339 dated March 31, 2023, in the amount of $235.00, for materials and services billed on March 17, 2023.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)

Authorized to Pay

Signature

PO# 20232883 Date 7/19/2023

GROTON UTILITIES

At Your Service

295 Meridian Street - Groton, Connecticut 06340
Tel: 860-446-4025 Fax: 860-446-4075

DATE	INVOICE NO
3/31/2023	0023339

BILL TO
Ledyard, Town of 741 Colonel Ledyard Hwy Ledyard, CT 06339-1511

DUE DATE
4/30/2023

DESCRIPTION	QUANTITY	EFFECTIVE RATE	AMOUNT	DISCOUNT	CREDIT	BALANCE
PREVIOUS OUTSTANDING BALANCE						3,327.61
WO Billing until 03/26/2023:						
0028992 - Services	1.00	235.00	235.00	0.00	0.00	235.00
		INVOICE TOTAL:	235.00	0.00	0.00	235.00

PLEASE DETACH BOTTOM PORTION & REMIT WITH YOUR PAYMENT

For questions please contact us at

DUE DATE	INVOICE NO
4/30/2023	0023339

Customer Name: Ledyard, Town of
Customer No: 000205
Account No: 0015791 - 28992 Ledyard Emergencies FY2023 - FY2025

Please remit payment by the due date to:

City of Groton
Groton Utilities 860-446-4025
295 Meridian Street
Groton, CT 06340-

Invoice Total:	235.00
Discounts:	0.00
Credit Applied:	0.00
Ending Balance:	3,562.61
INVOICE BALANCE:	$235.00
AMOUNT PAID:	

Ledyard Billable							
WO Audit Report							
Until 03/26/2023							
WO Number	Labor	Services	Activity	Units	Date	Description	Notes
0028992	-	235.00	235.00	1.00	03/17/2023	materials	Water & Sewer Specialties
Report Totals	-	235.00	235.00				

File #: 23-1840 **Agenda Date:** 7/25/2023 **Agenda #:** 3.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Any Other New Business to come before the Authority.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)