



Ludlow Construction Company, Inc.

Maintenance and Plan of Operation

19C0002 DURHAM MEADOWS CONSTRUCT WATERLINE

Version Date: August 12, 2019

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Ludlow Construction

MAINTENANCE AND PLAN OF OPERATION

This Maintenance and Plan of Operation (MAPO) is a requirement to Contract No. 19C0002, Specification Section 01 11 0 Paragraph 1.2. The MAPO is a written narrative describing the proposed sequence of construction, and proposed temporary equipment to be utilized to maintain operation of the force main, all services, and all hydrants during construction. Due to the nature of this project this MAPO is a living document, and shall be updated as necessary by the SSHO, QC, Superintendent, and Project Manager at the request of the crews or subcontractor crews performing work related to this plan. Ludlow Construction's project manager will inform the Contracting Officer's Representative of any changes to the MAPO but will not resubmit for approval.

All employees of Ludlow Construction Company and subcontractors who are assigned to this project are subject to the requirements and procedures specified in this plan as well as the contract specifications. All will be required to read this plan and any referenced documents to gain general awareness of the MAPO requirements associated with this project.

Project Overview

This Maintenance and Plan of Operation (MAPO) has been prepared by Ludlow Construction Company, and is submitted to the United States Army Corps of Engineers, New England District (USACE). The USACE was retained by the United States Environmental Protection Agency (EPA), Interagency Agreement - DW-96-958872, to contract and oversee the implementation of the Site Wide Groundwater – Alternative Water Supply component of the remedial action for the Durham Meadows Superfund Site in Durham, CT. Ludlow Construction Company is under contract, W912WJ19C0002, with the United States Army Corps of Engineers, New England District (USACE) to implement the construction of the waterline extension and other related activities as defined by the contract documents, including but not limited to the project specifications and drawings and all approved plans.

The scope of this plan is to outline the Maintenance and Plan of Operation (MAPO) procedures to be followed and implemented for the project. Refer to the stand-alone Accident Prevention Plan (APP) and Quality Assurance Project Plan (QAPP) / Sampling and Analysis Plan (SAP) documents prepared by Ludlow Construction for applicable site health and safety information, and sampling related project quality assurance information, respectively. After acceptance of this MAPO, Ludlow will notify the Contracting Officer in writing of any proposed changes.

Sequence of Construction, Testing, & Start-up

Sequence of Construction:

Mobilization operations will begin at the end of June 2019 and conclude on as shown in the attached construction schedule Start-up (Appendix A).

Upon completion of Mobilization, all Environmental and Safety controls will be established by the Environmental Protection Manager and the SSHO (Forrest Brown) in accordance with Federal, CT, and local requirements. As well as those set forth in the EM 385-1-1, Environmental Protection Plan, and the Accident Prevention Plan.

Upon completion of implementing all Environmental and Safety controls Ludlow Construction will begin set up of the proposed lay down areas. Once all preliminary work has been completed Ludlow Construction will begin with the installation of 16 inch water line.

Work will occur yearly between the months of April 1 and Dec 1. It will be performed on the State Roads, Rt. 17 and Rt. 68 during the night hours from 7 PM- 5 AM, Sunday night through Thursday. One-way alternating traffic will be implemented. Work on the side streets will be done between 7AM-4PM. These roads will be closed to through traffic during work hours if granted. Work will not occur on roadway during late September of each year during the Durham Fair as stated in specifications. Traffic plans are drawn out in Appendix B of this plan.

The proposed sequence of construction and installation can be seen in the attached schedule (Appendix A). In August of 2019, a Ludlow crew will perform the connection to the existing 12" DI Water main at the intersection of Talcott Ridge Dr and install the 16" DI water main all the way to Old Cemetery Rd, which goes from Station 100+00 to 209+25. As work progresses down Rt. 17, the water main will be first disinfected and chlorinated, and then pressure tested. Disinfecting and sampling operations of the water main will be detailed in the QAPP to be submitted and accepted prior to commencement of the operations.

Also, in July of 2019, another Ludlow crew will work on installing the water main up Talcott Ridge Dr. and up to the tank site. The tank road will be built and the water main installed, as well as the altitude vault. The crew will then install the booster station, water meter vault and pressure reducing vault. The Long Hill pump station modifications will also occur in the fall of 2019.

In spring of 2020, Ludlow Construction crews will be installing main water lines on Maple Ave, Wallingford Ave, and then to Pickett Lane and Maiden Lane. Disinfecting, sampling, and pressure testing of the 16 DI water main that was installed on Rt. 17 will conclude. Once the disinfecting and sampling is complete, water services will be installed to the curb stops on Rt. 17 as detailed in the construction schedule in Appendix A. Construction of the Cherry Hill Storage Tank will begin in the May of 2020 and is scheduled for completion in August 2020. Once the tank and vaults are fully operational, water services to the houses can commence. Bringing the storage tank on line will be fully coordinated with the Contracting Officer, Middletown Water Department, Town of Durham, and the CT DPH.

The sequence of construction has been developed to minimize the residence time of water in the newly installed pipelines and Cherry Hill storage tank. Once the Cherry Hill storage is near completion in 2020, the newly installed water lines on Rt 17, and Talcott Ridge Drive will be chlorinated, disinfected and sampled. One acceptable samples have been received, there will be a period of time until the Cherry Hill Storage tank is complete. During this period, water lines on Rt 17 and Talcott Ridge will be flushed weekly to maintain water quality. Once the tank is complete and tested, it will then be chlorinated, disinfected, and sampled. After the water in the tank is deemed acceptable and operational, it will be put into service. Then the connection at STA 209+25 to the existing Durham water main can occur, and water services to the houses can begin. This will provide redundancy and a draw down of water in the tank. In the event draw down of the tank water to the existing Durham water system is not enough, Ludlow will continually flush the newly installed water main to maintain water quality in the tank and the existing water lines, until there are enough house services connected on Rt 17 to provide proper draw down of tank.

The water main on Talcott Ln and Maple Ave will then be disinfected, chlorinated, sampled. The tie in at Maple Ave STA 90+00 to the existing water system can then be completed. This will allow for the water in the newly installed lines on Talcott Ln and Maple Ave to flow and become redundant. Lastly, the water main on Maiden Ln and Pickett Ln will disinfected and sampled and then turned on to Rt 17. This will allow the water to continually flow through the Maiden Ln and Pickett Ln loop making it redundant. After each segment is activated the water services to the houses will be installed. When connecting to the houses, loss of service will be minimal. The service will be stubbed into the houses as the existing water well and piping will remain active. A date and time will then be set for a certified plumber to enter the houses and tie the new existing service into the house piping. This time and date will be scheduled with the homeowner, and each house will be out of water for a scheduled 2 hour time period, as they are permanently connected to the new water service.

No portion of the completed water system shall be brought on line without being fully coordinated with the Contracting Officer's Representative, and the appropriate water distribution representatives from the City of Middletown, the Town of Durham, and the CT DPH. All newly installed hydrants will remain bagged until the water line is fully operational and accepted. Existing hydrants will remain operational to ensure there is no loss of fire protection for structures.

Testing: Prior to waterline going fully operational for service, testing specifically outlined in Section No. 02515 and the Quality Assurance Project Plan shall be performed.

A. Basic Procedure for disinfecting water mains

1. Disinfection work shall be performed in accordance with Contract Specification Section 02515 Disinfecting Water Utility Distribution system and

fully coordinated with water distribution representatives from the city of Middletown and the Town of Durham. The Middletown Water Department will operate existing valves and facilities.

2. Testing and disinfection of water mains shall be limited to 1,200 ft. sections.
3. Inspecting materials to be used to ensure their integrity.
4. Preventing contaminating materials from entering the water main during storage, construction, or repair and noting potential contamination at the construction site.
5. Removing, by flushing or other means, those materials that may have entered the water main.
6. Chlorinating any residual contamination that may remain, and flushing the chlorinated water from the main.
7. Protecting the existing distribution system from backflow caused by hydrostatic pressure test and disinfection procedures with the use of a certified Backflow Device.
8. Documenting that an adequate level of chlorine contacted each pipe to provide disinfection.
9. Determining the bacteriological quantity by laboratory test after disinfection.
10. Final connection of the accepted new water main to the active distribution system.
11. Submit all testing and other documentation to the City of Middletown or the Town of Durham, and seek approval from the CTDPH.

Regulatory Requirements:

1. Disinfection work in accordance with Contract Specification Section 02515
Disinfection work shall be performed in accordance with the Contract specification 02515 Disinfecting Water Utility Distribution System, and fully coordinated with water distribution representatives from the City of Middletown and the Town of Durham

Quality Assurance:

1. Perform work in connection with disinfection under direction of QC/QA inspections and follow the procedures of the Quality Assurance Project Plan
2. Testing will be in accordance with the accepted QAPP and QCP for Contract No. 19C0002
3. Use equipment in proper working condition and adequate for specified work.

Discharge of chlorinated water into watercourses or surface waters is regulated by the National Pollutant Discharge Elimination System (NPDES). Chlorinated water will be discharged into a dechlorinating unit and into the existing drainage system. Disposal of this water is the responsibility of Ludlow Construction Company, and will be done in compliance with the CTDEEP General permit for discharge of Hydrostatic Pressure Testing Wastewater.

Rate of flow and locations of discharges will be scheduled in advance, to permit review and coordination with the Contracting Officer and regulatory authorities.

Materials:

- A. Water: Use potable water for cleaning and disinfection.
- B. Chlorine: Provide in accordance with AWWA C652.
 - 1. Liquid Chlorine: Inject with a solution feed chlorinator and a water booster pump. Follow the instruction of the chlorinator manufacturer.
 - 2. Sodium Hypochlorite (Solution): Further dilute in water to desired concentration and pump into the pipeline at a metered rate.

Chlorine Residual Test Kit: For measuring chlorine concentration, supply and use a medium range, drop count, DPD drop dilution method kit per AWWA C651. Maintain kits in good working order available for immediate test of residuals at point of sampling.

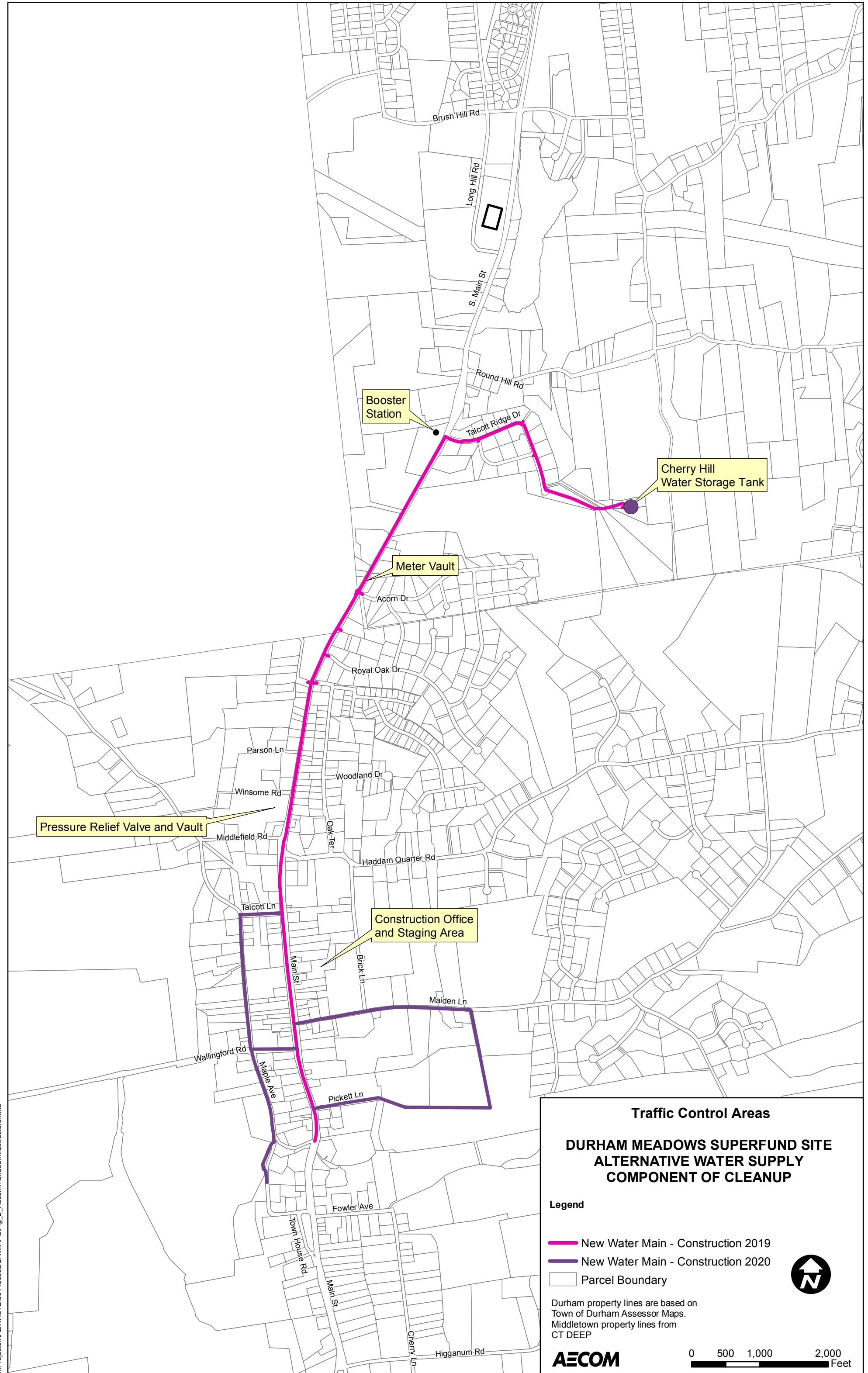
Appendix A (Construction Schedule)

Appendix B (Traffic Control during Construction)

See below figure for the roadways in which traffic control will be implemented. One lane alternating traffic will be implemented on Main St Rt 17 and Wallingford Rd Rt 68. Side Streets such as Talcott Rd Dr, Talcott Ln, Maple Ave, Maiden Ln, and Pickett Ln will be closed to through traffic. Each roadway has a site specific traffic control plan attached below. Pickett Ln is a private road and any closure or use of as a detour will be coordinated and approved by the Regional School District 13.

State Police will be utilized for night work on Rt 17 and Rt 68 in Durham, CT. Two officers will be used to direct alternating one lane traffic. Middletown Police will be used for the night work on Rt 17 in Middletown, CT. Certified Flaggers will be used for road closures on all other project side streets.

Variable Message Boards will be installed on Rt 17 to notify motorists of work days and times. These Message boards will be installed on Rt 17 in locations approved by the USACE and CT DOT.



| DD6.18.18 Durham Meadows Waterline - UP03 | | | | | | | | Ludlow - All Activities | | | | PAGE 2 OF 9 PAGES | | | | | | | | | | |
|---|---|------------|-------------|-------------|--------------|------------|-------------|--------------------------------------|--------------------|---------------------|---|-------------------|---|---|------|---|------|---|---|---|---|---|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | 2020 | | 2021 | | 2022 | | | | | |
| | | | | | | | | | | | J | J | A | S | N | D | J | F | A | J | J | N |
| A3470 | P&S Waste Management Plan | 30 | | 12-Feb-19 A | 08-Apr-19 A | 01-Apr-20 | 01-Apr-20 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | P&S Waste Management Plan | | R&A Waste Management Plan | | | | | | | | | |
| A3480 | R&A Waste Management Plan | 30 | | 08-Apr-19 A | 16-May-19 A | 01-Apr-20 | 01-Apr-20 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | | | | | | | | | | | | |
| 01 78 00 - Closeout Submittals | | | | | | | | | | | | | | | | | | | | | | |
| A3490 | P&S Closeout Documentation | 30 | 856 | 16-Jun-19 | 15-Jul-19 | 19-Oct-21 | 17-Nov-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Closeout Documentation | | R&A Closeout Documentation | | | | | | | | | |
| A3500 | R&A Closeout Documentation | 30 | 856 | 16-Jul-19 | 14-Aug-19 | 18-Nov-21 | 17-Dec-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 01 78 23 - Operation and Maintenance Data | | | | | | | | | | | | | | | | | | | | | | |
| A3510 | P&S O&M Data | 30 | 886 | 16-Jun-19 | 15-Jul-19 | 18-Nov-21 | 17-Dec-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S O&M Data | | | | | | | | | | | |
| 02012 - Protecting Existing Underground Utilities | | | | | | | | | | | | | | | | | | | | | | |
| A3520 | P&S Existing Utility Protection Shop Drawings | 30 | 85 | 16-Jun-19 | 15-Jul-19 | 09-Sep-19 | 08-Oct-19 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Existing Utility Protection Shop Drawings | | R&A Existing Utility Protection Shop Drawings | | | | | | | | | |
| A3530 | R&A Existing Utility Protection Shop Drawings | 30 | 85 | 16-Jul-19 | 14-Aug-19 | 09-Oct-19 | 07-Nov-19 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 02013 - Connection to Existing Buried Pipelines | | | | | | | | | | | | | | | | | | | | | | |
| A3540 | P&S Product Data - Tapping Sleeves & Valves | 30 | 18 | 16-Jun-19 | 15-Jul-19 | 04-Jul-19 | 02-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Product Data - Tapping Sleeves & Valves | | | | | | | | | | | |
| 02018 - Vibration Monitoring | | | | | | | | | | | | | | | | | | | | | | |
| A3550 | P&S Vibration Monitoring Plan & Documentation | 30 | | 04-Mar-19 A | 14-Mar-19 A | 29-Jul-19 | 29-Jul-19 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | P&S Vibration Monitoring Plan & Documentation | | | | | | | | | | | |
| A3560 | R&A Vibration Monitoring Plan & Documentation | 30 | | 15-Mar-19 A | 18-Mar-19 A | 29-Jul-19 | 29-Jul-19 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | R&A Vibration Monitoring Plan & Documentation | | | | | | | | | | | |
| 02053 - Excavated Material Management Plan | | | | | | | | | | | | | | | | | | | | | | |
| A3570 | P&S Soil Management Plan | 30 | 782 | 16-Jun-19 | 15-Jul-19 | 06-Aug-21 | 04-Sep-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Soil Management Plan | | R&A Soil Management Plan | | | | | | | | | |
| A3580 | R&A Soil Management Plan | 30 | 782 | 16-Jul-19 | 14-Aug-19 | 05-Sep-21 | 04-Oct-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 02160 - Excavation Support System | | | | | | | | | | | | | | | | | | | | | | |
| A3590 | P&S Excavation Support Plan & Product Data | 30 | | 25-Feb-19 A | 08-Mar-19 A | 03-Aug-19 | 03-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | P&S Excavation Support Plan & Product Data | | | | | | | | | | | |
| A3600 | R&A Excavation Support Plan & Product Data | 30 | | 09-Mar-19 A | 14-Mar-19 A | 03-Aug-19 | 03-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | R&A Excavation Support Plan & Product Data | | | | | | | | | | | |
| 02210 - Earth Excavation, Backfill, Fill and Grading | | | | | | | | | | | | | | | | | | | | | | |
| A3610 | P&S Excavation, Backfill & Fill Plan | 30 | | 29-Mar-19 A | 09-May-19 A | 03-Aug-19 | 03-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | P&S Excavation, Backfill & Fill Plan | | R&A Excavation, Backfill & Fill Plan | | | | | | | | | |
| A3620 | R&A Excavation, Backfill & Fill Plan | 30 | | 09-May-19 A | 22-May-19 A | 03-Aug-19 | 03-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | | | | | | | | | | | | |
| 02223 - Screened Gravel | | | | | | | | | | | | | | | | | | | | | | |
| A3630 | P&S Screened Gravel Samples | 30 | | 27-May-19 A | 28-May-19 A | 30-Apr-20 | 30-Apr-20 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | I P&S Screened Gravel Samples | | | | | | | | | | | |
| A3640 | R&A Screened Gravel | 30 | | 29-May-19 A | 30-May-19 A | 30-Apr-20 | 30-Apr-20 | Cure, Milestone, & Submittal - 7D/Wk | 0 | 100% | I R&A Screened Gravel | | | | | | | | | | | |
| 02224 - Bank Run or Crushed Gravel | | | | | | | | | | | | | | | | | | | | | | |

| DD6.18.18 Durham Meadows Waterline - UP03 | | | | | | | | | | Ludlow - All Activities | | | | | | PAGE 3 OF 9 PAGES | | | | | | | | | |
|--|---|------------|-------------|-------------|--------------|------------|-------------|--------------------------------------|--------------------|-------------------------|---|---|---|---|------|-------------------|------|---|---|---|---|---|---|---|--|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | 2020 | | 2021 | | 2022 | | | | | | | | |
| | | | | | | | | | | | J | J | J | A | J | J | A | J | J | A | J | J | A | J | |
| A7890 | P&S Pipe Material & Fittings Product Data REV 01 | 5 | 9 | 15-Apr-19 A | 19-Jun-19 | 25-Jun-19 | 28-Jun-19 | Cure, Milestone, & Submittal - 7D/Wk | 4 | 0% | P&S Pipe Material & Fittings Product Data REV 01 | | R&A Pipe Material & Fittings Product Data REV 01 | | | | | | | | | | | | |
| A7900 | R&A Pipe Material & Fittings Product Data REV 01 | 30 | 9 | 20-Jun-19 | 19-Jul-19 | 29-Jun-19 | 28-Jul-19 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| A4520 | Procure Pipe Materials & Fittings | 5 | 9 | 20-Jul-19 | 24-Jul-19 | 29-Jul-19 | 02-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 5 | 0% | | | | | | | | | | | | | | | |
| 02515 - Disinfecting Water Utility Distribution Systems | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3830 | P&S Disinfecting Sequence & Product Data | 30 | 721 | 16-Jun-19 | 15-Jul-19 | 06-Jun-21 | 05-Jul-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Disinfecting Sequence & Product Data | | R&A Disinfecting Sequence & Product Data | | | | | | | | | | | | |
| A3840 | R&A Disinfecting Sequence & Product Data | 30 | 721 | 16-Jul-19 | 14-Aug-19 | 06-Jul-21 | 04-Aug-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| 02630 - Storm Drainage Utilities | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3850 | P&S Storm Drainage Pipe & Structures Shop Drawings | 30 | 223 | 16-Jun-19 | 15-Jul-19 | 25-Jan-20 | 23-Feb-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Storm Drainage Pipe & Structures Shop Drawings | | R&A Storm Drainage Pipe & Structures Shop Drawings | | | | | | | | | | | | |
| A3860 | R&A Storm Drainage Pipe & Structures Shop Drawings | 30 | 223 | 16-Jul-19 | 14-Aug-19 | 24-Feb-20 | 24-Mar-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| A4530 | Procure Storm Drainage Materials | 30 | 223 | 15-Aug-19 | 13-Sep-19 | 25-Mar-20 | 23-Apr-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | Procure Storm Drainage Materials | | | | | | | | | | | | | | |
| 02820 - Chain Link Fences & Gates | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3870 | P&S Chain Link Fence Product Data | 30 | 368 | 08-Apr-19 A | 03-Jul-19 | 18-Jun-20 | 05-Jul-20 | Cure, Milestone, & Submittal - 7D/Wk | 18 | 50% | P&S Chain Link Fence Product Data | | R&A Chain Link Fence Product Data | | | | | | | | | | | | |
| A3880 | R&A Chain Link Fence Product Data | 30 | 368 | 04-Jul-19 | 02-Aug-19 | 06-Jul-20 | 04-Aug-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| 02900 - Planting | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3890 | P&S Plantings Data, Material and Samples as Needed | 30 | 795 | 16-Jun-19 | 15-Jul-19 | 19-Aug-21 | 17-Sep-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Plantings Data, Material and Samples as Needed | | R&A Plantings Data, Material and Samples | | | | | | | | | | | | |
| A3900 | R&A Plantings Data, Material and Samples | 30 | 795 | 16-Jul-19 | 14-Aug-19 | 18-Sep-21 | 17-Oct-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| 02922 - Hydroseeding | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3910 | P&S Seeding Certs | 30 | 782 | 16-Jun-19 | 15-Jul-19 | 06-Aug-21 | 04-Sep-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Seeding Certs | | R&A Seeding Certs | | | | | | | | | | | | |
| A3920 | R&A Seeding Certs | 30 | 782 | 16-Jul-19 | 14-Aug-19 | 05-Sep-21 | 04-Oct-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| 03100 - Concrete Formwork | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3930 | P&S Architectural Formwork Shop Drawings | 30 | 306 | 16-Jun-19 | 15-Jul-19 | 17-Apr-20 | 16-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Architectural Formwork Shop Drawings | | R&A Architectural Formwork Shop Drawings | | | | | | | | | | | | |
| A3940 | R&A Architectural Formwork Shop Drawings | 30 | 306 | 16-Jul-19 | 14-Aug-19 | 17-May-20 | 15-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| A4540 | Procure Architectural Formwork | 30 | 306 | 15-Aug-19 | 13-Sep-19 | 16-Jun-20 | 15-Jul-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | Procure Architectural Formwork | | | | | | | | | | | | | | |
| 03200 - Concrete Reinforcement | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3950 | P&S Rebar Shop Drawings | 30 | 306 | 16-Jun-19 | 15-Jul-19 | 17-Apr-20 | 16-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Rebar Shop Drawings | | R&A Rebar Shop Drawings | | | | | | | | | | | | |
| A3960 | R&A Rebar Shop Drawings | 30 | 306 | 16-Jul-19 | 14-Aug-19 | 17-May-20 | 15-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| A4550 | Procure Rebar Material As Needed | 30 | 306 | 15-Aug-19 | 13-Sep-19 | 16-Jun-20 | 15-Jul-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | Procure Rebar Material As Needed | | | | | | | | | | | | | | |
| 03300 - Cast-In-Place Concrete | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3970 | P&S Cast-in-place Concrete Mix Design | 30 | 336 | 16-Jun-19 | 15-Jul-19 | 17-May-20 | 15-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Cast-in-place Concrete Mix Design | | R&A Cast-in-place Concrete Mix Design | | | | | | | | | | | | |
| A3980 | R&A Cast-in-place Concrete Mix Design | 30 | 336 | 16-Jul-19 | 14-Aug-19 | 16-Jun-20 | 15-Jul-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| 03410 - Precast Structural Concrete Building | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3990 | P&S Precast Structure Concrete Building Shop Drawings | 30 | 217 | 16-Jun-19 | 15-Jul-19 | 19-Jan-20 | 17-Feb-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | P&S Precast Structure Concrete Building Shop Drawings | | R&A Precast Structure Concrete Building Shop Drawings | | | | | | | | | | | | |
| A4000 | R&A Precast Structure Concrete Building Shop Drawings | 30 | 217 | 16-Jul-19 | 14-Aug-19 | 18-Feb-20 | 18-Mar-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | |
| A4560 | Procure Precast Concrete Buildings | 60 | 217 | 15-Aug-19 | 13-Oct-19 | 19-Mar-20 | 17-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 60 | 0% | Procure Precast Concrete Buildings | | | | | | | | | | | | | | |
| 03420 - Precast Reinforced Concrete Vaults | | | | | | | | | | | | | | | | | | | | | | | | | |
| A4010 | P&S Precast Reinforced Concrete Vaults | 30 | 217 | 16-Jun-19 | 15-Jul-19 | | | | | | | | | | | | | | | | | | | | |

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|--|--|------------|-------------|-------------|--------------|------------|-------------|--------------------------------------|-------------------------|---------------------|------|---|------|---|-------------------|---|------|---|---|---|---|--|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | 2020 | | 2021 | | 2022 | | | | | |
| | | | | | | | | | | | N | J | J | A | N | D | J | F | A | J | J | |
| A4120 | R&A Gas Engine Generator Set & Appurtenances Shop Drawings | 30 | 268 | 16-Jul-19 | 14-Aug-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4610 | Procure Gas Engine Generator | 30 | 268 | 15-Aug-19 | 13-Sep-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 13225 - Prestressed Concrete Tanks | | | | | | | | | | | | | | | | | | | | | | |
| A4130 | P&S Prestressed Concrete Tanks Shop Drawings & Data | 30 | 331 | 16-Jun-19 | 15-Jul-19 | 12-May-20 | 10-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4140 | R&A Prestressed Concrete Tanks Shop Drawings & Data | 30 | 331 | 16-Jul-19 | 14-Aug-19 | 11-Jun-20 | 10-Jul-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4620 | Procure Prestressed Concrete Tanks | 30 | 331 | 15-Aug-19 | 13-Sep-19 | 11-Jul-20 | 09-Aug-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 13300 - Utility Control Instrumentation System | | | | | | | | | | | | | | | | | | | | | | |
| A4150 | P&S Utility Control Instrumentation System Shop Drawings | 30 | 414 | 16-Jun-19 | 15-Jul-19 | 03-Aug-20 | 01-Sep-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4160 | R&A Utility Control Instrumentation System Shop Drawings | 30 | 414 | 16-Jul-19 | 14-Aug-19 | 02-Sep-20 | 01-Oct-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 15101 - Valves, Gates, Hydrants, and Appurtenances | | | | | | | | | | | | | | | | | | | | | | |
| A4170 | P&S Valves, Gates, Hydrants & Appurtenances Shop Drawings & Product Data | 30 | 14 | 25-Mar-19 A | 19-Jun-19 | 30-Jun-19 | 03-Jul-19 | Cure, Milestone, & Submittal - 7D/Wk | 4 | 0% | | | | | | | | | | | | |
| A4180 | R&A Valves, Gates, Hydrants & Appurtenances Shop Drawings & Product Data | 30 | 14 | 20-Jun-19 | 19-Jul-19 | 04-Jul-19 | 02-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 15105 - Pipe Supports for Process Piping | | | | | | | | | | | | | | | | | | | | | | |
| A4190 | P&S Pipe Support Shop Drawings & Certs | 30 | 644 | 16-Jun-19 | 15-Jul-19 | 21-Mar-21 | 19-Apr-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4200 | R&A Pipe Support Shop Drawings & Certs | 30 | 644 | 16-Jul-19 | 14-Aug-19 | 20-Apr-21 | 19-May-21 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 15112 - Self-Contained Automatic Control Valves and Appurtenances | | | | | | | | | | | | | | | | | | | | | | |
| A4210 | P&S Automatic Control Valves Shop Drawings & Product Data | 30 | 414 | 16-Jun-19 | 15-Jul-19 | 03-Aug-20 | 01-Sep-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4220 | R&A Automatic Control Valves Shop Drawings & Product Data | 30 | 414 | 16-Jul-19 | 14-Aug-19 | 02-Sep-20 | 01-Oct-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 15115 - Flow Meter | | | | | | | | | | | | | | | | | | | | | | |
| A4230 | P&S Flow Meter Shop Drawings & Product Data | 30 | 414 | 16-Jun-19 | 15-Jul-19 | 03-Aug-20 | 01-Sep-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4240 | R&A Flow Meter Shop Drawings & Product Data | 30 | 414 | 16-Jul-19 | 14-Aug-19 | 02-Sep-20 | 01-Oct-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 15400 - Plumbing Systems | | | | | | | | | | | | | | | | | | | | | | |
| A4250 | P&S Plumbing Material Product Data | 30 | 465 | 16-Jun-19 | 15-Jul-19 | 23-Sep-20 | 22-Oct-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 15806 - Heating, Ventilating, and Air Conditioning | | | | | | | | | | | | | | | | | | | | | | |
| A4260 | P&S Heating & Air Conditioning Shop Drawings | 30 | 298 | 16-Jun-19 | 15-Jul-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4270 | R&A Heating & Air Conditioning Shop Drawings | 30 | 298 | 16-Jul-19 | 14-Aug-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 15809 - Water Booster Pumps and Appurtenances | | | | | | | | | | | | | | | | | | | | | | |
| A4280 | P&S Booster Pumps Product Data | 30 | 399 | 16-Jun-19 | 15-Jul-19 | 19-Jul-20 | 17-Aug-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 16050 - Electrical Work - General | | | | | | | | | | | | | | | | | | | | | | |
| A4290 | P&S Electrical Shop Drawings, Diagrams, and Product Data | 30 | 298 | 16-Jun-19 | 15-Jul-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4300 | R&A Electrical Shop Drawings, Diagrams, and Product Data | 30 | 298 | 16-Jul-19 | 14-Aug-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 16110 - Raceway and Boxes for Electrical Systems | | | | | | | | | | | | | | | | | | | | | | |
| A4310 | P&S Raceway & Boxes Shop Drawings | 30 | 298 | 16-Jun-19 | 15-Jul-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4320 | R&A Raceway & Boxes Shop Drawings | 30 | 298 | 16-Jul-19 | 14-Aug-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 16120 - Electric Wires & Cables | | | | | | | | | | | | | | | | | | | | | | |
| A4330 | P&S Wires & Cables Shop Drawings | 30 | 298 | 16-Jun-19 | 15-Jul-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4340 | R&A Wires & Cables Shop Drawings | 30 | 298 | 16-Jul-19 | 14-Aug-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 16160 - Panelboards | | | | | | | | | | | | | | | | | | | | | | |
| A4350 | P&S Panelboards Shop Drawings | 30 | 268 | 16-Jun-19 | 15-Jul-19 | 10-Mar-20 | 08-Apr-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4360 | R&A Panelboards Shop Drawings | 30 | 268 | 16-Jul-19 | 14-Aug-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4630 | Procure Panelboards | 30 | 268 | 15-Aug-19 | 13-Sep-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| 16220 - Electric Motors | | | | | | | | | | | | | | | | | | | | | | |
| A4370 | P&S Electric Motors Shop Drawings | 30 | 298 | 16-Jun-19 | 15-Jul-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | |
| A4380 | R&A Electric Motors Shop Drawings | 30 | | | | | | | | | | | | | | | | | | | | |

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|---|---|------------|-------------|-------------|--------------|------------|----------------------------|--------------------------------------|--------------------|---------------------|------|-------------------|------|---|------|---|------|---|---|---|---|---|---|---|---|---|---|--|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | 2020 | | 2021 | | 2022 | | | | | | | | | | | |
| | | | | | | | | | | | J | J | A | S | N | D | J | F | A | J | J | A | S | N | D | J | F | |
| A4640 | Procure Automatic Transfer Switch | 30 | 268 | 15-Aug-19 | 13-Sep-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| 16450 - Grounding and Bonding for Electrical Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A4460 | P&S Grounding & Bonding Shop Drawings | 30 | 293 | 16-Jun-19 | 15-Jul-19 | 04-Apr-20 | 03-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| A4470 | R&A Grounding & Bonding Shop Drawings | 30 | 293 | 16-Jul-19 | 14-Aug-19 | 04-May-20 | 02-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| 16601 - Lightning Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A4480 | P&S Lightning Protection Shop Drawings | 30 | 293 | 16-Jun-19 | 15-Jul-19 | 04-Apr-20 | 03-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| A4490 | R&A Lightning Protection Shop Drawings | 30 | 293 | 16-Jul-19 | 14-Aug-19 | 04-May-20 | 02-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| 16900 - Electrical Controls and Miscellaneous Electrical Equipment | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A4500 | P&S Electrical Controls & Equipment Shop Drawings | 30 | 298 | 16-Jun-19 | 15-Jul-19 | 09-Apr-20 | 08-May-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| A4510 | R&A Electrical Controls & Equipment Shop Drawings | 30 | 298 | 16-Jul-19 | 14-Aug-19 | 09-May-20 | 07-Jun-20 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| Construction | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start-up | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A7720 | P&S Permits Project Wide | 30 | 7 | 18-Feb-19 A | 26-Jun-19 | 23-Jun-19 | 03-Jul-19 | Cure, Milestone, & Submittal - 7D/Wk | 11 | 80% | | | | | | | | | | | | | | | | | | |
| A1120 | Mobilization Period | 10 | 18 | 17-Jun-19 | 28-Jun-19 | 12-Jul-19 | 26-Jul-19 | Out of Roadway Work - Days | 10 | 0% | | | | | | | | | | | | | | | | | | |
| A4650 | Establish Engineers Field Office | 5 | 18 | 17-Jun-19 | 21-Jun-19 | 12-Jul-19 | 19-Jul-19 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A4680 | Perform Vibration Monitoring Survey | 5 | 28 | 17-Jun-19 | 21-Jun-19 | 29-Jul-19 | 02-Aug-19 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A7730 | Issuance of Permits & Police Detail - Project Wide | 30 | 7 | 27-Jun-19 | 26-Jul-19 | 04-Jul-19 | 02-Aug-19 | Cure, Milestone, & Submittal - 7D/Wk | 30 | 0% | | | | | | | | | | | | | | | | | | |
| A1140 | Install E&S Controls | 5 | 4 | 15-Jul-19 | 22-Jul-19 | 22-Jul-19 | 26-Jul-19 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A1160 | Establish Laydown Yard | 5 | 4 | 23-Jul-19 | 29-Jul-19 | 02-Aug-19 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | | | | | |
| A4660 | Perform Test Pits as Needed - Project Wide | 3 | 6 | 23-Jul-19 | 25-Jul-19 | 31-Jul-19 | 02-Aug-19 | Out of Roadway Work - Days | 3 | 0% | | | | | | | | | | | | | | | | | | |
| A5280 | Tree Clearing - Tank Access | 10 | 56 | 15-Aug-19 | 29-Aug-19 | 15-Nov-19 | 29-Nov-19 | Out of Roadway Work - Days | 10 | 0% | | | | | | | | | | | | | | | | | | |
| A7550 | Establish Water Treatment System Area | 5 | 111 | 24-Apr-20 | 30-Apr-20 | 15-Oct-20 | 22-Oct-20 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | | | | |
| Route 17 South Main Street | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rte 17 - Sta 100+00 to 209+25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A4670 | Sta. 100+00 to 105+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 6 | 5 | 29-Jul-19 | 08-Aug-19 | 03-Aug-19 | 15-Aug-19 | In Roadway Work - Nights | 6 | 0% | | | | | | | | | | | | | | | | | | |
| A4700 | Sta. 105+00 to 110+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 5 | 08-Aug-19 | 15-Aug-19 | 15-Aug-19 | 22-Aug-19 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A5100 | Sta. 205+00 to 209+25 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 55 | 08-Aug-19 | 15-Aug-19 | 09-Nov-19 | 20-Nov-19 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A4720 | Sta. 110+00 to 115+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 5 | 15-Aug-19 | 22-Aug-19 | 22-Aug-19 | 29-Aug-19 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A5080 | Sta. 200+00 to 205+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 55 | 15-Aug-19 | 22-Aug-19 | 20-Nov-19 | 27-Nov-19 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A4740 | Sta. 115+00 to 120+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 5 | 22-Aug-19 | 29-Aug-19 | 29-Aug-19 | 06-Sep-19 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A5060 | Sta. 195+00 to 200+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 55 | 22-Aug-19 | 29-Aug-19 | 27-Nov-19 | 09-Apr-20 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A4760 | Sta. 120+00 to 125+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 5 | 29-Aug-19 | 06-Sep-19 | 06-Sep-19 | 13-Sep-19 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A5020 | Sta. 185+00 to 190+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 55 | 29-Aug-19 | 06-Sep-19 | 09-Apr-20 | 16-Apr-20 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A4780 | Sta. 125+00 to 130+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 5 | 06-Sep-19 | 13-Sep-19 | 13-Sep-19 | 20-Sep-19 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | | | | | | | |
| A5040 | Sta. 190+00 to 195+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL | 5 | 55 | 06-Sep-19 | 13-Sep-19 | 16-Apr-20 | 23-Apr-20 | In Roadway Work - Nights</ | | | | | | | | | | | | | | | | | | | | |

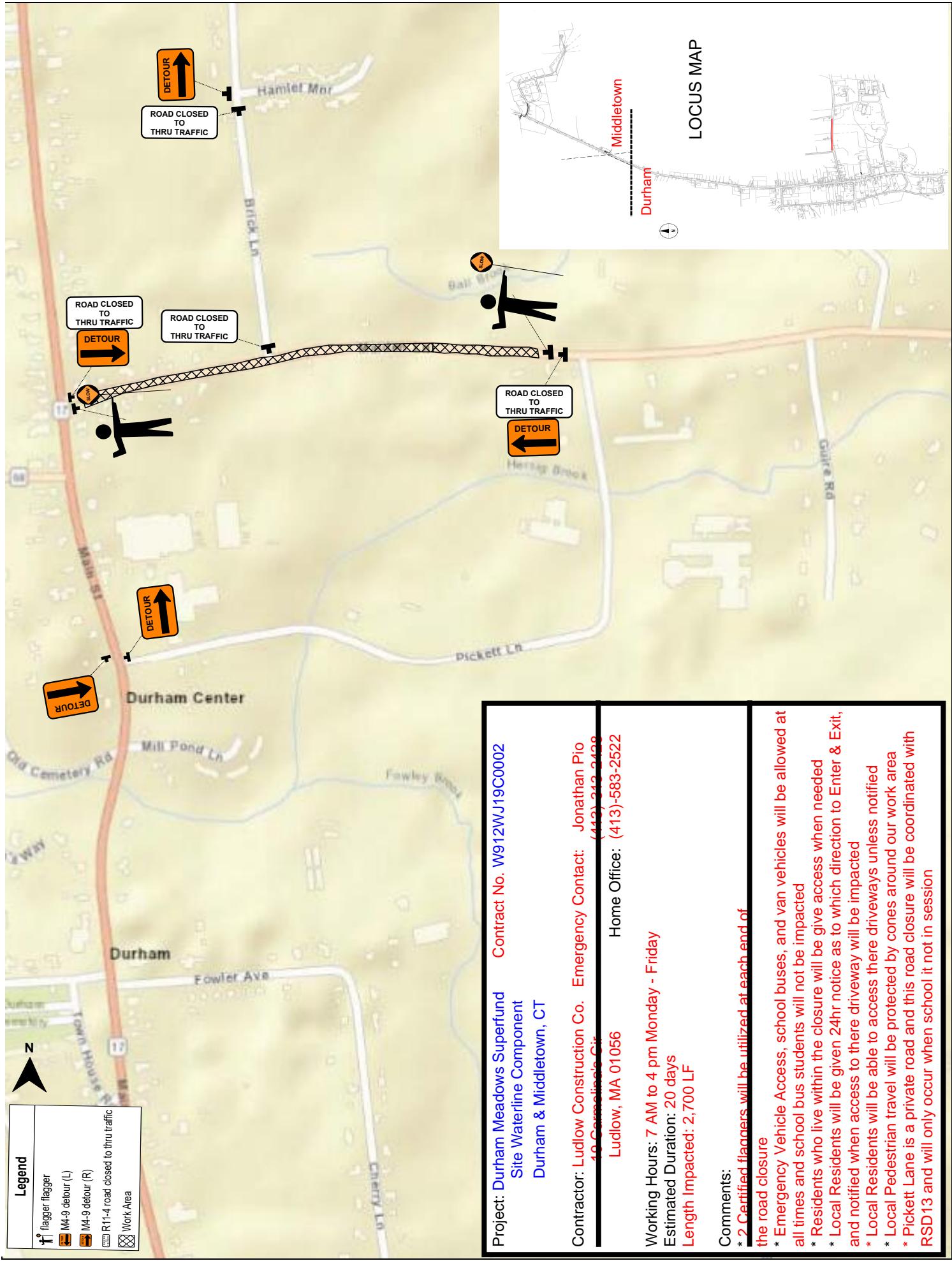
| DD6.18.18 Durham Meadows Waterline - UP03 | | | | | | | | Ludlow - All Activities | | | | PAGE 6 OF 9 PAGES | | | | | | | |
|--|---|------------|-------------|-------------|--------------|------------|-------------|----------------------------|--------------------|---------------------|---|-------------------|------|---|------|---|------|---|--|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | 2020 | | 2021 | | 2022 | | |
| | | | | | | | | | | | J | J | J | J | A | J | J | A | |
| Talcott Ridge Dr. & Watch Hill Dr. - 8" Waterline | | | | | | | | | | | | | | | | | | | |
| A5260 | Sta. 600+00 to 604+32 - Watch Hill Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 33 | 06-Sep-19 | 12-Sep-19 | 08-Nov-19 | 15-Nov-19 | In Roadway Work - Days | 5 | 0% | I Sta. 600+00 to 604+32 - Watch Hill Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | | | | | | | | |
| A5240 | Sta. 607+14 to 605+00 - Watch Hill Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 2 | 33 | 13-Sep-19 | 16-Sep-19 | 18-Nov-19 | 20-Nov-19 | In Roadway Work - Days | 2 | 0% | I Sta. 607+14 to 605+00 - Watch Hill Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | | | | | | | | |
| A5220 | Sta. 756+51 to 751+55 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 33 | 17-Sep-19 | 07-Oct-19 | 21-Nov-19 | 27-Nov-19 | In Roadway Work - Days | 5 | 0% | I Sta. 756+51 to 751+55 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | | | | | | | | |
| A7530 | Connect to Existing Water Main - Sta. 752+00 - Talcott Ridge Dr. | 1 | 31 | 08-Oct-19 | 08-Oct-19 | 29-Nov-19 | 29-Nov-19 | Out of Roadway Work - Days | 1 | 0% | I Connect to Existing Water Main - Sta. 752+00 - Talcott Ridge Dr. | | | | | | | | |
| Tank Access Driveway | | | | | | | | | | | | | | | | | | | |
| A5290 | Perform Grubbing, Grade & Compact Subbase - Tank Access | 5 | 31 | 09-Oct-19 | 17-Oct-19 | 01-Apr-20 | 07-Apr-20 | Out of Roadway Work - Days | 5 | 0% | I Perform Grubbing, Grade & Compact Subbase - Tank Access | | | | | | | | |
| A5300 | Sta. 23+26 to 17+00 - Tank Access - Excavate, Install Pipe, Hydrants & Backfill - 20" WL | 5 | 31 | 18-Oct-19 | 25-Oct-19 | 09-Apr-20 | 16-Apr-20 | Out of Roadway Work - Days | 5 | 0% | I Sta. 23+26 to 17+00 - Tank Access - Excavate, Install Pipe, Hydrants & Backfill - 20" WL | | | | | | | | |
| A5320 | Sta. 17+00 to 10+00 - Tank Access - Excavate, Install Pipe, Hydrants & Backfill - 20" WL | 5 | 31 | 28-Oct-19 | 01-Nov-19 | 17-Apr-20 | 23-Apr-20 | Out of Roadway Work - Days | 5 | 0% | I Sta. 17+00 to 10+00 - Tank Access - Excavate, Install Pipe, Hydrants & Backfill - 20" WL | | | | | | | | |
| A5350 | Remove & Install Drainage Structures & Pipes as Needed - Tank Access | 5 | 31 | 04-Nov-19 | 12-Nov-19 | 24-Apr-20 | 30-Apr-20 | Out of Roadway Work - Days | 5 | 0% | I Remove & Install Drainage Structures & Pipes as Needed - Tank Access | | | | | | | | |
| A5360 | Install Rip Rap Aprons as Needed - Tank Access | 3 | 31 | 14-Nov-19 | 18-Nov-19 | 01-May-20 | 05-May-20 | Out of Roadway Work - Days | 3 | 0% | I Install Rip Rap Aprons as Needed - Tank Access | | | | | | | | |
| A5340 | Install Aggregate Base - Two Courses - Tank Access | 5 | 31 | 19-Nov-19 | 25-Nov-19 | 07-May-20 | 14-May-20 | Out of Roadway Work - Days | 5 | 0% | I Install Aggregate Base - Two Courses - Tank Access | | | | | | | | |
| A5370 | Pave HMA Binder Course - Tank Access | 3 | 31 | 26-Nov-19 | 29-Nov-19 | 15-May-20 | 19-May-20 | Out of Roadway Work - Days | 3 | 0% | I Pave HMA Binder Course - Tank Access | | | | | | | | |
| Vaults & Stations | | | | | | | | | | | | | | | | | | | |
| Water Meter Vault | | | | | | | | | | | | | | | | | | | |
| A6150 | Excavate, Grade & Install Crushed Stone Bedding - Water Meter Vault | 3 | 65 | 01-Apr-20 | 03-Apr-20 | 13-Jul-20 | 15-Jul-20 | Out of Roadway Work - Days | 3 | 0% | I Excavate, Grade & Install Crushed Stone Bedding - Water Meter Vault | | | | | | | | |
| A6160 | Install Precast Structure - Water Meter Vault | 2 | 65 | 06-Apr-20 | 07-Apr-20 | 16-Jul-20 | 17-Jul-20 | Out of Roadway Work - Days | 2 | 0% | I Install Precast Structure - Water Meter Vault | | | | | | | | |
| A6170 | Connect to Installed Waterline - Water Meter Vault | 3 | 65 | 09-Apr-20 | 13-Apr-20 | 20-Jul-20 | 22-Jul-20 | Out of Roadway Work - Days | 3 | 0% | I Connect to Installed Waterline - Water Meter Vault | | | | | | | | |
| A6190 | Install Electrical Conduit from Existing Service to Vault - Water Meter Vault | 3 | 65 | 14-Apr-20 | 17-Apr-20 | 23-Jul-20 | 27-Jul-20 | Out of Roadway Work - Days | 3 | 0% | I Install Electrical Conduit from Existing Service to Vault - Water Meter Vault | | | | | | | | |
| A6200 | Install Phone Service from Existing Service to Vault - Water Meter Vault | 3 | 70 | 14-Apr-20 | 17-Apr-20 | 30-Jul-20 | 03-Aug-20 | Out of Roadway Work - Days | 3 | 0% | I Install Phone Service from Existing Service to Vault - Water Meter Vault | | | | | | | | |
| A6180 | Install Sump Pump & Discharge - Water Meter Vault | 1 | 72 | 14-Apr-20 | 14-Apr-20 | 03-Aug-20 | 03-Aug-20 | Out of Roadway Work - Days | 1 | 0% | I Install Sump Pump & Discharge - Water Meter Vault | | | | | | | | |
| A6230 | Install & Connect Grounding - Water Meter Vault | 1 | 71 | 14-Apr-20 | 14-Apr-20 | 31-Jul-20 | 31-Jul-20 | Out of Roadway Work - Days | 1 | 0% | I Install & Connect Grounding - Water Meter Vault | | | | | | | | |
| A6320 | Install Radio Antenna - Water Meter Vault | 1 | 71 | 16-Apr-20 | 16-Apr-20 | 03-Aug-20 | 03-Aug-20 | Out of Roadway Work - Days | 1 | 0% | I Install Radio Antenna - Water Meter Vault | | | | | | | | |
| A6330 | Install Electrical Components, Switches & Receptacles - Water Meter Vault | 5 | 65 | 20-Apr-20 | 24-Apr-20 | 28-Jul-20 | 03-Aug-20 | Out of Roadway Work - Days | 5 | 0% | I Install Electrical Components, Switches & Receptacles - Water Meter Vault | | | | | | | | |
| A6210 | Install Electrical Cabinets & Meters, Connect & Test - Water Meter Vault | 5 | 65 | 27-Apr-20 | 01-May-20 | 05-Aug-20 | 11-Aug-20 | Out of Roadway Work - Days | 5 | 0% | I Install Electrical Cabinets & Meters, Connect & Test - Water Meter Vault | | | | | | | | |
| Booster Pump Station | | | | | | | | | | | | | | | | | | | |
| A6440 | Excavate, Grade & Install Crushed Stone Bedding - Booster Pump Station | 3 | 65 | 04-May-20 | 07-May-20 | 13-Aug-20 | 17-Aug-20 | Out of Roadway Work - Days | 3 | 0% | I Excavate, Grade & Install Crushed Stone Bedding - Booster Pump Station | | | | | | | | |
| A6450 | Install Precast Footings & Structure - Booster Pump Station | 4 | 65 | 08-May-20 | 14-May-20 | 18-Aug-20 | 21-Aug-20 | Out of Roadway Work - Days | 4 | 0% | I Install Precast Footings & Structure - Booster Pump Station | | | | | | | | |
| A6460 | Connect to Installed Waterline - Booster Pump Station | 4 | 65 | 15-May-20 | 20-May-20 | 24-Aug-20 | 27-Aug-20 | Out of Roadway Work - Days | 4 | 0% | I Connect to Installed Waterline - Booster Pump Station | | | | | | | | |
| A6470 | Install Electrical Conduit from Existing Service to Vault - Booster Pump Station | 4 | 65 | 21-May-20 | 27-May-20 | 28-Aug-20 | 02-Sep-20 | Out of Roadway Work - Days | 4 | 0% | I Install Electrical Conduit from Existing Service to Vault - Booster Pump Station | | | | | | | | |
| A6480 | Install Sump Pump & Discharge - Booster Pump Station | 2 | 93 | 21-May-20 | 22-May-20 | 13-Oct-20 | 15-Oct-20 | Out of Roadway Work - Days | 2 | 0% | I Install Sump Pump & Discharge - Booster Pump Station | | | | | | | | |
| A6490 | Install & Connect Grounding - Booster Pump Station | 2 | 93 | 21-May-20 | 22-May-20 | 13-Oct-20 | 15-Oct-20 | Out of Roadway Work - Days | 2 | 0% | I Install & Connect Grounding - Booster Pump Station | | | | | | | | |
| A7510 | Excavate & Install Natural Gas Service Line - Booster Pump Station | 5 | 65 | 28-May-20 | 03-Jun-20 | 03-Sep-20 | 11-Sep-20 | Out of Roadway Work - Days | 5 | 0% | I Excavate & Install Natural Gas Service Line - Booster Pump Station | | | | | | | | |
| A6510 | Install Electrical Components, Switches & Receptacles - Booster Pump Station | 5 | 65 | 04-Jun-20 | 11-Jun-20 | 14-Sep-20 | 21-Sep-20 | Out of Roadway Work - Days | 5 | 0% | I Install Electrical Components, Switches & Receptacles - Booster Pump Station | | | | | | | | |
| A6520 | Install Electrical Cabinets & Meters, Connect & Test - Booster Pump Station | 4 | 81 | 12-Jun-20 | 17-Jun-20 | 16-Oct-20 | 22-Oct-20 | Out of Roadway Work - Days | 4 | 0% | I Install Electrical Cabinets & Meters, Connect & Test - Booster Pump Station | | | | | | | | |
| Altitude Valve Vault | | | | | | | | | | | | | | | | | | | |
| A6070 | Excavate, Grade & Install Crushed Stone Bedding - Altitude Valve Vault | 3 | 31 | 01-Apr-20 | 03-Apr-20 | 20-May-20 | 22-May-20 | Out of Roadway Work - Days | 3 | 0% | I Excavate, Grade & Install Crushed Stone Bedding - Altitude Valve Vault | | | | | | | | |
| A6080 | Install Precast Structure - Altitude Valve Vault | 2 | 31 | 06-Apr-20 | 07-Apr-20 | 26-May-20 | 27-May-20 | Out of Roadway Work - Days | 2 | 0% | I Install Precast Structure - Altitude Valve Vault | | | | | | | | |

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|--|--|------------|-------------|-------------|--------------|------------|-------------|--------------------------------------|--------------------|---------------------|------|---|-------------------|---|------|---|------|---|---|---|--|--|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | 2020 | | 2021 | | 2022 | | | | | |
| | | | | | | | | | | | J | J | J | A | S | N | D | J | F | A | J | J |
| A7240 | Excavate Foundation, Grade & Install Leveling Base - Storage Tank | 12 | 31 | 28-Apr-20 | 15-May-20 | 16-Jun-20 | 01-Jul-20 | Out of Roadway Work - Days | 12 | 0% | | | | | | | | | | | Excavate Foundation, Grade & Install Leveling Base - | |
| A7320 | Grade & Install Perimeter Drainage as Needed | 8 | 31 | 18-May-20 | 28-May-20 | 02-Jul-20 | 15-Jul-20 | Out of Roadway Work - Days | 8 | 0% | | | | | | | | | | | Grade & Install Perimeter Drainage as Needed | |
| A7250 | Form, Reinforce & Place Floor Slab - Storage Tank | 12 | 31 | 29-May-20 | 16-Jun-20 | 16-Jul-20 | 31-Jul-20 | Out of Roadway Work - Days | 12 | 0% | | | | | | | | | | | Form, Reinforce & Place Floor Slab - Storage Tank | |
| A7260 | Cure Floor Slab - Storage Tank | 7 | 47 | 17-Jun-20 | 23-Jun-20 | 03-Aug-20 | 09-Aug-20 | Cure, Milestone, & Submittal - 7D/Wk | 7 | 0% | | | | | | | | | | | Cure Floor Slab - Storage Tank | |
| A7270 | Install & Grout Precast Wall Panels - Storage Tank | 12 | 30 | 24-Jun-20 | 13-Jul-20 | 10-Aug-20 | 26-Aug-20 | Out of Roadway Work - Days | 12 | 0% | | | | | | | | | | | Install & Grout Precast Wall Panels - Storage Tank | |
| A7300 | Install Precast Dome Panels - Storage Tank | 8 | 30 | 14-Jul-20 | 23-Jul-20 | 27-Aug-20 | 08-Sep-20 | Out of Roadway Work - Days | 8 | 0% | | | | | | | | | | | Install Precast Dome Panels - Storage Tank | |
| A7280 | Finish Prestressed Wall Exterior - Storage Tank | 15 | 30 | 24-Jul-20 | 17-Aug-20 | 10-Sep-20 | 01-Oct-20 | Out of Roadway Work - Days | 15 | 0% | | | | | | | | | | | Finish Prestressed Wall Exterior - Storage Tank | |
| A7290 | Install Tank Pipe & Fittings - Storage Tank | 5 | 30 | 18-Aug-20 | 24-Aug-20 | 02-Oct-20 | 08-Oct-20 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | Install Tank Pipe & Fittings - Storage Tank | |
| A7420 | Install & Connect Grounding - Storage Tank | 5 | 30 | 25-Aug-20 | 31-Aug-20 | 09-Oct-20 | 19-Oct-20 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | Install & Connect Grounding - Storage Tank | |
| A7310 | Install Stairs & Railings - Storage Tank | 5 | 30 | 01-Sep-20 | 08-Sep-20 | 20-Oct-20 | 27-Oct-20 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | Install Stairs & Railings - Storage Tank | |
| A7330 | Chlorinate, Test & Fill - Storage Tank | 3 | 30 | 10-Sep-20 | 14-Sep-20 | 28-Oct-20 | 30-Oct-20 | Out of Roadway Work - Days | 3 | 0% | | | | | | | | | | | Chlorinate, Test & Fill - Storage Tank | |
| Maple Avenue, Talcott Lane, Wallingford Rd. - Line Installation | | | | | | | | | | | | | | | | | | | | | | |
| A5730 | Sta. 300+00 to 306+00 - Talcott Lane - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 4 | 24-Apr-20 | 30-Apr-20 | 30-Apr-20 | 07-May-20 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | Sta. 300+00 to 306+00 - Talcott Lane - Excavate, Install |
| A5400 | Sta. 940+88 to 935+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 4 | 4 | 01-May-20 | 07-May-20 | 08-May-20 | 13-May-20 | In Roadway Work - Days | 4 | 0% | | | | | | | | | | | | Sta. 940+88 to 935+00 - Maple Ave. - Excavate, Install |
| A5420 | Sta. 935+00 to 930+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 4 | 08-May-20 | 14-May-20 | 14-May-20 | 21-May-20 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | Sta. 935+00 to 930+00 - Maple Ave. - Excavate, Install |
| A5440 | Sta. 930+00 to 925+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 4 | 15-May-20 | 22-May-20 | 22-May-20 | 29-May-20 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | Sta. 930+00 to 925+00 - Maple Ave. - Excavate, Install |
| A5460 | Sta. 925+00 to 920+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 4 | 26-May-20 | 01-Jun-20 | 01-Jun-20 | 05-Jun-20 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | Sta. 925+00 to 920+00 - Maple Ave. - Excavate, Insta |
| A5750 | Sta. 600+00 to 605+00 - Wallingford Rd - Excavate, Install Pipe, Hydrants & Backfill - 12" WL | 5 | 4 | 01-Jun-20 | 06-Jun-20 | 05-Jun-20 | 13-Jun-20 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | Sta. 600+00 to 605+00 - Wallingford Rd - Excavate, I |
| A5770 | Sta. 605+00 to 609+50 - Wallingford Rd - Excavate, Install Pipe, Hydrants & Backfill - 12" WL | 5 | 4 | 09-Jun-20 | 16-Jun-20 | 15-Jun-20 | 20-Jun-20 | In Roadway Work - Nights | 5 | 0% | | | | | | | | | | | | Sta. 605+00 to 609+50 - Wallngford Rd - Excava |
| A5480 | Sta. 920+00 to 915+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 4 | 16-Jun-20 | 22-Jun-20 | 22-Jun-20 | 29-Jun-20 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | Sta. 920+00 to 915+00 - Maple Ave. - Excavate, Inst |
| A5500 | Sta. 915+00 to 910+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 5 | 4 | 23-Jun-20 | 29-Jun-20 | 29-Jun-20 | 07-Jul-20 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | Sta. 915+00 to 910+00 - Maple Ave. - Excavate, Ins |
| A5520 | Sta. 910+00 to 906+56 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 4 | 4 | 30-Jun-20 | 06-Jul-20 | 07-Jul-20 | 13-Jul-20 | In Roadway Work - Days | 4 | 0% | | | | | | | | | | | | Sta. 910+00 to 906+56 - Maple Ave. - Excavate, Ins |
| A5540 | Sta. 906+56 to 905+28 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 2 | 3 | 07-Jul-20 | 09-Jul-20 | 13-Jul-20 | 15-Jul-20 | Out of Roadway Work - Days | 2 | 0% | | | | | | | | | | | | Sta. 906+56 to 905+28 - Maple Ave. - Excavate, Ins |
| A7160 | Install Water Control Measures - Allyn Brook Crossing - Maple Ave | 2 | 3 | 10-Jul-20 | 13-Jul-20 | 15-Jul-20 | 17-Jul-20 | Out of Roadway Work - Days | 2 | 0% | | | | | | | | | | | | Install Water Control Measures - Allyn Brook Cross |
| A7170 | Excavate & Install 1st Half of Steel Casing Crossing - Allyn Brook Crossing - Maple Ave | 4 | 107 | 14-Jul-20 | 17-Jul-20 | 30-Apr-21 | 06-May-21 | Out of Roadway Work - Days | 4 | 0% | | | | | | | | | | | | Excavate & Install 1st Half of Steel Casing Crossin |
| A7180 | Install Scour Protection Mat & Backfill 1st Half - Allyn Brook Crossing - Maple Ave | 1 | 107 | 20-Jul-20 | 20-Jul-20 | 07-May-21 | 07-May-21 | Out of Roadway Work - Days | 1 | 0% | | | | | | | | | | | | Install Scour Protection Mat & Backfill 1st Half - Al |
| A7190 | Switch Water Control Measures - Allyn Brook Crossing - Maple Ave | 1 | 107 | 21-Jul-20 | 21-Jul-20 | 10-May-21 | 10-May-21 | Out of Roadway Work - Days | 1 | 0% | | | | | | | | | | | | Switch Water Control Measures - Allyn Brook Cros |
| A7200 | Excavate & Install 2nd Half of Steel Casing Crossing - Allyn Brook Crossing - Maple Ave | 4 | 107 | 22-Jul-20 | 27-Jul-20 | 11-May-21 | 17-May-21 | Out of Roadway Work - Days | 4 | 0% | | | | | | | | | | | | Excavate & Install 2nd Half of Steel Casing Cross |
| A7210 | Install Scour Protection Mat & Backfill 2nd Half - Allyn Brook Crossing - Maple Ave | 1 | 107 | 28-Jul-20 | 28-Jul-20 | 18-May-21 | 18-May-21 | Out of Roadway Work - Days | 1 | 0% | | | | | | | | | | | | Install Scour Protection Mat & Backfill 2nd Half - A |
| A7220 | Remove Water Control Measures - Allyn Brook Crossing - Maple Ave | 1 | 107 | 29-Jul-20 | 29-Jul-20 | 19-May-21 | 19-May-21 | Out of Roadway Work - Days | 1 | 0% | | | | | | | | | | | | Remove Water Control Measures - Allyn Brook C |
| A7230 | Install & Connect Waterline - Allyn Brook Crossing - Maple Ave | 2 | 107 | 30-Jul-20 | 31-Jul-20 | 20-May-21 | 21-May-21 | Out of Roadway Work - Days | 2 | 0% | | | | | | | | | | | | Install & Connect Waterline - Allyn Brook Crossin |
| A5560 | Sta. 904+74 to 902+25 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL | 4 | 107 | 03-Aug-20 | 07-Aug-20 | 24-May-21 | 27-May-21 | Out of Roadway Work - Days | 4 | 0% | | | | | | | | | | | | Sta. 904+74 to 902+25 - Maple Ave. - Excavate, I |
| A5580 | Sta. 902+25 to Existing Water Main - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" 1 | 3 | 100 | 10-Aug-20 | 13-Aug-20 | 28-May-21 | 02-Jun-21 | In Roadway Work - Days | 3 | 0% | | | | | | | | | | | | Sta. 902+25 to Existing Water Main - Maple Ave. |
| Pickett Lane - Line Installation | | | | | | | | | | | | | | | | | | | | | | |
| A5900 | Sta. 538+55 to 533+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL | 5 | 2 | 14-Jul-20 | 21-Jul-20 | 17-Jul-20 | 24-Jul-20 | Pickett Lane School Zone | | | | | | | | | | | | | | |

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|---|--|------------|-------------|-------------|--------------|------------|-------------|----------------------------|-------------------------|---------------------|------|---|------|---|-------------------|---|------|---|---|---|---|---|--|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | 2020 | | 2021 | | 2022 | | | | | | |
| | | | | | | | | | | | J | J | J | A | N | D | J | F | A | J | J | N | |
| A7130 | Backfill Jacking Pit & Pipe - Allyn Brook Crossing - Maiden Lane | 3 | 106 | 22-Sep-20 | 24-Sep-20 | 08-Jul-21 | 12-Jul-21 | Out of Roadway Work - Days | 3 | 0% | | | | | I | | | | | | | | |
| A5830 | Sta. 412+00 to 415+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL | 5 | 102 | 05-Oct-20 | 09-Oct-20 | 13-Jul-21 | 20-Jul-21 | In Roadway Work - Days | 5 | 0% | | | | | I | | | | | | | | |
| A5850 | Sta. 415+00 to 420+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL | 5 | 102 | 13-Oct-20 | 19-Oct-20 | 21-Jul-21 | 27-Jul-21 | In Roadway Work - Days | 5 | 0% | | | | | I | | | | | | | | |
| A5870 | Sta. 420+00 to 426+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL | 6 | 102 | 20-Oct-20 | 27-Oct-20 | 28-Jul-21 | 04-Aug-21 | In Roadway Work - Days | 6 | 0% | | | | | I | | | | | | | | |
| Service Installations | | | | | | | | | | | | | | | | | | | | | | | |
| Service Installations | | | | | | | | | | | | | | | | | | | | | | | |
| Route 17 - Services | | | | | | | | | | | | | | | | | | | | | | | |
| A7920 | Install Services to Curbstop - Sta. 164+00 to 174+00 - Route 17 | 4 | 60 | 13-Jul-20 | 17-Jul-20 | 23-Oct-20 | 29-Oct-20 | In Roadway Work - Nights | 4 | 0% | | | | | I | | | | | | | | |
| A7930 | Install Services to Curbstop - Sta. 174+00 to 184+00 - Route 17 | 5 | 60 | 17-Jul-20 | 24-Jul-20 | 29-Oct-20 | 05-Nov-20 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A7940 | Install Services to Curbstop - Sta. 184+00 to 194+00 - Route 17 | 6 | 60 | 24-Jul-20 | 01-Aug-20 | 05-Nov-20 | 17-Nov-20 | In Roadway Work - Nights | 6 | 0% | | | | | I | | | | | | | | |
| A7950 | Install Services to Curbstop - Sta. 194+00 to 204+00 - Route 17 | 5 | 60 | 03-Aug-20 | 08-Aug-20 | 17-Nov-20 | 24-Nov-20 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A7960 | Install Services to Curbstop - Sta. 204+00 to 209+25 - Route 17 | 4 | 61 | 12-Aug-20 | 18-Aug-20 | 25-Nov-20 | 03-Apr-21 | In Roadway Work - Nights | 4 | 0% | | | | | I | | | | | | | | |
| A6560 | Install Full Services - Sta. 164+00 to 174+00 - Route 17 | 4 | 24 | 14-Sep-20 | 18-Sep-20 | 31-Oct-20 | 06-Nov-20 | In Roadway Work - Nights | 4 | 0% | | | | | I | | | | | | | | |
| A6570 | Install Full Services - Sta. 174+00 to 184+00 - Route 17 | 5 | 24 | 18-Sep-20 | 09-Oct-20 | 06-Nov-20 | 17-Nov-20 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A6580 | Install Full Services - Sta. 184+00 to 194+00 - Route 17 | 5 | 24 | 09-Oct-20 | 17-Oct-20 | 17-Nov-20 | 24-Nov-20 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A6590 | Install Full Services - Sta. 194+00 to 204+00 - Route 17 | 5 | 24 | 19-Oct-20 | 24-Oct-20 | 24-Nov-20 | 03-Apr-21 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A6600 | Install Full Services - Sta. 204+00 to 209+25 - Route 17 | 4 | 24 | 26-Oct-20 | 30-Oct-20 | 07-Apr-21 | 13-Apr-21 | In Roadway Work - Nights | 4 | 0% | | | | | I | | | | | | | | |
| Route 17 - Services to Curbstop | | | | | | | | | | | | | | | | | | | | | | | |
| A6680 | Install Services to Curbstop - Sta. 100+00 to 110+00 - Route 17 | 3 | 24 | 30-Oct-20 | 04-Nov-20 | 13-Apr-21 | 16-Apr-21 | In Roadway Work - Nights | 3 | 0% | | | | | I | | | | | | | | |
| A6690 | Install Services to Curbstop - Sta. 110+00 to 120+00 - Route 17 | 5 | 24 | 04-Nov-20 | 13-Nov-20 | 16-Apr-21 | 23-Apr-21 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A6700 | Install Services to Curbstop - Sta. 120+00 to 130+00 - Route 17 | 5 | 24 | 13-Nov-20 | 20-Nov-20 | 23-Apr-21 | 30-Apr-21 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A6710 | Install Services to Curbstop - Sta. 130+00 to 140+00 - Route 17 | 5 | 24 | 20-Nov-20 | 02-Apr-21 | 30-Apr-21 | 07-May-21 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| A6720 | Install Services to Curbstop - Sta. 140+00 to 150+00 - Route 17 | 9 | 24 | 02-Apr-21 | 17-Apr-21 | 07-May-21 | 22-May-21 | In Roadway Work - Nights | 9 | 0% | | | | | I | | | | | | | | |
| A6730 | Install Services to Curbstop - Sta. 150+00 to 160+00 - Route 17 | 9 | 24 | 17-Apr-21 | 30-Apr-21 | 24-May-21 | 05-Jun-21 | In Roadway Work - Nights | 9 | 0% | | | | | I | | | | | | | | |
| A6740 | Install Services to Curbstop - Sta. 160+00 to 164+00 - Route 17 | 5 | 24 | 30-Apr-21 | 07-May-21 | 07-Jun-21 | 12-Jun-21 | In Roadway Work - Nights | 5 | 0% | | | | | I | | | | | | | | |
| Maple Avenue, Talcott Ln. & Wallingford Rd. - Curbstop | | | | | | | | | | | | | | | | | | | | | | | |
| A6750 | Install Services to Curbstop - Sta. 300+00 to 306+00 - Talcott Lane | 2 | 23 | 07-May-21 | 10-May-21 | 14-Jun-21 | 15-Jun-21 | In Roadway Work - Days | 2 | 0% | | | | | I | | | | | | | | |
| A6790 | Install Services to Curbstop - Sta. 940+88 to 930+00 - Maple Ave | 8 | 23 | 11-May-21 | 21-May-21 | 16-Jun-21 | 25-Jun-21 | Out of Roadway Work - Days | 8 | 0% | | | | | I | | | | | | | | |
| A6800 | Install Services to Curbstop - Sta. 930+00 to 920+00 - Maple Ave | 6 | 23 | 24-May-21 | 01-Jun-21 | 28-Jun-21 | 06-Jul-21 | Out of Roadway Work - Days | 6 | 0% | | | | | I | | | | | | | | |
| A6810 | Install Services to Curbstop - Sta. 920+00 to 907+00 - Maple Ave | 6 | 23 | 02-Jun-21 | 10-Jun-21 | 07-Jul-21 | 15-Jul-21 | Out of Roadway Work - Days | 6 | 0% | | | | | I | | | | | | | | |
| A6820 | Install Services to Curbstop - Sta. 907+00 to 900+00 - Maple Ave | 5 | 23 | 11-Jun-21 | 17-Jun-21 | 16-Jul-21 | 22-Jul-21 | Out of Roadway Work - Days | 5 | 0% | | | | | I | | | | | | | | |
| A6770 | Install Services to Curbstop - Sta. 600+00 to 609+50 - Wallingford Rd. | 4 | 23 | 17-Jun-21 | 23-Jun-21 | 22-Jul-21 | 28-Jul-21 | In Roadway Work - Nights | 4 | 0% | | | | | I | | | | | | | | |
| Talcott Ridge Dr. & Watch Hill Dr. - Curbstop | | | | | | | | | | | | | | | | | | | | | | | |
| A6970 | Install Services to Curbstop - Sta. 52+00 to 42+00 - Talcott Ridge Dr. | 3 | 23 | 23-Jun-21 | 25-Jun-21 | 28-Jul-21 | 30-Jul-21 | Out of Roadway Work - Days | 3 | 0% | | | | | I | | | | | | | | |
| A6980 | Install Services to Curbstop - Sta. 42+00 to 30+00 - Talcott Ridge Dr. | 3 | 23 | 28-Jun-21 | 30-Jun-21 | 02-Aug-21 | 04-Aug-21 | Out of Roadway Work - Days | 3 | 0% | | | | | I</td | | | | | | | | |

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|---|--|------------|-------------|-------------|--------------|------------|-------------|--------------------------------------|--------------------|---------------------|------|---|---|-------------------|---|---|------|---|---|------|---|---|---|--|--|
| Activity ID | Activity Description | Orig. Dur. | Total Float | Early Start | Early Finish | Late Start | Late Finish | Calendar | Remaining Duration | Physical % Complete | 2019 | | | 2020 | | | 2021 | | | 2022 | | | | | |
| | | | | | | | | | | | N | J | J | A | S | N | D | J | F | A | J | J | A | J | J |
| A6880 | Install Services to Curbstop - Sta. 410+00 to 420+00 - Maiden Lane | 5 | 1 | 19-Aug-21 | 25-Aug-21 | 20-Aug-21 | 30-Aug-21 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Install Services to Curbstop - Sta. 410+00 to 420+00 - Maiden Lane |
| A6890 | Install Services to Curbstop - Sta. 420+00 to 426+00 - Maiden Lane | 5 | 1 | 27-Aug-21 | 02-Sep-21 | 30-Aug-21 | 07-Sep-21 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Install Services to Curbstop - Sta. 420+00 to 426+00 - Maiden Lane |
| Well Abandonments | | | | | | | | | | | | | | | | | | | | | | | | | |
| A7660 | Abandon Wells - Maiden Lane | 5 | 1 | 03-Sep-21 | 13-Sep-21 | 07-Sep-21 | 16-Sep-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Abandon Wells - Maiden Lane |
| A7710 | Abandon Wells - Rte 17 | 5 | 1 | 14-Sep-21 | 21-Sep-21 | 16-Sep-21 | 23-Sep-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Abandon Wells - Rte 17 |
| A7700 | Abandon Wells - Pickett Lane | 5 | 1 | 22-Sep-21 | 28-Sep-21 | 23-Sep-21 | 30-Sep-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Abandon Wells - Pickett Lane |
| A7670 | Abandon Wells - Maple Ave | 5 | 1 | 29-Sep-21 | 05-Oct-21 | 30-Sep-21 | 08-Oct-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Abandon Wells - Maple Ave |
| A7680 | Abandon Wells - Talcott Lane | 5 | 1 | 06-Oct-21 | 15-Oct-21 | 08-Oct-21 | 19-Oct-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Abandon Wells - Talcott Lane |
| A7690 | Abandon Wells - Wallingford Rd. | 5 | 1 | 18-Oct-21 | 22-Oct-21 | 19-Oct-21 | 26-Oct-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Abandon Wells - Wallingford Rd. |
| Project Wide Finishes | | | | | | | | | | | | | | | | | | | | | | | | | |
| In Roadway Finishes | | | | | | | | | | | | | | | | | | | | | | | | | |
| A7390 | Mill & Overlay Roadway - Talcott Ridge Dr. | 6 | 23 | 01-Jul-21 | 09-Jul-21 | 05-Aug-21 | 13-Aug-21 | In Roadway Work - Days | 6 | 0% | | | | | | | | | | | | | | | Mill & Overlay Roadway - Talcott Ridge Dr. |
| A7370 | Pave HMA Overlay - Pickett Lane | 4 | 28 | 12-Jul-21 | 15-Jul-21 | 20-Aug-21 | 25-Aug-21 | Pickett Lane School Zone - Days | 4 | 0% | | | | | | | | | | | | | | | Pave HMA Overlay - Pickett Lane |
| A7400 | Mill & Overlay Roadway - Watch Hill Dr. | 3 | 23 | 12-Jul-21 | 15-Jul-21 | 16-Aug-21 | 18-Aug-21 | In Roadway Work - Days | 3 | 0% | | | | | | | | | | | | | | | Mill & Overlay Roadway - Watch Hill Dr. |
| A7380 | Mill & Overlay Roadway - Route 17 | 12 | 23 | 15-Jul-21 | 31-Jul-21 | 19-Aug-21 | 04-Sep-21 | In Roadway Work - Nights | 12 | 0% | | | | | | | | | | | | | | | Mill & Overlay Roadway - Route 17 |
| A7580 | Install Traffic Loops - Pickett Lane | 2 | 28 | 16-Jul-21 | 19-Jul-21 | 26-Aug-21 | 31-Aug-21 | Pickett Lane School Zone - Days | 2 | 0% | | | | | | | | | | | | | | | Install Traffic Loops - Pickett Lane |
| A7570 | Install Traffic Loops - Wallingford Rd. | 2 | 53 | 20-Jul-21 | 21-Jul-21 | 22-Oct-21 | 26-Oct-21 | In Roadway Work - Days | 2 | 0% | | | | | | | | | | | | | | | Install Traffic Loops - Wallingford Rd. |
| A7410 | Mill & Overlay Roadway - Wallingford Rd. | 2 | 23 | 02-Aug-21 | 04-Aug-21 | 04-Sep-21 | 09-Sep-21 | In Roadway Work - Nights | 2 | 0% | | | | | | | | | | | | | | | Mill & Overlay Roadway - Wallingford Rd. |
| A7340 | Pave HMA Overlay - Maple Avenue | 5 | 23 | 04-Aug-21 | 11-Aug-21 | 09-Sep-21 | 15-Sep-21 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Pave HMA Overlay - Maple Avenue |
| A7350 | Pave HMA Overlay - Talcott Lane | 3 | 23 | 12-Aug-21 | 16-Aug-21 | 16-Sep-21 | 04-Oct-21 | In Roadway Work - Days | 3 | 0% | | | | | | | | | | | | | | | Pave HMA Overlay - Talcott Lane |
| A7500 | Driveway Paving HMA & Aprons - Project Wide | 10 | 26 | 17-Aug-21 | 31-Aug-21 | 08-Oct-21 | 26-Oct-21 | In Roadway Work - Days | 10 | 0% | | | | | | | | | | | | | | | Driveway Paving HMA & Aprons - Project Wide |
| A7360 | Pave HMA Overlay - Maiden Lane | 6 | 11 | 03-Sep-21 | 13-Sep-21 | 05-Oct-21 | 14-Oct-21 | In Roadway Work - Days | 6 | 0% | | | | | | | | | | | | | | | Pave HMA Overlay - Maiden Lane |
| A7450 | Install Permanent Pavement Markings - Project Wide | 8 | 12 | 13-Sep-21 | 07-Oct-21 | 14-Oct-21 | 26-Oct-21 | In Roadway Work - Nights | 8 | 0% | | | | | | | | | | | | | | | Install Permanent Pavement Markings - Project Wide |
| A7460 | Install Traffic Loops - Rte 17 | 4 | 14 | 14-Sep-21 | 17-Sep-21 | 20-Oct-21 | 26-Oct-21 | In Roadway Work - Days | 4 | 0% | | | | | | | | | | | | | | | Install Traffic Loops - Rte 17 |
| Out of Roadway Finishes | | | | | | | | | | | | | | | | | | | | | | | | | |
| A5380 | Pave HMA Surface Course & Curb - Tank Access | 2 | 61 | 12-Jul-21 | 13-Jul-21 | 18-Oct-21 | 20-Oct-21 | Out of Roadway Work - Days | 2 | 0% | | | | | | | | | | | | | | | Pave HMA Surface Course & Curb - Tank Access |
| A5390 | Install Merritt Parkway Guiderail System - Tank Access | 4 | 61 | 15-Jul-21 | 20-Jul-21 | 20-Oct-21 | 26-Oct-21 | Out of Roadway Work - Days | 4 | 0% | | | | | | | | | | | | | | | Install Merritt Parkway Guiderail System - Tank Access |
| A6530 | Perform Booster Station Modifications - Durham Booster Station | 2 | 42 | 12-Aug-21 | 13-Aug-21 | 20-Oct-21 | 22-Oct-21 | Out of Roadway Work - Days | 2 | 0% | | | | | | | | | | | | | | | Perform Booster Station Modifications - Durham Booster Station |
| A7440 | Install Loam & Seed - Project Wide | 6 | 34 | 12-Aug-21 | 20-Aug-21 | 05-Oct-21 | 15-Oct-21 | Out of Roadway Work - Days | 6 | 0% | | | | | | | | | | | | | | | Install Loam & Seed - Project Wide |
| A7490 | Disposal of Contaminated Material as Needed - Project Wide | 5 | 41 | 12-Aug-21 | 19-Aug-21 | 19-Oct-21 | 26-Oct-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Disposal of Contaminated Material as Needed - Project Wide |
| A7560 | Convert Wells as Needed - Project Wide. | 5 | 41 | 12-Aug-21 | 19-Aug-21 | 19-Oct-21 | 26-Oct-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | | Convert Wells as Needed - Project Wide. |
| A7480 | Decommission Durham Fairground Well - Durham Fairground | 2 | 42 | 16-Aug-21 | 17-Aug-21 | 22-Oct-21 | 26-Oct-21 | Out of Roadway Work - Days | 2 | 0% | | | | | | | | | | | | | | | Decommission Durham Fairground Well - Durham Fairground |
| A7430 | Install Plantings - Project Wide | 10 | 34 | 23-Aug-21 | 03-Sep-21 | 18-Oct-21 | 29-Oct-21 | Out of Roadway Work - Days | 10 | 0% | | | | | | | | | | | | | | | Install Plantings - Project Wide |
| Closeout | | | | | | | | | | | | | | | | | | | | | | | | | |
| A1060 | Substantial Field Completion Request | 1 | 3 | 23-Oct-21 | 23-Oct-21 | 26-Oct-21 | 26-Oct-21 | Cure, Milestone, & Submittal - 7D/Wk | 1 | 0% | | | | | | | | | | | | | | Substantial Field Completion Request | |
| A1070 | Contractor Pre-Final Inspection | 5 | 3 | 23-Oct-21 | 28-Oct-21 | 27-Oct-21 | 31-Oct-21 | Cure, Milestone, & Submittal - 7D/Wk | 5 | 0% | | | | | | | | | | | | | | Contractor Pre-Final Inspection | |
| A1090 | Correction of Punch List from Contractors Pre-Final Inspection | 10 | 1 | 28-Oct-21 | 15-Nov-21 | 01-Nov-21 | 16-Nov-21 | In Roadway Work - Days | 10 | 0% | | | | | | | | | | | | | | Correction of Punch List from Contractors Pre-Final Inspection | |
| A1080 | Demobilization | 5 | 4 | 15-Nov-21 | 23-Nov-21 | 23-Nov-21 | 30-Nov-21 | Out of Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | Demobilization | |
| A1100 | Government's Pre-Final Inspection | 5 | 1 | 15-Nov-21 | 20-Nov-21 | 17-Nov-21 | 21-Nov-21 | Cure, Milestone, & Submittal - 7D/Wk | 5 | 0% | | | | | | | | | | | | | | Government's Pre-Final Inspection | |
| A3180 | Correction of Punchlist from Governments Pre-Final Inspection | 5 | 0 | 22-Nov-21 | 30-Nov-21 | 22-Nov-21 | 30-Nov-21 | In Roadway Work - Days | 5 | 0% | | | | | | | | | | | | | | Correction of Punchlist from Governments Pre-Final Inspection | |
| A1110 | Final Inspection | 17 | 0 | 01-Dec-21 | 17-Dec-21 | 01-Dec-21 | 17-Dec-21 | Cure, Milestone, & Submittal - 7D/Wk | 17 | 0% | | | | | | | | | | | | | | Final Inspection | |

MAIDEN LANE



Project: Durham Meadows Superfund
Contract No. W912WJ19C0002
Site Waterline Component
Durham & Middletown, CT

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
(413) 212-2103
10 Greenfield St., Ste. C
Ludlow, MA 01056 Home Office: (413)-583-2522

Working Hours: 7 AM to 4 pm Monday - Friday
Estimated Duration: 20 days
Length Impacted: 2,700 LF

Comments:

- * 2 Certified flaggers will be utilized at each end of the road closure
- * Emergency Vehicle Access, school buses, and van vehicles will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed and notified when access to their driveway will be impacted
- * Local Residents will be able to access their driveways unless notified
- * Local Pedestrian travel will be protected by cones around our work area
- * Pickett Lane is a private road and this road closure will be coordinated with RSD13 and will only occur when school is not in session

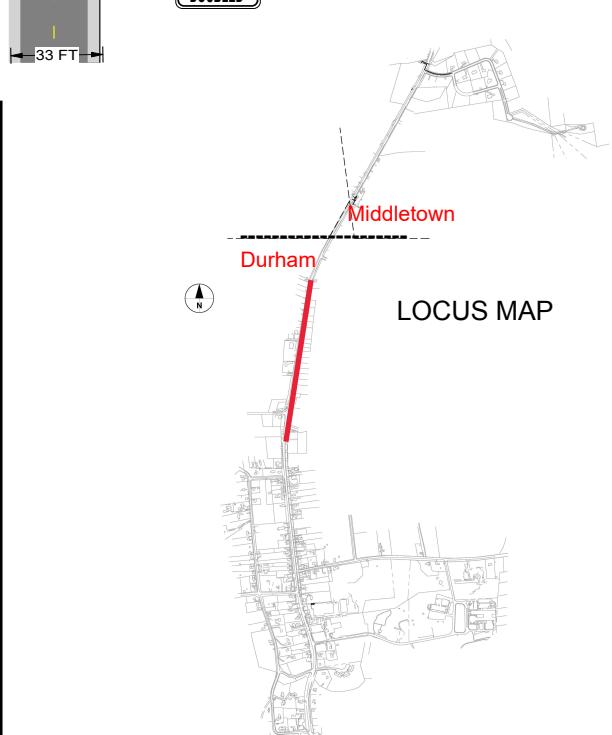
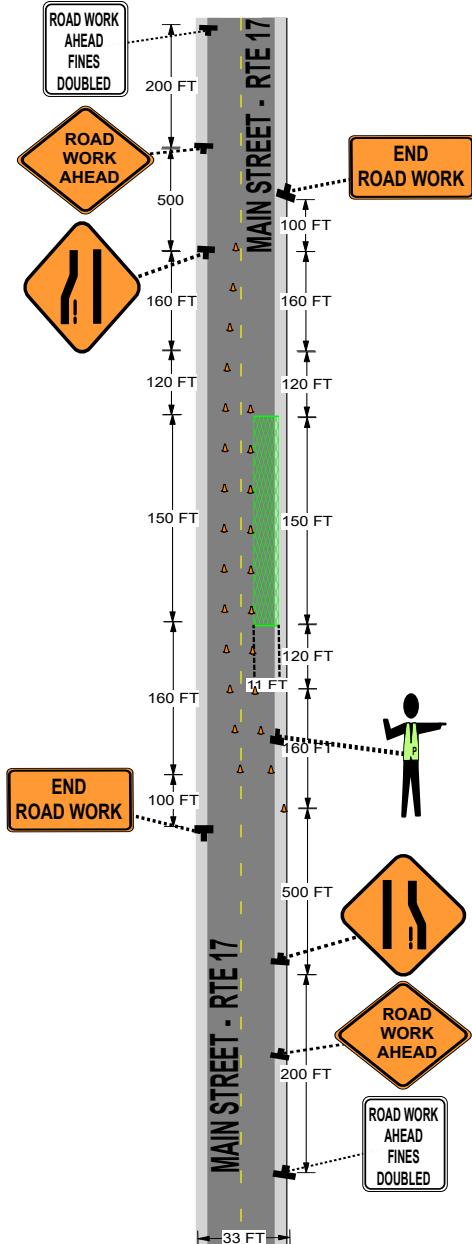
Main St/Rt17 and Wallingford Rd/Rt 68 Two Lane Traffic

www.invarion.com

Legend



- Cone
- END ROAD WORK
- FINES DOUBLED
- MERGE LEFT
- MERGE RIGHT
- ROAD WORK AHEAD
- Work Area



Project: Durham Meadows Superfund
Contract No. W912WJ19C0002
Site Waterline Component
Durham & Middletown, CT

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

Working Hours: 8 AM to 3:30pm
Estimated Duration: 50 days
Length Impacted: For saw cutting and misc work where two lanes are maintained

Comments:

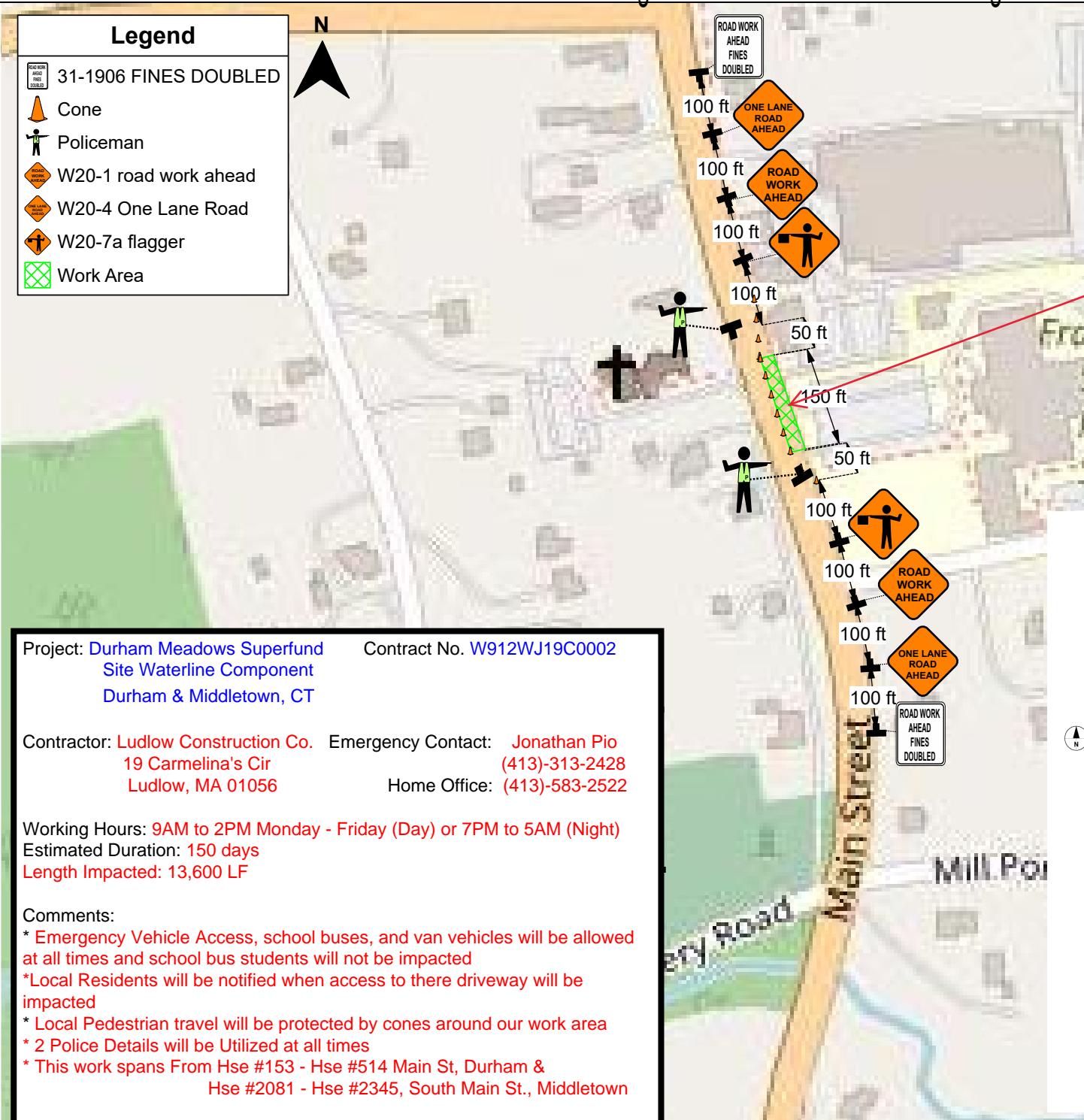
- *One Police detail will be utilized in assisting traffic flow
- *Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- *Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to there driveway will be impacted
- *Local Pedestrian travel will be protected by cones around our work area

Main St/Rt 17 and Wallingford Rd/Rt 68 One Lane Alternating Traffic

Legend

- Cone
- Policeman
- W20-1 road work ahead
- W20-4 One Lane Road
- W20-7a flagger
- Work Area

N



Project: Durham Meadows Superfund
Site Waterline Component
Durham & Middletown, CT

Contract No. [W912WJ19C0002](#)

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

Working Hours: 9AM to 2PM Monday - Friday (Day) or 7PM to 5AM (Night)

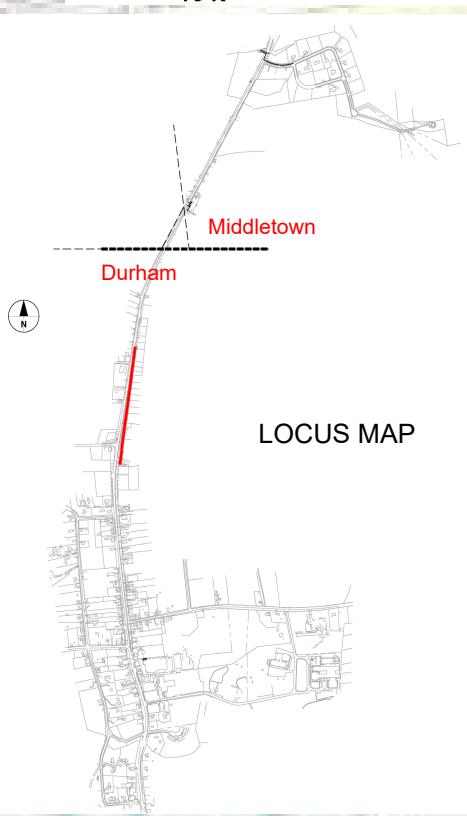
Estimated Duration: 150 days

Length Impacted: 13,600 LF

Comments:

- * Emergency Vehicle Access, school buses, and van vehicles will be allowed at all times and school bus students will not be impacted
- * Local Residents will be notified when access to their driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area
- * 2 Police Details will be Utilized at all times
- * This work spans From Hse #153 - Hse #514 Main St, Durham & Hse #2081 - Hse #2345, South Main St., Middletown

[www.invision.com](#)



MAPLE AVE NORTH



Project: Durham Meadows Superfund
Site Waterline Component
Durham & Middletown, CT

Contract No. W912WJ19C0002

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

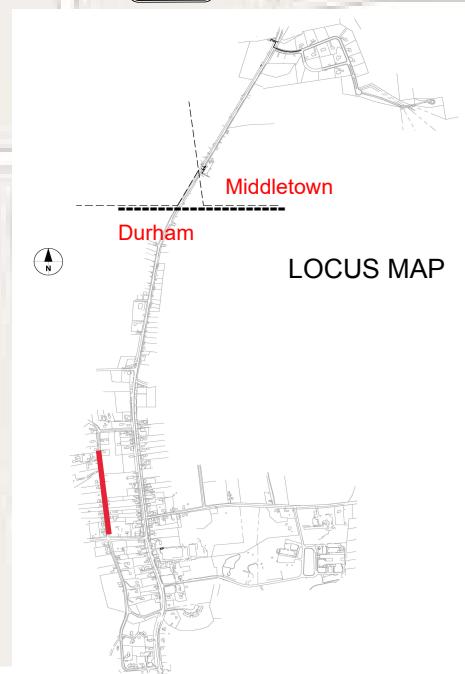
Working Hours: 7 AM to 4 pm Monday - Friday

Estimated Duration: 20 days

Length Impacted: 1,900 LF

Comments:

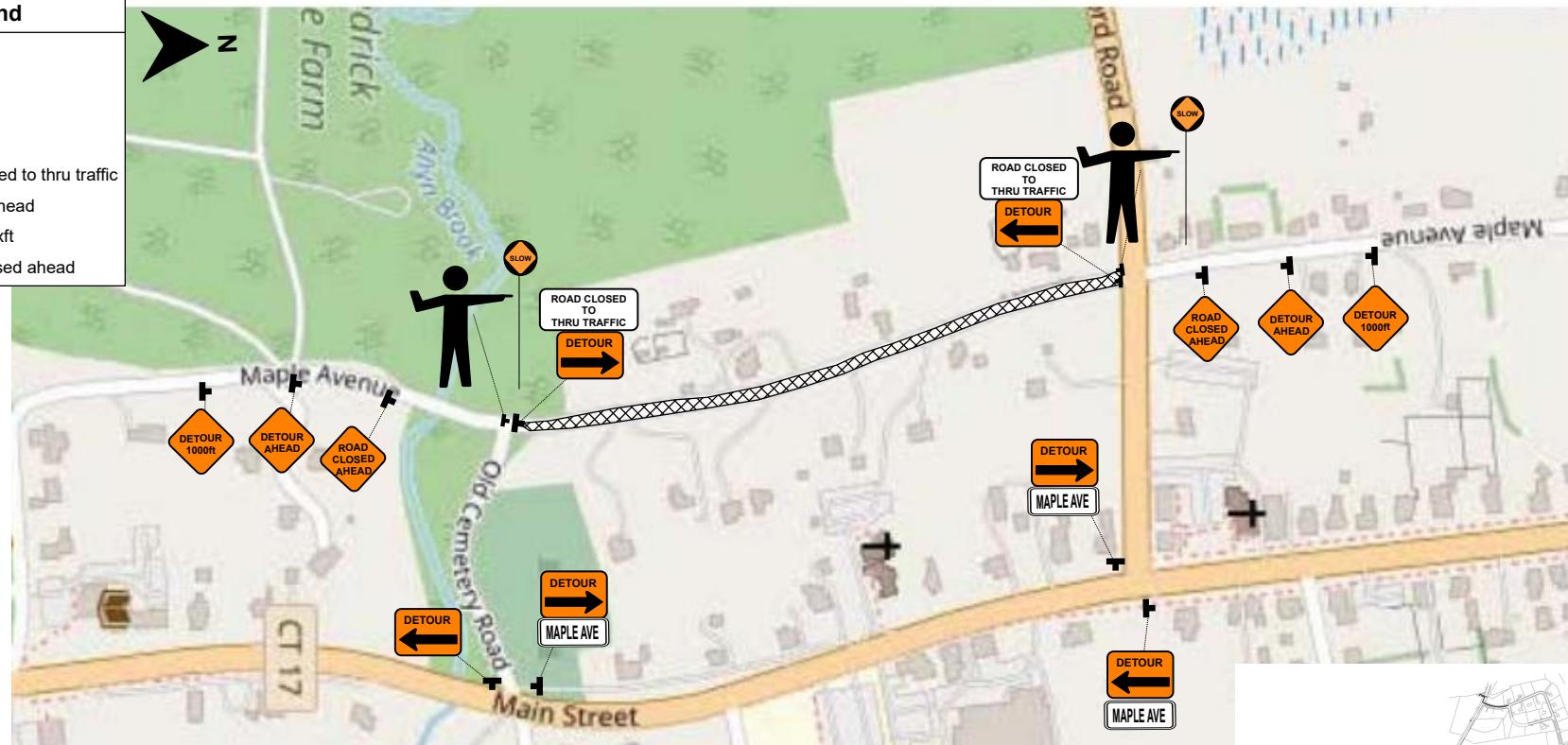
- * 2 Certified flaggers will be utilized at each end of the road closure
- * Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed
- * Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to there driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area



MAPLE AVE SOUTH

www.invarion.com

| Legend | |
|--------|-----------------------------------|
| | flagger flagger |
| | M4-9 detour (L) |
| | M4-9 detour (R) |
| | North Arrow |
| | R11-4 road closed to thru traffic |
| | W20-2 detour ahead |
| | W20-2 detour xxft |
| | W20-3 road closed ahead |



Project: Durham Meadows Superfund
Site Waterline Component
Durham & Middletown, CT

Contract No. W912WJ19C0002

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

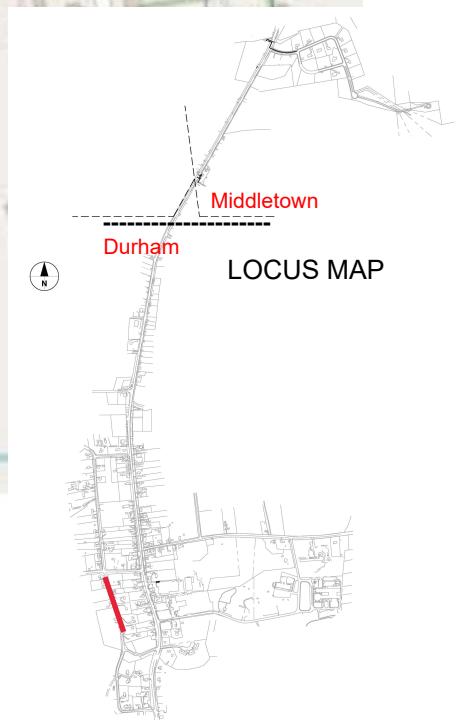
Working Hours: 7 AM to 4 pm Monday - Friday

Estimated Duration: 18 days

Length Impacted: 1,500 LF

Comments:

- * 2 Certified flaggers will be utilized at each end of the road closure
- * Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed
- * Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to their driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area



PICKETT LANE

www.invarion.com



Project: Durham Meadows Superfund
Site Waterline Component
Durham & Middletown, CT

Contract No. W912WJ19C0002

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

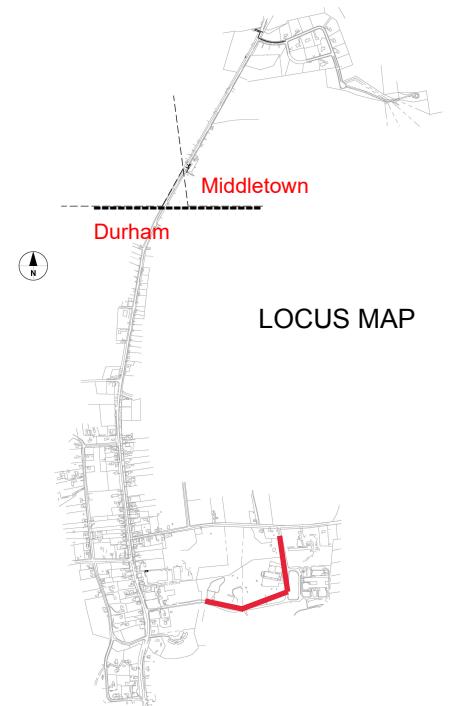
Working Hours: 7 AM to 4 pm Monday - Friday

Estimated Duration: 25 days

Impacted Length: 4,000 LF

Comments:

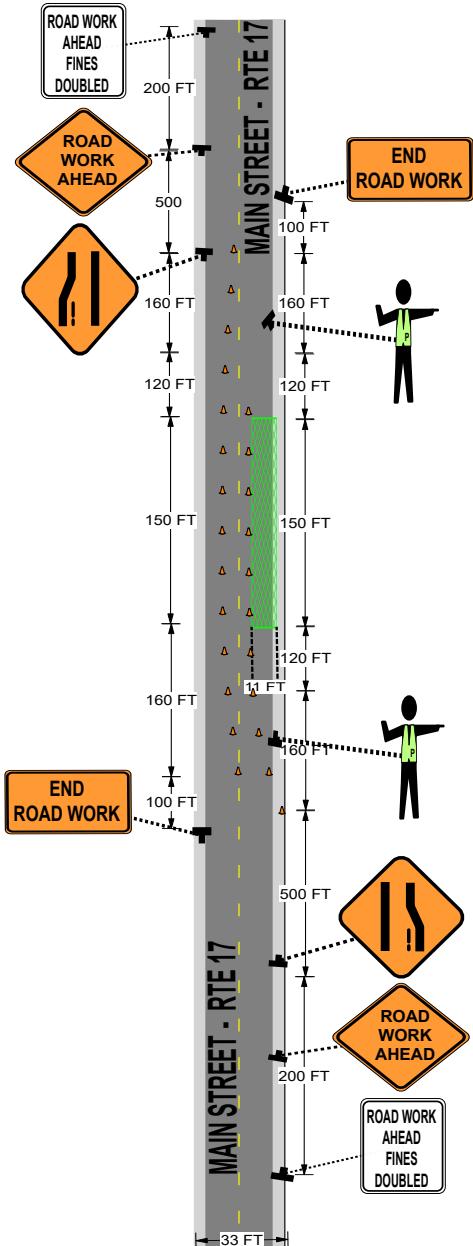
- *2 Certified flaggers will be utilized at each end of the road closure
- * Work will only be done during school Summer vacation. Flaggers will allow through those seeking access to recreational facilities
- * Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed
- * Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to their driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area
- * Pickett Lane is a private road and this road closure will be coordinated with RSD13 and will only occur when school is not in session



Legend



- Cone
- END ROAD WORK
- FINES DOUBLED
- MERGE LEFT
- MERGE RIGHT
- ROAD WORK AHEAD
- Work Area



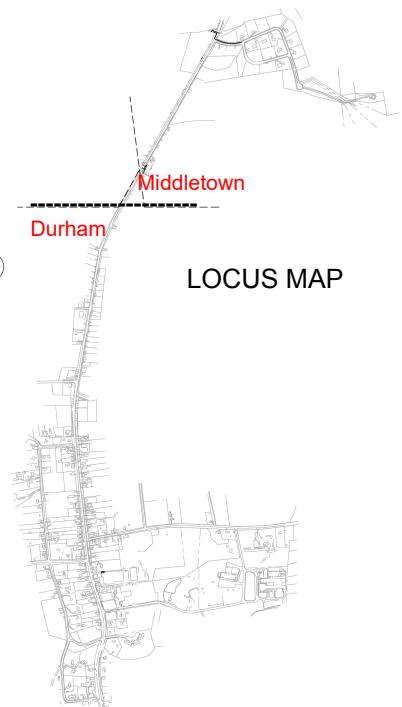
Project: Durham Meadows Superfund
Contract No. W912WJ19C0002
Site Waterline Component
Durham & Middletown, CT

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

Working Hours: 7 AM to 3pm
Estimated Duration: 5 days
Length Impacted: 240 LF

Comments:

- * One Certified flagger will be utilized in assisting traffic flow
- * Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed
- * Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to their driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area



TALCOTT LANE

www.invarion.com

Legend



Work Area



M4-9 detour (L)



M4-9 detour (R)



R11-4 road closed to thru traffic



M4-7 M4-7



flagger



Project: Durham Meadows Superfund
Site Waterline Component
Durham & Middletown, CT

Contract No. W912WJ19C0002

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

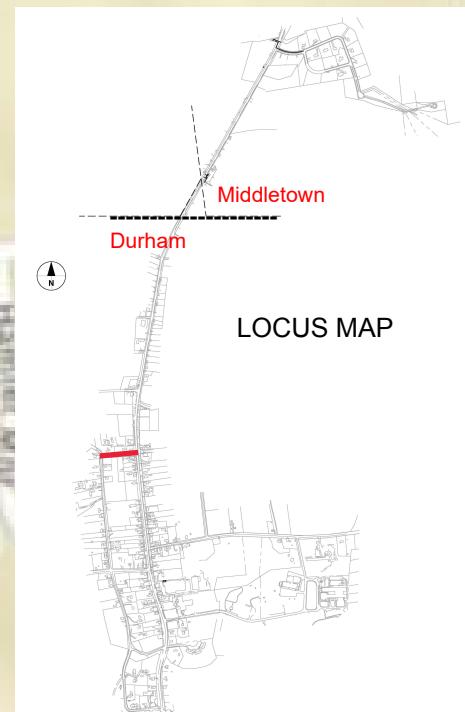
Working Hours: 7 AM to 4 pm Monday - Friday

Estimated Duration: 9 days

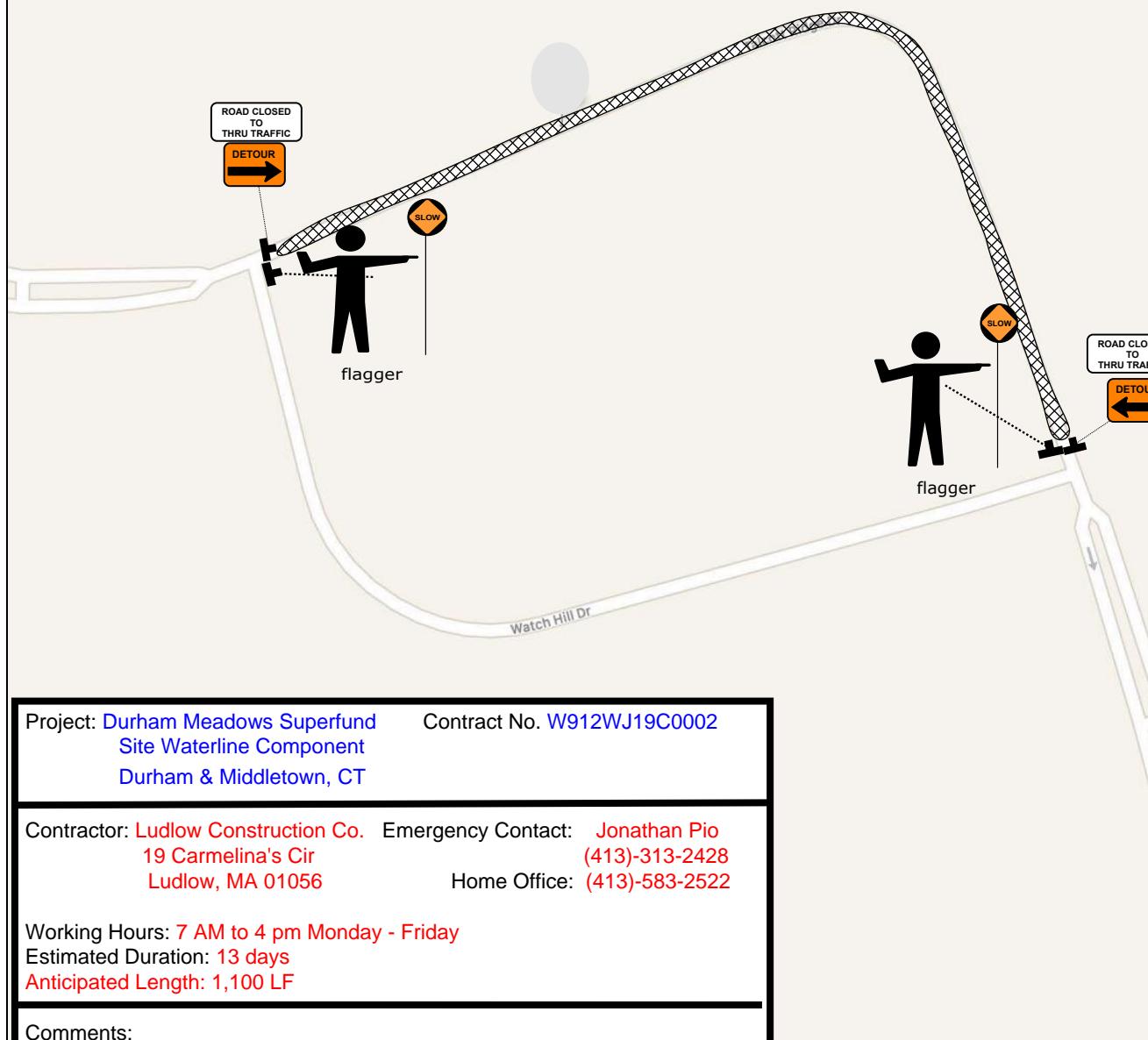
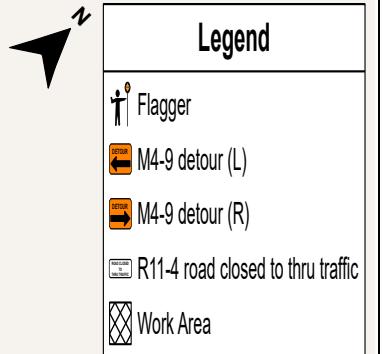
Length Impacted: 610 LF

Comments:

- * 2 Certified flaggers will be utilized at each end of the road closure
- * Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed
- * Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to their driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area



TALCOTT RIDGE DRIVE



Project: Durham Meadows Superfund
Site Waterline Component
Durham & Middletown, CT

Contract No. W912WJ19C0002

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
19 Carmelina's Cir (413)-313-2428
Ludlow, MA 01056 Home Office: (413)-583-2522

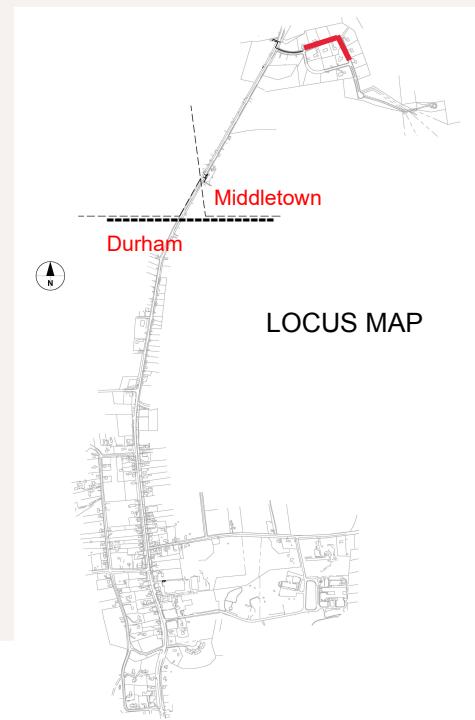
Working Hours: 7 AM to 4 pm Monday - Friday

Estimated Duration: 13 days

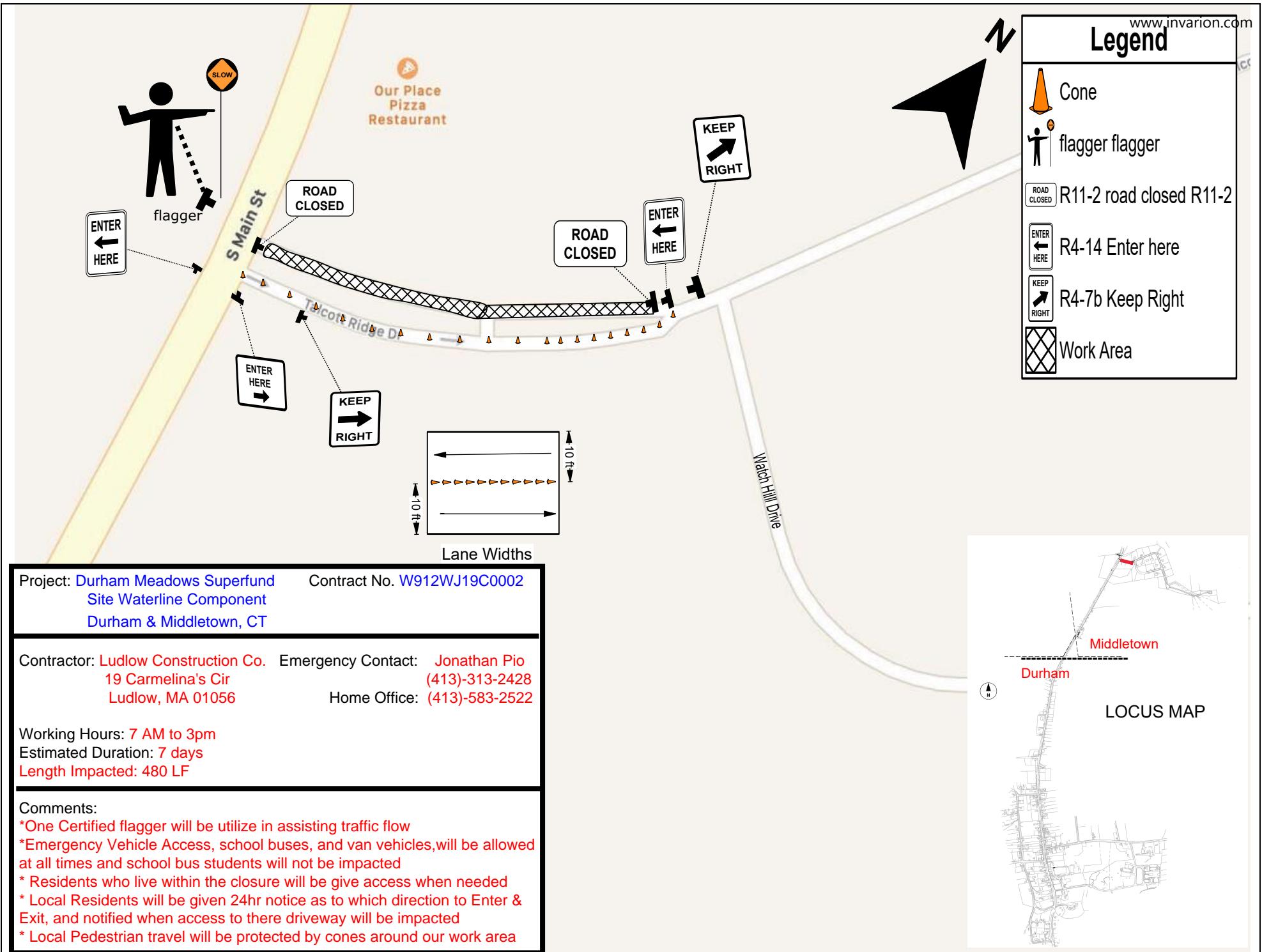
Anticipated Length: 1,100 LF

Comments:

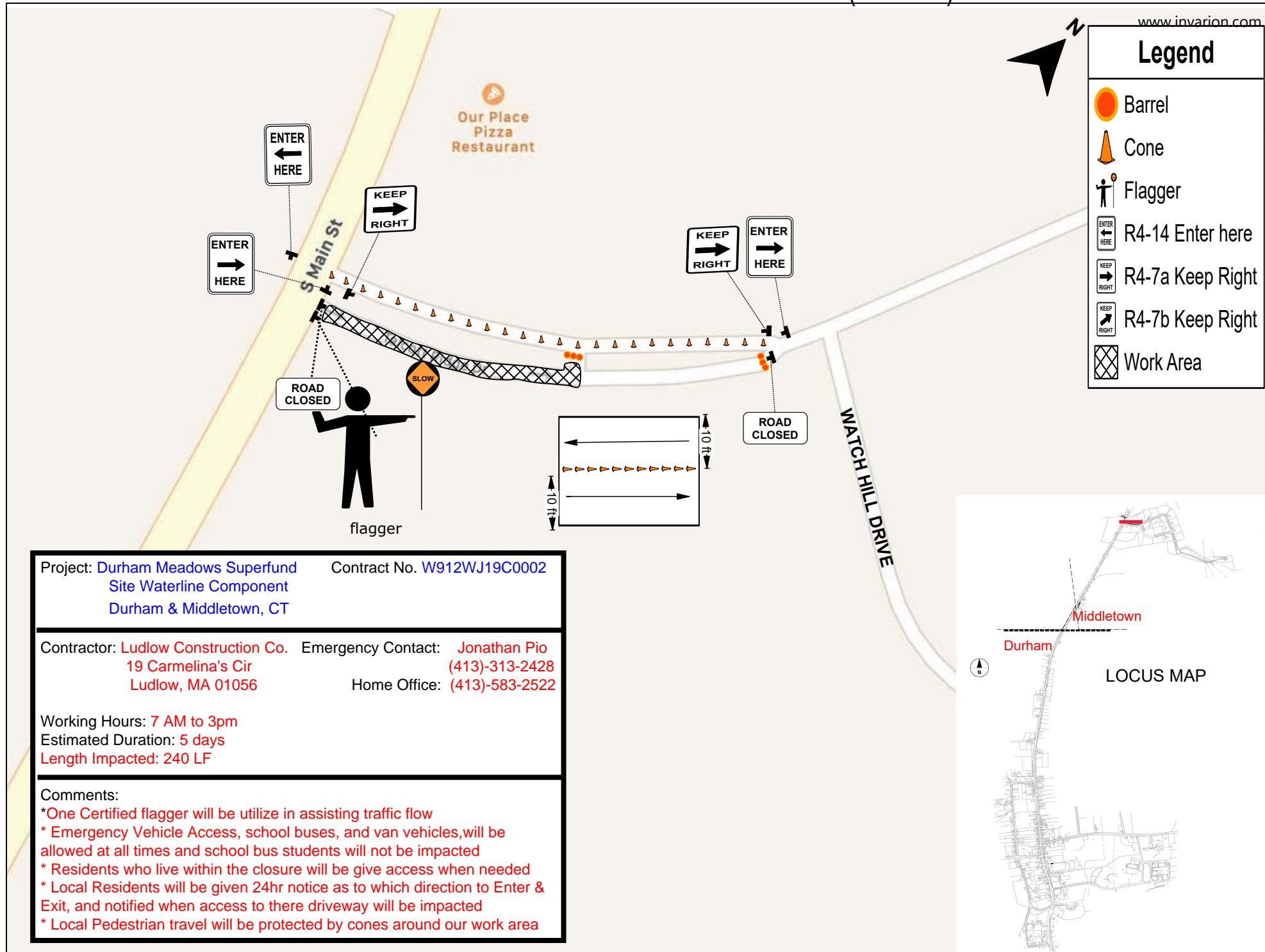
- *2 Certified flaggers will be utilized at each end of the road closure
- * Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed
- * Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to their driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area



TALCOTT RIDGE DR. TWO WAY TRAFFIC

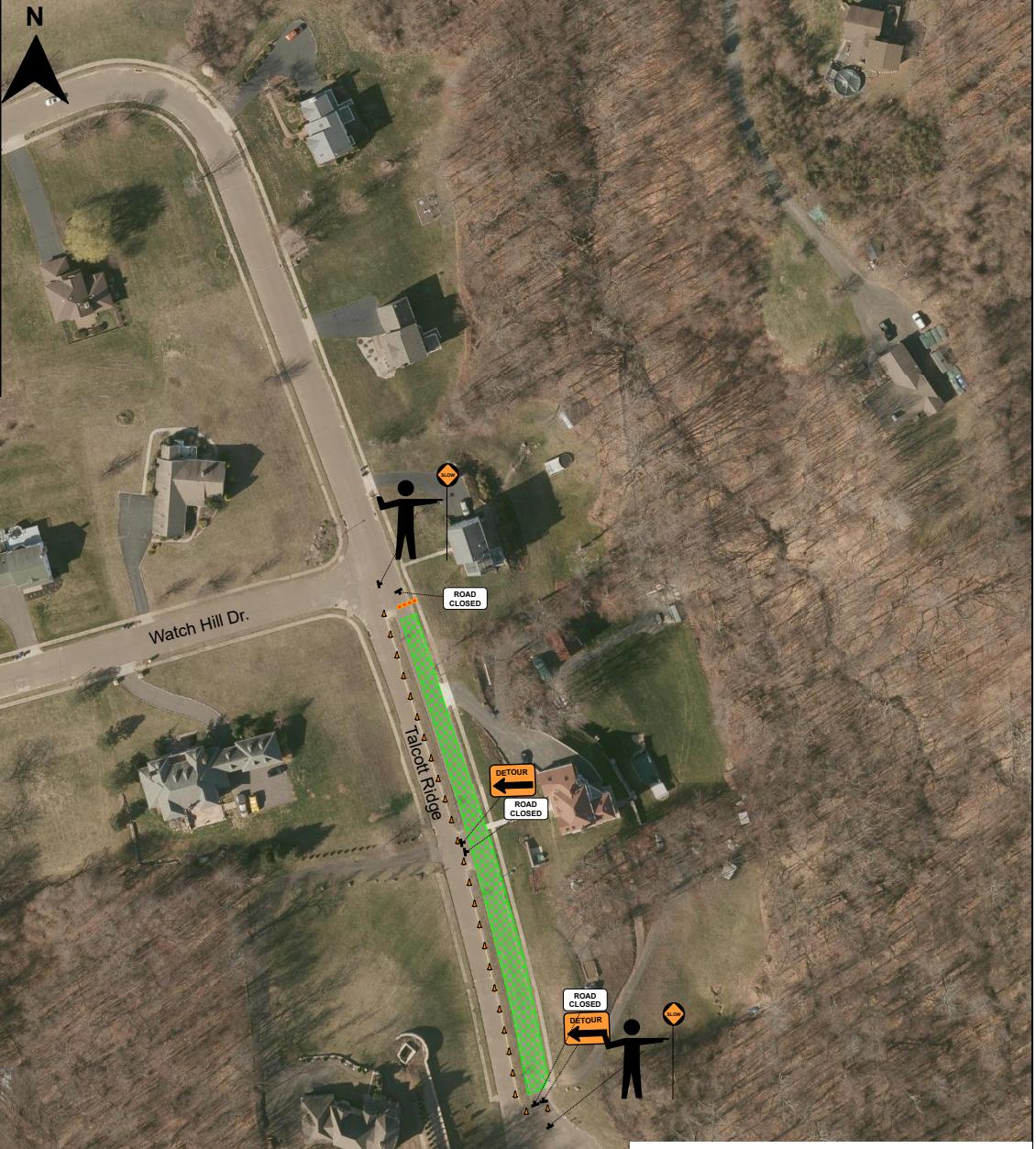
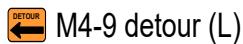


TALCOTT RIDGE DR. TWO WAY TRAFFIC (SHORT)



TALCOTT RIDGE DR. UPPER

Legend



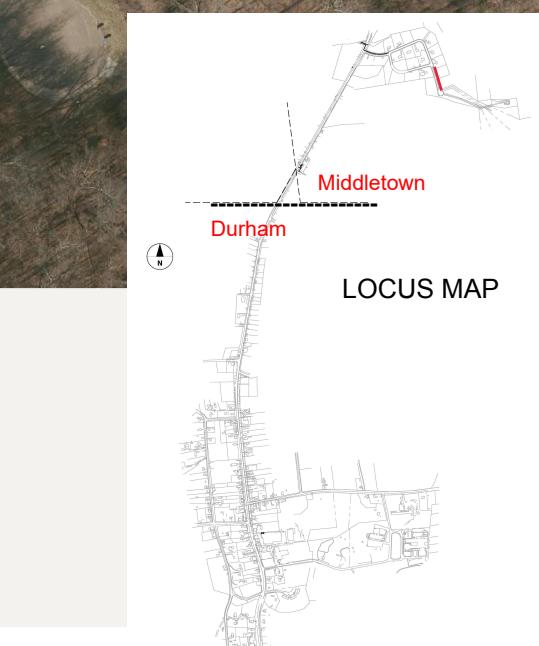
Project: Durham Meadows Superfund Contract No. W912WJ19C0002
 Site Waterline Component
 Durham & Middletown, CT

Contractor: Ludlow Construction Co. Emergency Contact: Jonathan Pio
 19 Carmelina's Cir (413)-313-2428
 Ludlow, MA 01056 Home Office: (413)-583-2522

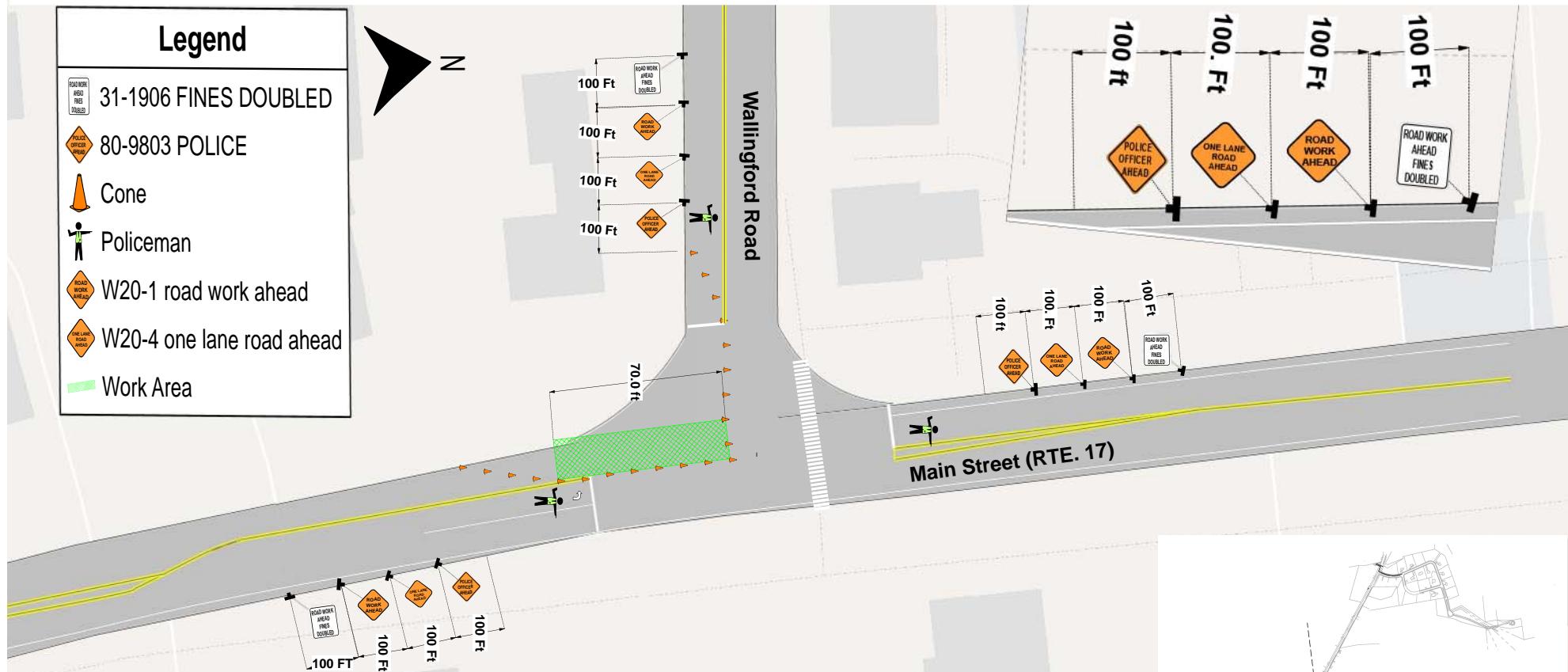
Working Hours: 7 AM to 3pm
 Estimated Duration: 7 days
 Length Impacted: 550 LF

Comments:

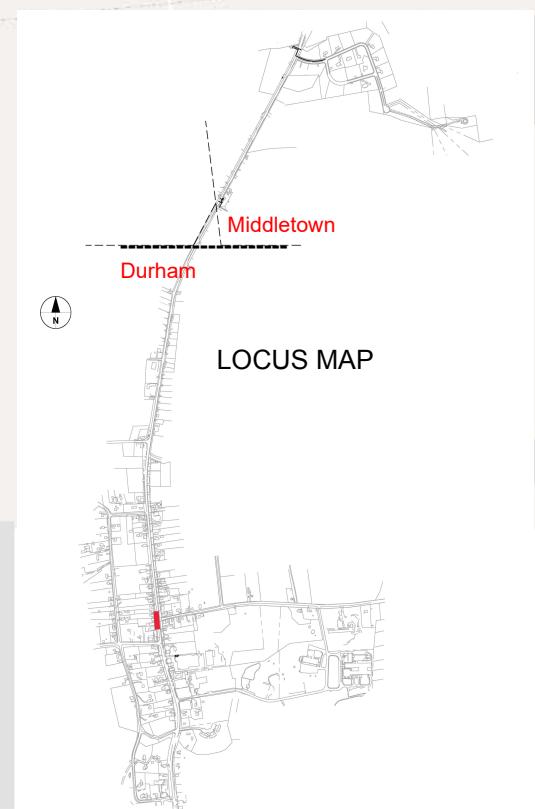
- *One Certified flagger will be utilized in assisting traffic flow
- *Emergency Vehicle Access, school buses, and van vehicles, will be allowed at all times and school bus students will not be impacted
- * Residents who live within the closure will be given access when needed
- * Local Residents will be given 24hr notice as to which direction to Enter & Exit, and notified when access to their driveway will be impacted
- * Local Pedestrian travel will be protected by cones around our work area



RT 17 at Intersections One Lane Alternating Traffic



| | |
|--|--|
| Project: Durham Meadows Superfund Site Waterline Component Durham & Middletown, CT | Contract No. W912WJ19C0002 |
| Contractor: Ludlow Construction Co. 19 Carmelina's Cir Ludlow, MA 01056 | Emergency Contact: Jonathan Pio (413)-313-2428 Home Office: (413)-583-2522 |
| Working Hours: 9AM to 2PM Monday - Friday (Day) or 7PM to 5AM (Night) Estimated Duration: 2 days | |
| Comments: <ul style="list-style-type: none"> * Emergency Vehicle Access, school buses, and van vehicles will be allowed at all times and school bus students will not be impacted * Local Residents will be notified when access to their driveway will be impacted * Local Pedestrian travel will be protected by cones around our work area * 3 Police Details will be Utilized at all times * This detail will be used at Talcott Lane, and Middlefield Road as well. | |



TRAFFIC CONTROL DURING CONSTRUCTION OPERATIONS

The following guidelines shall assist field personnel in determining when and what type of traffic control patterns to use for various situations. These guidelines shall provide for the safe and efficient movement of traffic through work zones and enhance the safety of work forces in the work area.

TRAFFIC CONTROL PATTERNS

Traffic control patterns shall be used when a work operation requires that all or part of any vehicle or work area protrudes onto any part of a travel lane or shoulder. For each situation, the installation of traffic control devices shall be based on the following:

- Speed and volume of traffic
- Duration of operation
- Exposure to hazards

Traffic control patterns shall be uniform, neat and orderly so as to command respect from the motorist.

In the case of a horizontal or vertical sight restriction in advance of the work area, the traffic control pattern shall be extended to provide adequate sight distance for approaching traffic.

If a lane reduction taper is required to shift traffic, the entire length of the taper should be installed on a tangent section of roadway so that the entire taper area can be seen by the motorist.

Any existing signs that are in conflict with the traffic control patterns shall be removed, covered, or turned so that they are not readable by oncoming traffic.

When installing a traffic control pattern, a Buffer Area should be provided and this area shall be free of equipment, workers, materials and parked vehicles.

PLACEMENT OF SIGNS

Signs must be placed in such a position to allow motorists the opportunity to reduce their speed prior to the work area. Signs shall be installed on the same side of the roadway as the work area. On multi-lane divided highways, advance warning signs shall be installed on both sides of the highway. On directional roadways (on-ramps, off-ramps, one-way roads), where the sight distance to signs is restricted, these signs should be installed on both sides of the roadway.

ALLOWABLE ADJUSTMENT OF SIGNS AND DEVICES SHOWN ON THE TRAFFIC CONTROL PLANS

The traffic control plans contained herein show the location and spacing of signs and devices under ideal conditions. Signs and devices should be installed as shown on these plans whenever possible.

The proper application of the traffic control plans and installation of traffic control devices depends on actual field conditions.

Adjustments to the traffic control plans shall be made only at the direction of the Engineer to improve the visibility of the signs and devices and to better control traffic operations. Adjustments to the traffic control plans shall be based on safety of work forces and motorists, abutting property requirements, driveways, side roads, and the vertical and horizontal curvature of the roadway.

Table I indicates the minimum taper length required for a lane closure based on the posted speed limit of the roadway. These taper lengths shall only be used when the recommended taper lengths shown on the traffic control plans cannot be achieved.

TABLE I – MINIMUM TAPER LENGTHS

| POSTED SPEED LIMIT MILES PER HOUR | MINIMUM TAPER LENGTH IN FEET FOR A SINGLE LANE CLOSURE |
|--------------------------------------|---|
| 30 OR LESS | 180 |
| 35 | 250 |
| 40 | 320 |
| 45 | 540 |
| 50 | 600 |
| 55 | 660 |
| 65 | 780 |

SECTION 1. WORK ZONE SAFETY MEETINGS

- 1.a) Prior to the commencement of work, a work zone safety meeting will be conducted with representatives of USACE, CT DOT, Connecticut State Police (Local Barracks), Municipal Police, the Contractor (Project Superintendent) and the Traffic Control Subcontractor (if different than the prime Contractor) to review the traffic operations, lines of responsibility, and operating guidelines which will be used on the project. Other work zone safety meetings during the course of the project should be scheduled as needed.
- 1.b) A Work Zone Safety Meeting Agenda shall be developed and used at the meeting to outline the anticipated traffic control issues during the construction of this project. Any issues that can't be resolved at these meetings will be brought to the attention of the USACE or EPA prior to engaging the District Engineer and the Office of Construction. The agenda should include:
 - Review Project scope of work and time
 - Review Prosecution and Progress
 - Review Trafficpersons
 - Review Maintenance and Protection of Traffic Setups
 - Review Contractor's schedule and method of operations.
 - Review areas of special concern: ramps, turning roadways, medians, lane drops, etc.
 - Open discussion of work zone questions and issues
 - Discussion of review and approval process for changes in contract requirements as they relate to work zone areas

SECTION 2. GENERAL

- 2.a) Failure of the Contractor to have the required minimum number of signs, personnel and equipment, which results in the pattern not being installed, shall not be a reason for a time extension or claim for loss time.
- 2.b) In cases of legitimate differences of opinion between the Contractor and the CT DOT staff, the Contractor shall err on the side of safety. The matter shall be brought to the Contracting Officer's Representative of the USACE for resolution immediately or, in the case of work after regular business hours, on the next business day.

SECTION 3. INSTALLING AND REMOVING TRAFFIC CONTROL PATTERNS

- 3.a) Lane Closures shall be installed beginning with the advance warning signs and proceeding forward toward the work area.

- 3.b) Lane Closures shall be removed in the reverse order, beginning at the work area, or end of the traffic control pattern, and proceeding back toward the advance warning signs.
- 3.c) Stopping traffic will be allowed:
 - For such activities as blasting, excavating, shoring
 - During paving, milling operations, etc. where, in the middle of the operation, it is necessary to flip the pattern to complete the operation on the other half of the roadway and traffic should not travel across the longitudinal joint or difference in roadway elevation.
 - To move slow moving equipment across live traffic lanes into the work area.
- 3.d) The Contractor must adhere to using the proper signs, placing the signs correctly, and ensuring the proper spacing of signs.
- 3.e) Additional devices are required on entrance ramps, exit ramps, and intersecting roads to warn and/or move traffic into the proper travelpath prior to merging/exiting with/from the main line traffic. This shall be completed before installing the mainline pattern past the ramp or intersecting roadway.
- 3.f) Prior to installing a pattern, any conflicting existing signs shall be covered with an opaque material. Once the pattern is removed, the existing signs shall be uncovered.

SECTION 6. USE OF TRAFFIC DRUMS AND TRAFFIC CONES

- 6.a) Traffic drums shall be used for taper channelization on limited-access roadways, ramps, and turning roadways and to delineate raised catch basins and other hazards.
- 6.b) Traffic drums shall be used in place of traffic cones in traffic control patterns that are in effect for more than a 36-hour duration.
- 6.c) Traffic Cones less than 42 inches in height shall not be used on limited-access roadways or on non-limited access roadways with a posted speed limit of 45 mph and above.
- 6.d) Typical spacing of traffic drums and/or cones shown on the Traffic Control Plans in the Contract are maximum spacings and may be reduced to meet actual field conditions as required.

SECTION 7. USE OF (REMOTE CONTROLLED) CHANGEABLE MESSAGE SIGNS (CMS)

- 7.a) For lane closures on limited access roadways, one CMS shall be used in advance of the traffic control pattern. Prior to installing the pattern, the CMS shall be installed and in operation, displaying the appropriate lane closure information (i.e.: Left Lane Closed - Merge Right). The CMS shall be positioned $\frac{1}{2}$ - 1 mile ahead of the lane closure taper. If the nearest Exit ramp is greater than the specified $\frac{1}{2}$ - 1 mile distance, than an additional CMS shall be positioned a sufficient distance ahead of the Exit ramp to alert motorists to the work and therefore offer them an opportunity to take the exit.
- 7.b) CMS should not be installed within 1000 feet of an existing CMS.
- 7.c) On non-limited access roadways, the use of CMS for lane closures is optional. The roadway geometry, sight line distance, and traffic volume should be considered in the decision to use the CMS.

- 7.d) The advance CMS is typically placed off the right shoulder, 5 feet from the edge of pavement. In areas where the CMS cannot be placed beyond the edge of pavement, it may be placed on the paved shoulder with a minimum of five (5) traffic drums placed in a taper in front of it to delineate its position. The advance CMS shall be adequately protected if it is used for a continuous duration of 36 hours or more.
- 7.e) When the CMS are no longer required, they should be removed from the clear zone and have the display screen cleared and turned 90° away from the roadway.
- 7.f) The CMS generally should not be used for generic messages (ex: Road Work Ahead, Bump Ahead, Gravel Road, etc.).
- 7.g) The CMS should be used for specific situations that need to command the motorist's attention which cannot be conveyed with standard construction signs (Examples include: Exit 34 Closed Sat/Sun - Use Exit 35, All Lanes Closed - Use Shoulder, Workers on Road - Slow Down).
- 7.h) Messages that need to be displayed for long periods of time, such as during stage construction, should be displayed with construction signs. For special signs, please coordinate with the Office of Construction and the Division of Traffic Engineering for the proper layout/dimensions required.
- 7.i) The messages that are allowed on the CMS are as follows:

| <u>Message No.</u> | <u>Frame 1</u> | <u>Frame 2</u> | <u>Message No.</u> | <u>Frame 1</u> | <u>Frame 2</u> |
|--------------------|----------------------------|-----------------|--------------------|-----------------------------|------------------|
| 1 | LEFT LANE CLOSED | MERGE RIGHT | 9 | LANES CLOSED AHEAD | REDUCE SPEED |
| 2 | 2 LEFT LANES CLOSED | MERGE RIGHT | 10 | LANES CLOSED AHEAD | USE CAUTION |
| 3 | LEFT LANE CLOSED | REDUCE SPEED | 11 | WORKERS ON ROAD | REDUCE SPEED |
| 4 | 2 LEFT LANES CLOSED | REDUCE SPEED | 12 | WORKERS ON ROAD | SLOW DOWN |
| 5 | RIGHT LANE CLOSED | MERGE LEFT | 13 | EXIT XX CLOSED | USE EXIT YY |
| 6 | 2 RIGHT LANES CLOSED | MERGE LEFT | 14 | EXIT XX CLOSED USE YY | FOLLOW DETOUR |
| 7 | RIGHT LANE CLOSED | REDUCE SPEED | 15 | 2 LANES SHIFT AHEAD | USE CAUTION |
| 8 | 2 RIGHT LANES CLOSED | REDUCE SPEED | 16 | 3 LANES SHIFT AHEAD | USE CAUTION |

For any other message(s), approval must be received from the Office of Construction prior to their use. No more than two (2) displays shall be used within any message cycle.

SECTION 8. USE OF STATE POLICE OFFICERS & CERTIFIED FLAG PERSONNEL

- 8.a) State Police may be utilized only on limited access highways under their primary jurisdiction. Certified flag personnel may be used on secondary highways. One Officer may be used per critical sign pattern. Shoulder closures and right lane closures can generally be implemented without the presence of a State Police Officer. Likewise in areas with moderate traffic and wide, unobstructed medians, left lane closures can be implemented without State Police presence. Under some situations it may be desirable to have State Police presence, when one is available. Examples of this include: nighttime lane closures; left lane closures with minimal width for setting up advance signs and staging; lane and shoulder closures on turning roadways/ramps or mainline where sight distance is minimal; and closures where extensive turning movements or traffic congestion regularly occur, however they are not required.
- 8.b) State Police will be utilized for night work on Rt 17 and Rt 68 in Durham, CT. Two officers will be used to direct alternating one lane traffic. Middletown Police will be used for the night work on Rt 17 in Middletown, CT. Certified Flaggers will be used for road closures on all other project side streets.
- 8.c) Other functions of the State Police Officer(s) may include:
 - Assisting entering/exiting construction vehicles within the work area.
 - Enforcement of speed and other motor vehicle laws within the work area, if specifically requested by the project.

ORIGINAL

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| TOWN DURHAM | ROUTE NO. 17 | PMT 2B-REV 8/00 (302-06-0386) DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS STATE OF CONNECTICUT ENCROACHMENT PERMIT | DATE OF ISSUE 3/6/2019 | PERMIT NO. 1018047 Page 1 of 3 |
| LOCATION OF WORK OR BEGINNING AND ENDING POINTS Rt. 17, Main St, Middletown/ Durham line to Maple Ave, 1000 ft. on Rt. 68 from Rt. 17. | | | DATE OF EXPIRATION 3/6/2020 | AMT. OF SURETY BOND CERTIFY CHECK 1,000,000.00 |
| | | | SURETY COMPANY/BANK Travelers Casualty & Surety Co of America | |
| TO: LUDLOW CONSTRUCTION CO., INC. TOWN OF DURHAM OF MA 19 CARMELINA'S CIRCLE LUDLOW, MA 01056 | 30 TOWN HOUSE ROAD PO BOX 438 DURHAM , CT 06422 | BOND NUMBER: 106956424 PERMIT IS NOT VALID UNTIL SIGNATURE COPY IS SIGNED AND RETURNED TO THE OFFICE. PLEASE RETURN AT ONCE. FEE: 100.00 DATE REC'D: 2/27/2019 PO/WO NO: | | |

Permission is hereby granted to do the following work under the control and direction of the Department of Transportation, Bureau of Engineering and Highway Operations at the location designated hereon, subject to the statements made on the application for permit, and to the pertinent provisions of the current Highway Encroachment Permit Regulations manual, including amendments thereto.

This permit does not become effective until all necessary local and State licenses and permits are obtained by the Permittee or designated agent, and further the Permittee shall be subject to all Federal, State and local regulations.

This permit is issued in strict compliance with, but not limited by, the following specific requirements, referenced attachments, and the current edition of Department of Transportation's Standard Specifications for Roads, Bridges and Incidental Construction as applicable.

The Department of Transportation Permit Inspector, Dale Ethier 860-209-5406, MUST BE NOTIFIED AND THE CALL BEFORE YOU DIG REQUEST NUMBER RECORDED 48 HOURS IN ADVANCE OF STARTING WORK ON THE PROJECT. REQUEST NO._____

Permission is granted to excavate to install new water main and water services on Route 17 from Middletown/Durham Town line to Old Cemetery Road, on Route 68 1000' west of Route 17, and to install temporary access driveway within the highway right of way as delineated on the plans entitled "MIDDLETOWN AND DURHAM, CT DURHAM MEADOWS WATERLINE RD, EPA CONTRACT NO.EP-S1-06-01 TESK ORDER NO.0060-RD-RD-01D5 dated April 2018, with last revisions dated July 2018 on sheet C-505 and permit application received on 2/15/19. All work shall be in accordance with the current publication of the Department of Transportation "Standard Specifications for Roads, Bridges, and Incidental Construction", the latest Department Standard Details, and the following stipulations:

-A copy of this permit must be available on site at all times.

-Vehicular and pedestrian traffic must be adequately protected through the use of appropriate traffic control patterns. Uniformed police officers or personnel who are certified for traffic control to a level equivalent to the National Safety Council shall be utilized to direct traffic through the work area. All traffic control signing and appurtenances shall be in accordance with the latest edition of the "Manual on Uniform Traffic Control Devices" and must meet NCHRP 350 requirements.

-No work that will interfere with the flow of traffic shall be permitted before or after the hours listed below based on the traffic control pattern needed:

Two way traffic - 8:00 am to 3:00 pm, Monday through Friday.

Alternating one lane traffic pattern 9:00 am to 2:00 pm, Monday through Friday

Alternating or two way traffic at nights 7:00 pm to 5:00 am Sunday thru Thursday

-Holiday Restrictions- No permit work within the highway right of way will be permitted the day before a legal holiday and no work shall be resumed until 12:00 noon the day following the holiday, unless otherwise approved or indicated. Weekends shall be considered as part of the holiday when the legal holiday falls on either Friday or Monday.

-The pavement shall be cut in neat, straight lines to a depth necessary to remove the pavement to the subbase. The saw cutting slurry must not be allowed to enter the State's drainage system.

The Permit Inspector must be notified upon completion of work for final inspection and approval.

CALL Before you DIG! TOLL FREE, STATEWIDE 1-800-922-4455

Any and all liability for injury, damage or loss resulting from such work as may be undertaken under the terms of this permit is assumed by the Permittee. The Permittee is hereby designated responsible for all future maintenance of all installations or encroachments constructed under this Permit, which in the sole judgement of the State are not part of the highway appurtenances normally maintained by the State.

The Permittee hereby agrees to indemnify and hold harmless the State of Connecticut for any and all such injury, damage, or loss that may be incurred, either directly, or as a result of said work, and to reimburse the Department of Transportation for any expenses incurred due to the performance of any such work undertaken under the terms of this permit.

This permit is revocable at the discretion of the Department of Transportation Commissioner or designated representative.

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| TOWN DURHAM | ROUTE NO. 17 | PMT 2B-REV 8/00 (302-06-0386) DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS STATE OF CONNECTICUT ENCROACHMENT PERMIT | DATE OF ISSUE 3/6/2019 | PERMIT NO. 1018047 Page 2 of 3 |
| NAME OF HIGHWAY Main Street | | | DATE EFFECTIVE | |
| LOCATION OF WORK OR BEGINNING AND ENDING POINTS Rt. 17, Main St, Middletown/ Durham line to Maple Ave, 1000 ft. on Rt. 68 from Rt. 17. | | | DATE OF EXPIRATION 3/6/2020 | AMT. OF SURETY BOND CERTIFY CHECK 1,000,000.00 |
| | | | SURETY COMPANY/BANK Travelers Casualty & Surety Co of America | |
| TO: LUDLOW CONSTRUCTION CO., INC. TOWN OF DURHAM OF MA 19 CARMELINA'S CIRCLE LUDLOW, MA 01056 | 30 TOWN HOUSE ROAD PO BOX 438 DURHAM , CT 06422 | | BOND NUMBER: 106956424 PERMIT IS NOT VALID UNTIL SIGNATURE COPY IS SIGNED AND RETURNED TO THE OFFICE. PLEASE RETURN AT ONCE. FEE: 100.00 DATE REC'D: 2/27/2019 PO/WO NO: | |

-Traffic signal equipment damaged during construction will be replaced in accordance with the current publication of the Department of Transportation "Standard Specifications for Roads, Bridges, and Incidental Construction." Damaged loop detection will require milling and paving of the asphalt surface to a depth of 2" to encompass the area where new traffic loops are to be installed. The approved signal plan for this specific intersection should be obtained to insure the proper installation of the signal equipment.

-Sidewalk must be in conformance with the most current ADA Requirements. Ownership and maintenance responsibility of the sidewalk shall be that of parties other than the State.

-The D.O.T. Electrical Division must be notified 24 Hours in advance of disturbing any existing traffic loops, signalization or other traffic control devices that may be affected by this project. They can be reached at (860) 566-3156.

-All traffic signal loop detectors damaged during construction shall remain operational and must be repaired within 24 hours of being damaged.

-The contractor shall maintain access to all egress from all commercial and residential driveways throughout the project limits unless permission is granted from the property owners.

-The traffic signal loop detectors are to be replaced within 10 days following the last day of paving.

- The permittee will be required to have a consultant inspector on site at all times during any and all construction within the state ROW to perform inspections and to verify required materials testing in accordance with Form 817 standards. All compaction and density testing shall be performed by NETTCP qualified testing personnel using a nuclear density gauge that has been received its annual certification from CTDOT. Compaction tests on soils and Density tests on asphalt shall be performed once per lift of material installed, once every 25' L.F of the excavation or at the discretion of the permit inspector to assure that a rate of 95% is achieved unless otherwise advised by the Permit Inspector.. Daily inspection reports which have been reviewed/verified/stamped by a licensed CT Professional Engineer shall be submitted to the District on a weekly basis.

-The temporary trench pavement shall be smooth and flat. The trench must be maintained on a regularly basics throughout the project.

-The temporary trench pavement shall be a MINIMAL of 4" hot bituminous concrete to be installed in two equal lifts compacted and placed with strict conformance with Form 817 State standards.

-Full depth pavement replacement will be required in all roadway trench excavations. This will include 10" (compacted) of processed gravel base, 6" of Hot Mix Asphalt Superpave 1.0 Design Level 2 and 3" of Hot Mix Asphalt Superpave 0.50 Design Level 2 top course, installed in 2 equal lifts. All edges must be tack coated and the surface joints sealed. If the pavement depth measures less than 9", the requirements for binder and top course depths will be determined by the permit inspector.

-Hot bituminous will be required for all pavement excavations. The permittee will make certain that hot bituminous concrete is available before starting the work. If it is not available, NO excavation will be allowed within the right-of-way until such time as it is available.

-Permanent full depth pavement replacement will be required in all excavations. Temporary pavement restoration will not be allowed through the winter season. Excavations performed after November 1st will be at the discretion of the inspector and will require a MINIMAL of 4" of hot bituminous concrete to be installed in two equal lifts, and may require complete replacement the following spring. Asphalt from plants which have not received state certification will be regarded as temporary and must be replaced regardless of depth installed.

-All construction materials and methods shall confirm to the Department's Specification Form 817 and supplemental there too..

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| TOWN DURHAM | ROUTE NO. 17 | PMT 2B-REV 8/00 (302-06-0386) DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS STATE OF CONNECTICUT ENCROACHMENT PERMIT | DATE OF ISSUE 3/6/2019 | PERMIT NO. 1018047 |
| NAME OF HIGHWAY Main Street | | | DATE EFFECTIVE | Page 3 of 3 |
| LOCATION OF WORK OR BEGINNING AND ENDING POINTS Rt. 17, Main St, Middletown/ Durham line to Maple Ave, 1000 ft. on Rt. 68 from Rt. 17. | | | DATE OF EXPIRATION 3/6/2020 | AMT. OF SURETY BOND CERTIFY CHECK 1,000,000.00 |
| | | | SURETY COMPANY/BANK Travelers Casualty & Surety Co of America | |
| TO: OF MA 19 CARMELINA'S CIRCLE LUDLOW, MA 01056 | LUDLOW CONSTRUCTION CO., INC. TOWN OF DURHAM 30 TOWN HOUSE ROAD PO BOX 438 DURHAM , CT 06422 | | BOND NUMBER: 106956424 PERMIT IS NOT VALID UNTIL SIGNATURE COPY IS SIGNED AND RETURNED TO THE OFFICE. PLEASE RETURN AT ONCE. FEE: 100.00 DATE REC'D: 2/27/2019 PO/WO NO: | |

-The limits of the final pavement restoration will be determined by the inspector. This shall include milling and paving of the asphalt surface, surrounding and including the excavation, to a depth of 2". The milled area shall extend a minimum of 10 feet beyond the edges of the original trench line with vertically faced edges, not tapered. The entire milled area including the edges shall be swept and tack coated with an approved material at the appropriate rate. The area will then be paved with Hot Mix Asphalt Superpave 0.50 (machine laid) and compacted to a depth of 2". All excavations may be included into one milled area.

-At the end of each workday all trenches will be back filled and patched. The use of steel plates to cover open trenches within the highway right of way will NOT be allowed.

-All slopes shall be stabilized with an approved erosion control method. A State standard anti-tracking pad shall be installed and maintained throughout the construction project.

-Catch basins and drainage pipe damaged or filled with sediment during construction must be repaired, cleaned and flushed at contractor's expense. A minimum vertical clearance of 12" shall be maintained between facilities. Metal pipes damaged during construction must be repaired using the attached "concrete pipe connection" detail as directed and approved by the permit inspector. Repair must be performed utilizing solid section of existing pipe. Where this can not be achieved full metal pipe replacement may be required.

-The storing of pipe, excavation materials, or other construction materials within the highway right of way will not be allowed. Equipment shall be removed from the right of way when not in use.

-Roadway must be kept clean of debris and construction materials and machine swept as needed.

-The driveway shall be paved with hot bituminous concrete to the state's right of way property line.

-Upon completion of the job, the anti-tracking pad shall be removed and the excavated area must be restored with loam/seed and stabilized with mulch hay.

-Pavement markings must be replaced using epoxy paint. Turf must be established prior to this permit considered complete.

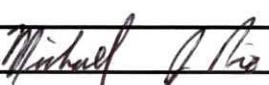
-All liability is assumed by the permittee. All areas disturbed as a result of this operation will be restored to the equivalency of their original condition or better at permittee's expense. The permittee will be billed in full by the Department for engineering and replacement costs of any area disturbed or destroyed by the permitted operations.

- The Department reserves the right to require the permittee to reimburse the State for all expenses incurred in connection with this permit including but not necessarily limited to inspection, State-owned equipment, supplies, etc. as outlined under regulation 13b-17-11.

-Requirements of the permit are subject to change as field condition warrant. Any change will require a review and prior approval by the District Office.

INSURANCE EXPIRES: 1/1/2020

PRIOR TO THE INSURANCE EXPIRATION DATE, THE PERMITTEE MUST SUBMIT AN UPDATED CERTIFICATE OF INSURANCE TO DOCUMENT APPROPRIATE CONTINUING INSURANCE COVERAGE.

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| PERMITTEE'S SIGNATURE  | DATE 3-11-19 | DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS BY Richard Reagan |
| DISTRICT MAINTENANCE DIRECTOR | | |

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| TOWN MIDDLETOWN | ROUTE NO. 17 | PMT 2B-REV 8/00 (302-06-0386) DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS STATE OF CONNECTICUT ENCROACHMENT PERMIT | DATE OF ISSUE 3/6/2019 | PERMIT NO. 1018048 |
| NAME OF HIGHWAY South Main Street | | | DATE EFFECTIVE | Page 1 of 3 |
| LOCATION OF WORK OR BEGINNING AND ENDING POINTS Rt. 17, S. Main St, 150 ft. n/o Talcott Ridge Dr. to the Middletown/ Durham townline. | | | DATE OF EXPIRATION 3/6/2020 | AMT. OF SURETY BOND CERTIFY CHECK 1,000,000.00 |
| | | | SURETY COMPANY/BANK Travelers Casualty & Surety Co of America | |
| TO: OF MA 19 CARMELINA'S CIRCLE LUDLOW, MA 01056 | CITY OF MIDDLETOWN 82 BERLIN STREET MIDDLETON, CT 06547 | | BOND NUMBER: 106956424 PERMIT IS NOT VALID UNTIL SIGNATURE COPY IS SIGNED AND RETURNED TO THE OFFICE. PLEASE RETURN AT ONCE. FEE: pd DATE REC'D: PO/WO NO: | |

Permission is hereby granted to do the following work under the control and direction of the Department of Transportation, Bureau of Engineering and Highway Operations at the location designated hereon, subject to the statements made on the application for permit, and to the pertinent provisions of the current Highway Encroachment Permit Regulations manual, including amendments thereto.

This permit does not become effective until all necessary local and State licenses and permits are obtained by the Permittee or designated agent, and further the Permittee shall be subject to all Federal, State and local regulations.

This permit is issued in strict compliance with, but not limited by, the following specific requirements, referenced attachments, and the current edition of Department of Transportation's Standard Specifications for Roads, Bridges and Incidental Construction as applicable.

The Department of Transportation Permit Inspector, Dale Ethier 860-209-5406, MUST BE NOTIFIED AND THE CALL BEFORE YOU DIG REQUEST NUMBER RECORDED 48 HOURS IN ADVANCE OF STARTING WORK ON THE PROJECT. REQUEST NO._____

Permission is granted to excavate to install new water main and water services on Route 17 from Talcott Ridge Road to Middletown/Durham Town line within the highway right of way as delineated on the plans entitled "MIDDLETOWN AND DURHAM, CT DURHAM MEADOWS WATERLINE RD, EPA CONTRACT NO. EP-S1-06-01 TESK ORDER NO. 0060-RD-RD-01D5 dated April 2018, with last revisions dated July 2018 on sheet C-505 and permit application received on 2/15/19. All work shall be in accordance with the current publication of the Department of Transportation "Standard Specifications for Roads, Bridges, and Incidental Construction", the latest Department Standard Details, and the following stipulations:

-A copy of this permit must be available on site at all times.

-Vehicular and pedestrian traffic must be adequately protected through the use of appropriate traffic control patterns. Uniformed police officers or personnel who are certified for traffic control to a level equivalent to the National Safety Council shall be utilized to direct traffic through the work area. All traffic control signing and appurtenances shall be in accordance with the latest edition of the "Manual on Uniform Traffic Control Devices" and must meet NCHRP 350 requirements.

-No work that will interfere with the flow of traffic shall be permitted before or after the hours listed below based on the traffic control pattern needed:

Two way traffic - 8:00 am to 3:00 pm, Monday through Friday.

Alternating one lane traffic pattern 9:00 am to 2:00 pm, Monday through Friday

Alternating or two way traffic at nights 7:00 pm to 5:00 am Sunday thru Thursday

-Holiday Restrictions- No permit work within the highway right of way will be permitted the day before a legal holiday and no work shall be resumed until 12:00 noon the day following the holiday, unless otherwise approved or indicated. Weekends shall be considered as part of the holiday when the legal holiday falls on either Friday or Monday.

-The pavement shall be cut in neat, straight lines to a depth necessary to remove the pavement to the subbase. The saw cutting slurry must not be allowed to enter the State's drainage system.

-The contractor shall maintain access to all egress from all commercial and residential driveways throughout the project limits unless permission is granted from the property owners.

The Permit Inspector must be notified upon completion of work for final inspection and approval.

CALL Before you DIG! TOLL FREE, STATEWIDE 1-800-922-4455

Any and all liability for injury, damage or loss resulting from such work as may be undertaken under the terms of this permit is assumed by the Permittee. The Permittee is hereby designated responsible for all future maintenance of all installations or encroachments constructed under this Permit, which in the sole judgement of the State are not part of the highway appurtenances normally maintained by the State.

The Permittee hereby agrees to indemnify and hold harmless the State of Connecticut for any and all such injury, damage, or loss that may be incurred, either directly, or as a result of said work, and to reimburse the Department of Transportation for any expenses incurred due to the performance of any such work undertaken under the terms of this permit.

This permit is revocable at the discretion of the Department of Transportation Commissioner or designated representative.

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| TOWN MIDDLETOWN | ROUTE NO. 17 | PMT 2B-REV 8/00 (302-06-0386) DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS STATE OF CONNECTICUT ENCROACHMENT PERMIT | DATE OF ISSUE 3/6/2019 | PERMIT NO. 1018048 Page 2 of 3 |
| NAME OF HIGHWAY South Main Street | | | DATE EFFECTIVE | |
| LOCATION OF WORK OR BEGINNING AND ENDING POINTS Rt. 17, S. Main St, 150 ft. n/o Talcott Ridge Dr. to the Middletown/ Durham townline. | | | DATE OF EXPIRATION 3/6/2020 | AMT. OF SURETY BOND CERTIFY CHECK 1,000,000.00 |
| | | | SURETY COMPANY/BANK Travelers Casualty & Surety Co of America | |
| TO: OF MA 19 CARMELINA'S CIRCLE LUDLOW, MA 01056 | LUDLOW CONSTRUCTION CO., INC. CITY OF MIDDLETOWN 82 BERLIN STREET MIDDLETOWN, CT 06547 | | BOND NUMBER: 106956424 PERMIT IS NOT VALID UNTIL SIGNATURE COPY IS SIGNED AND RETURNED TO THE OFFICE. PLEASE RETURN AT ONCE. FEE: pd DATE REC'D: PO/WO NO: | |

- The temporary trench pavement shall be smooth and flat. The trench must be maintained on a regularly basics throughout the project.
- The temporary trench pavement shall be a MINIMAL of 4" hot bituminous concrete to be installed in two equal lifts compacted and placed with strict conformance with Form 817 State standards.
- Full depth pavement replacement will be required in all roadway trench excavations. This will include 10" (compacted) of processed gravel base, 6" of Hot Mix Asphalt Superpave 1.0 Design Level 2 and 3" of Hot Mix Asphalt Superpave 0.50 Design Level 2 top course, installed in 2 equal lifts. All edges must be tack coated and the surface joints sealed. If the pavement depth measures less than 9", the requirements for binder and top course depths will be determined by the permit inspector.
- Hot bituminous will be required for all pavement excavations. The permittee will make certain that hot bituminous concrete is available before starting the work. If it is not available, NO excavation will be allowed within the right-of-way until such time as it is available.
- Permanent full depth pavement replacement will be required in all excavations. Temporary pavement restoration will not be allowed through the winter season. Excavations performed after November 1st will be at the discretion of the inspector and will require a MINIMAL of 4" of hot bituminous concrete to be installed in two equal lifts, and may require complete replacement the following spring. Asphalt from plants which have not received state certification will be regarded as temporary and must be replaced regardless of depth installed.
- The permittee will be required to have a consultant inspector on site at all times during any and all construction within the state ROW to perform inspections and to verify required materials testing in accordance with Form 817 standards. All compaction and density testing shall be performed by NETTCP qualified testing personnel using a nuclear density gauge that has been received its annual certification from CTDOT. Compaction tests on soils and Density tests on asphalt shall be performed once per lift of material installed, once every 25' L.F of the excavation or at the discretion of the permit inspector to assure that a rate of 95% is achieved unless otherwise advised by the Permit Inspector.. Daily inspection reports which have been reviewed/verified/stamped by a licensed CT Professional Engineer shall be submitted to the District on a weekly basis.
- All construction materials and methods shall confirm to the Department's Specification Form 817 and land supplemental there too.
- The limits of the final pavement restoration will be determined by the inspector. This shall include milling and paving of the asphalt surface, surrounding and including the excavation, to a depth of 2". The milled area shall extend a minimum of 10 feet beyond the edges of the original trench line with vertically faced edges, not tapered. The entire milled area including the edges shall be swept and tack coated with an approved material at the appropriate rate. The area will then be paved with Hot Mix Asphalt Superpave 0.50 (machine laid) and compacted to a depth of 2". All excavations may be included into one milled area.
- At the end of each workday all trenches will be back filled and patched. The use of steel plates to cover open trenches within the highway right of way will NOT be allowed.
- Catch basins and drainage pipe damaged or filled with sediment during construction must be repaired, cleaned and flushed at contractor's expense. A minimum vertical clearance of 12" shall be maintained between facilities. Metal pipes damaged during construction must be repaired using the attached "concrete pipe connection" detail as directed and approved by the permit inspector. Repair must be performed utilizing solid section of existing pipe. Where this can not be achieved full metal pipe replacement may be required.
- The storing of pipe, excavation materials, or other construction materials within the highway right of way will not be allowed. Equipment shall be removed from the right of way when not in use.
- Roadway must be kept clean of debris and construction materials and machine swept as needed.
- The driveway shall be paved with hot bituminous concrete to the state's right of way property line.
- Pavement markings must be replaced using epoxy paint. Turf must be established prior to this permit considered complete.

ORIGINAL

| | | | | |
|--|---|---|---|--|
| TOWN MIDDLETOWN | ROUTE NO. 17 | PMT 2B-REV 8/00 (302-06-0386) DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS STATE OF CONNECTICUT ENCROACHMENT PERMIT | DATE OF ISSUE 3/6/2019 | PERMIT NO. 1018048 Page 3 of 3 |
| NAME OF HIGHWAY South Main Street | | | DATE EFFECTIVE | |
| LOCATION OF WORK OR BEGINNING AND ENDING POINTS Rt. 17, S. Main St, 150 ft. n/o Talcott Ridge Dr. to the Middletown/ Durham townline. | | | DATE OF EXPIRATION 3/6/2020 | AMT. OF SURETY BOND CERTIFY CHECK 1,000,000.00 |
| | | | SURETY COMPANY/BANK Travelers Casualty & Surety Co of America | |
| TO: OF MA 19 CARMELINA'S CIRCLE LUDLOW, MA 01056 | LUDLOW CONSTRUCTION CO., INC. CITY OF MIDDLETON 82 BERLIN STREET MIDDLETON, CT 06547 | | BOND NUMBER: 106956424 PERMIT IS NOT VALID UNTIL SIGNATURE COPY IS SIGNED AND RETURNED TO THE OFFICE. PLEASE RETURN AT ONCE. FEE: pd DATE REC'D: PO/WO NO: | |

-All liability is assumed by the permittee. All areas disturbed as a result of this operation will be restored to the equivalency of their original condition or better at permittee's expense. The permittee will be billed in full by the Department for engineering and replacement costs of any area disturbed or destroyed by the permitted operations.

- The Department reserves the right to require the permittee to reimburse the State for all expenses incurred in connection with this permit including but not necessarily limited to inspection, State-owned equipment, supplies, etc. as outlined under regulation 13b-17-11.

-Requirements of the permit are subject to change as field condition warrant. Any change will require a review and prior approval by the District Office.

INSURANCE EXPIRES: 1/1/2020

PRIOR TO THE INSURANCE EXPIRATION DATE, THE PERMITTEE MUST SUBMIT AN UPDATED CERTIFICATE OF INSURANCE
TO DOCUMENT APPROPRIATE CONTINUING INSURANCE COVERAGE.

| | | |
|---|-----------------|---|
| PERMITTEE'S SIGNATURE <i>Michael J. Flanigan</i> | DATE 3-11-19 | DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY OPERATIONS BY Richard Reagan |
| DISTRICT MAINTENANCE DIRECTOR | | |

Appendix C Acronyms

APP – ACCIDENT PREVENTION PLAN

AWWA – AMERICAN WATER WORKS ASSOCIATION

CT DEEP – CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION

CTDPH – CONNECTICUT DENTAL HEALTH DEPARTMENT

DOT – DEPARTMENT OF TRANSPORTATION

DPD – DIETHYL-P-PHENYLENEDIAMINE

EPA – ENVIRONMENTAL PROTECTION AGENCY

GDA – GOVERNMENT DESIGNATED AUTHORITY

MAPO – MAINTENANCE AND PLAN OF OPERATION

NPDES – NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

QAPP – QUALITY ASSURANCE PROJECT PLAN

QC – QUALITY CONTROL

QCP – QUALITY CONTROL PERSONNEL

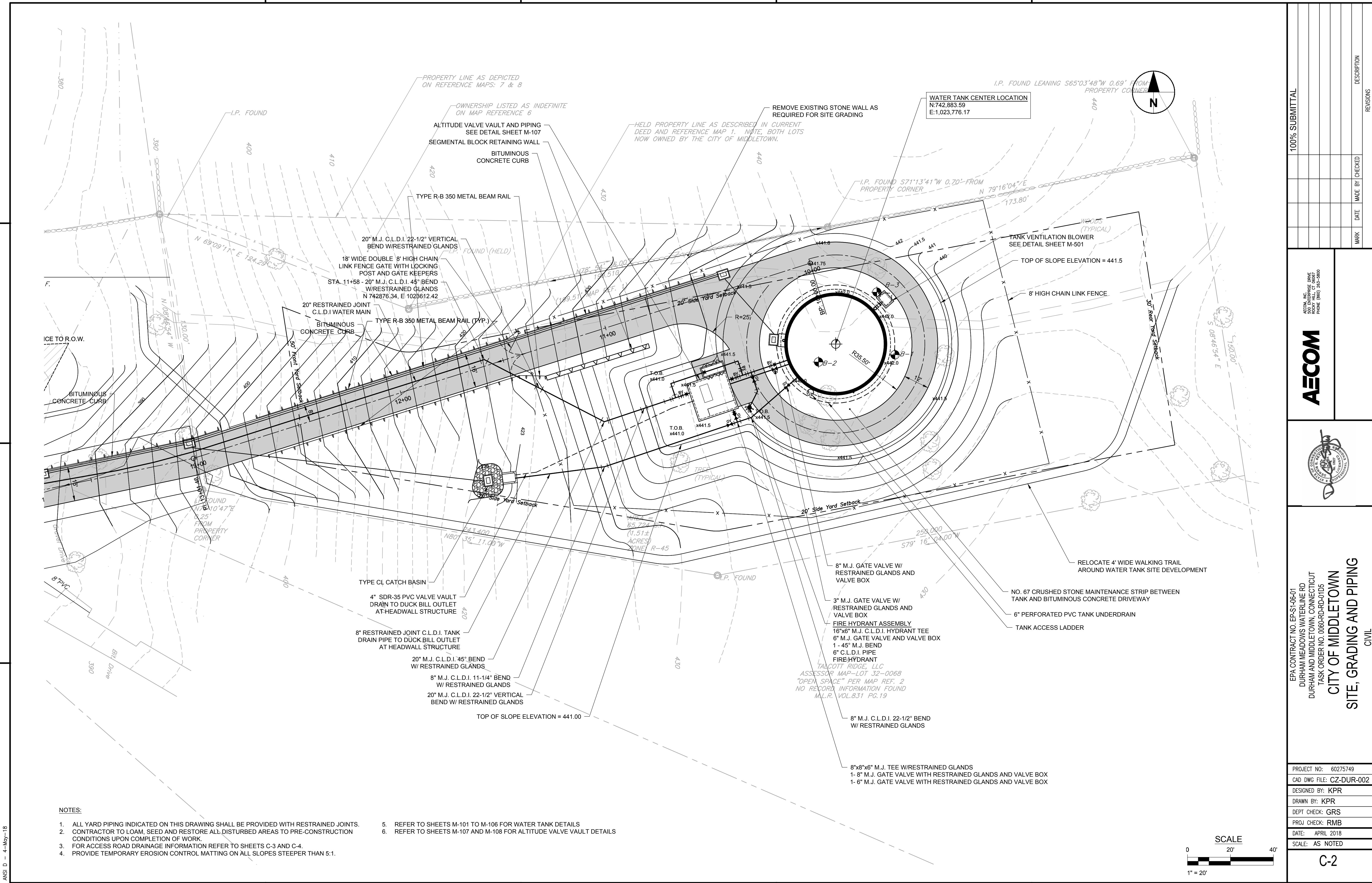
RT – ROUTE

SAP – SAMPLING ANALYSIS PLAN

SSHO – SITE SAFETY AND HEALTH OFFICER

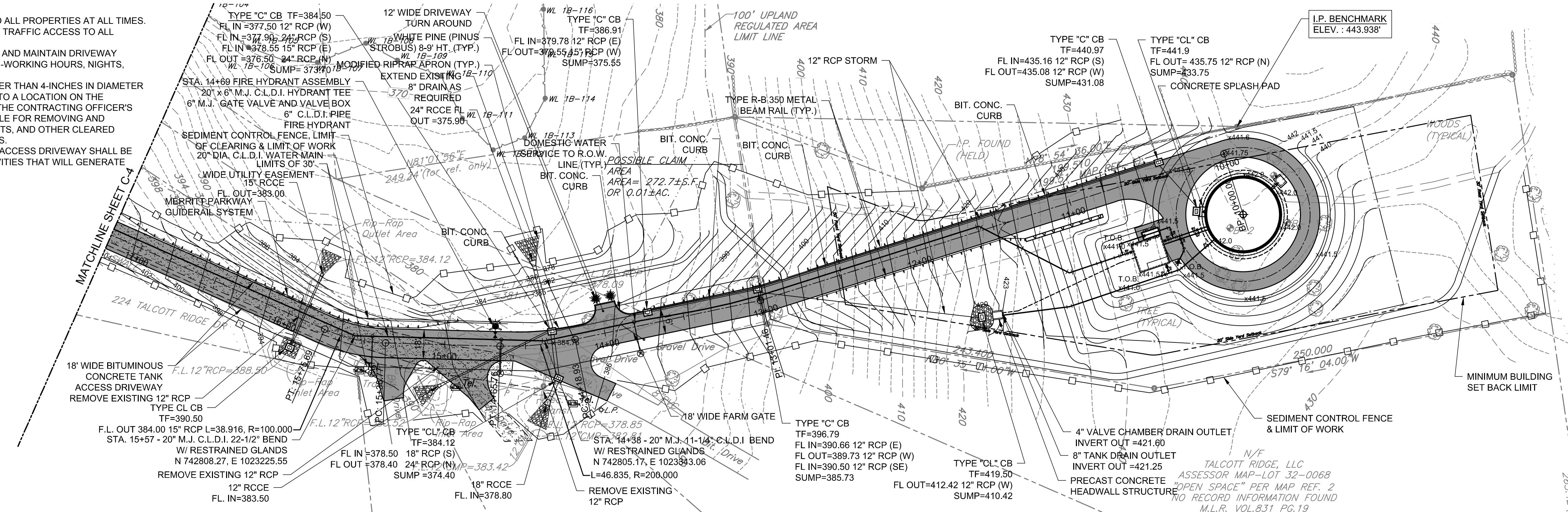
USACE – UNITED STATES ARMY CORPS OF ENGINEERS

Appendix D Plan Sheets

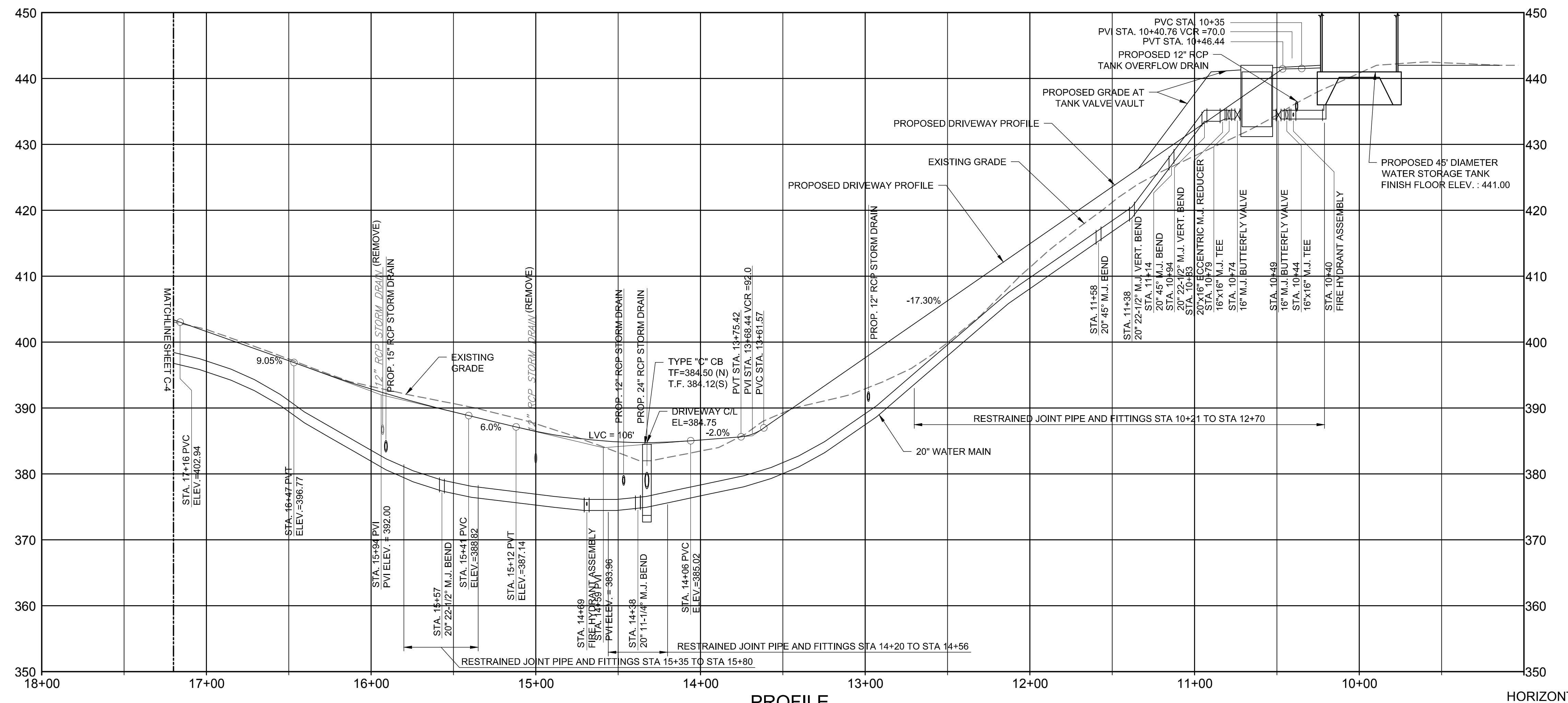


- NOTES:

 1. CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES AT ALL TIMES.
 2. CONTRACTOR SHALL PROVIDE, AS A MINIMUM, ONE WAY TRAFFIC ACCESS TO ALL PROPERTIES DURING WORKING HOURS.
 3. CONTRACTOR SHALL BACKFILL ALL OPEN EXCAVATIONS AND MAINTAIN DRIVEWAY ACCESS FOR VEHICLES AND PEDESTRIANS DURING NON-WORKING HOURS, NIGHTS, WEEKENDS, AND HOLIDAYS.
 4. ALL PORTIONS OF HARDWOOD TREES REMOVED GREATER THAN 4-INCHES IN DIAMETER SHALL BE CUT INTO 10 FOOT LENGTHS AND DELIVERED TO A LOCATION ON THE ADJACENT PROPERTY OWNERS LAND AS DIRECTED BY THE CONTRACTING OFFICER'S REPRESENTATIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL OTHER BRUSH, STUMPS, WOOD, ROOTS, AND OTHER CLEARED VEGETATION NOT RETAINED BY THE PROPERTY OWNERS.
 5. RESIDENTS WITHIN 500 FEET OF THE WATER TANK AND ACCESS DRIVEWAY SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ALL PLANNED ACTIVITIES THAT WILL GENERATE LOUD NOISES OR LARGE VIBRATIONS.

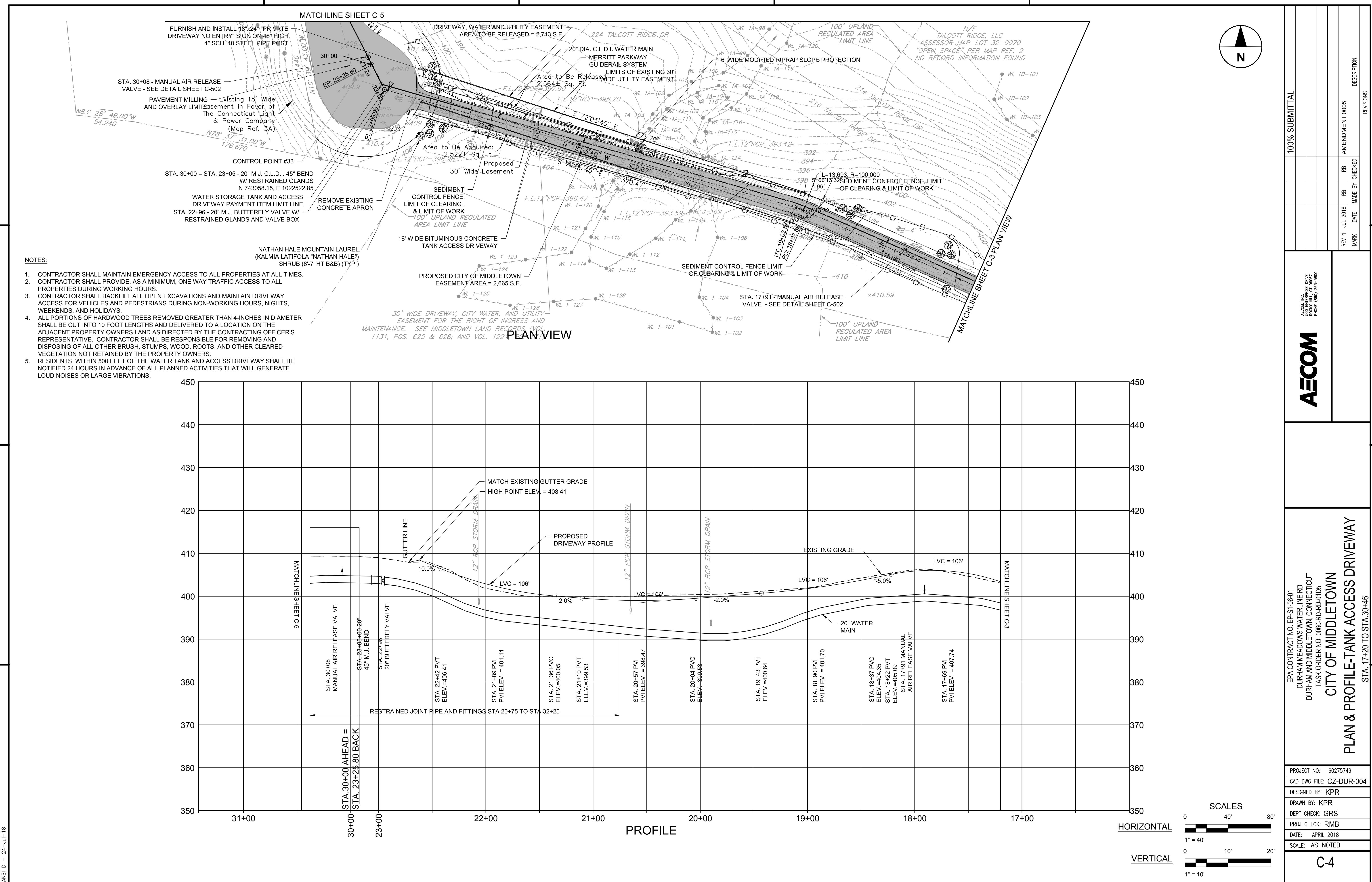


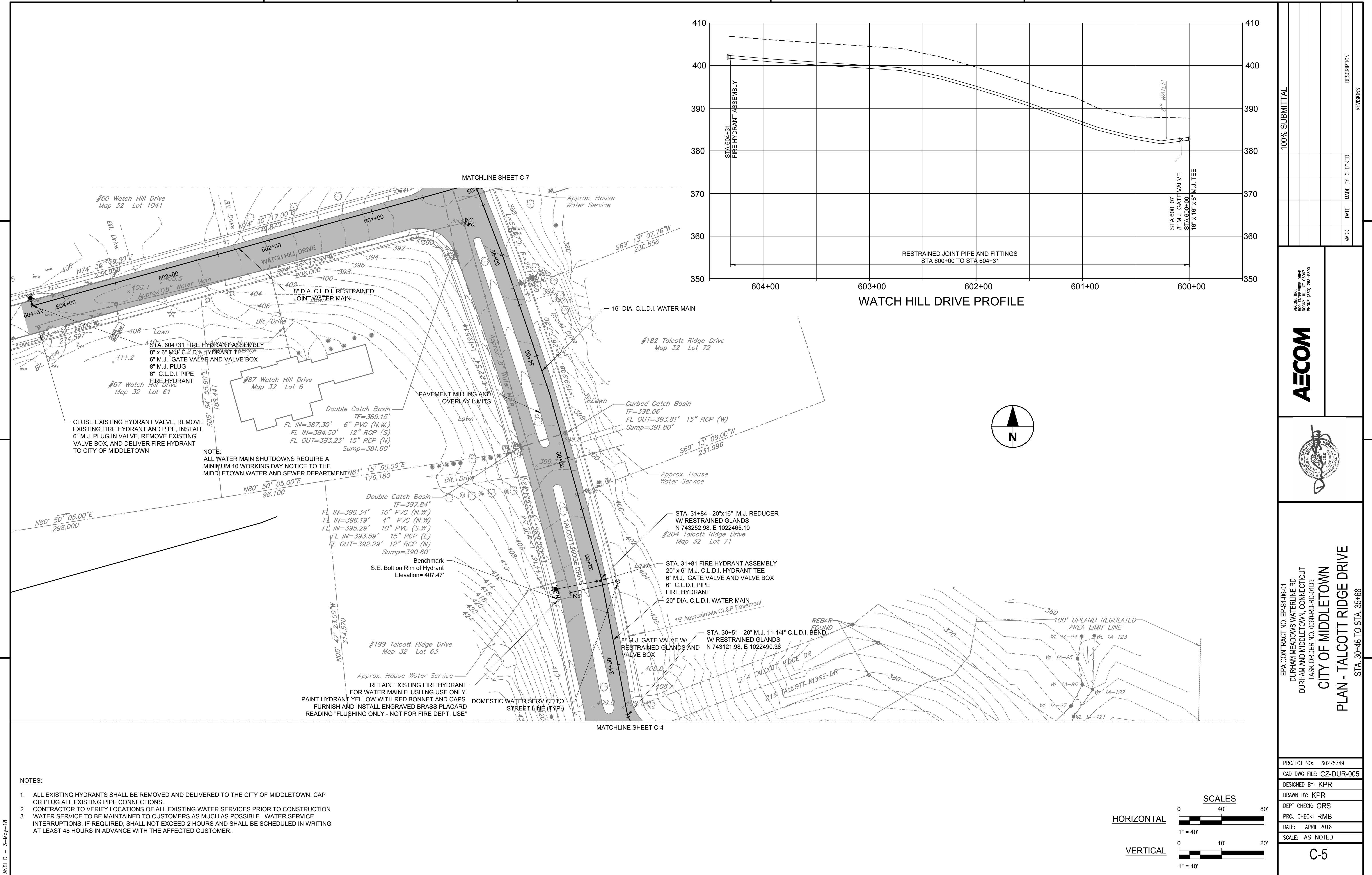
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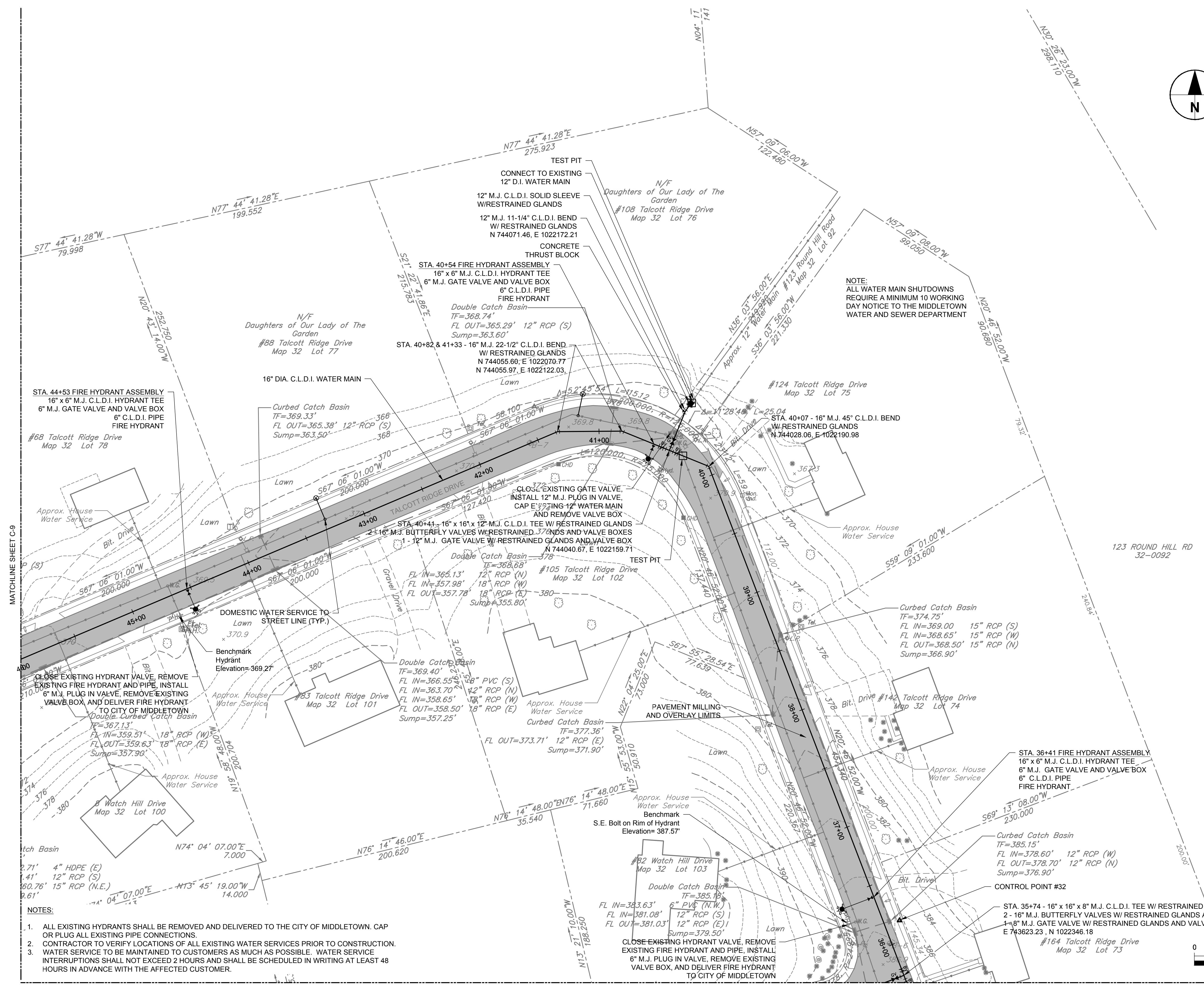


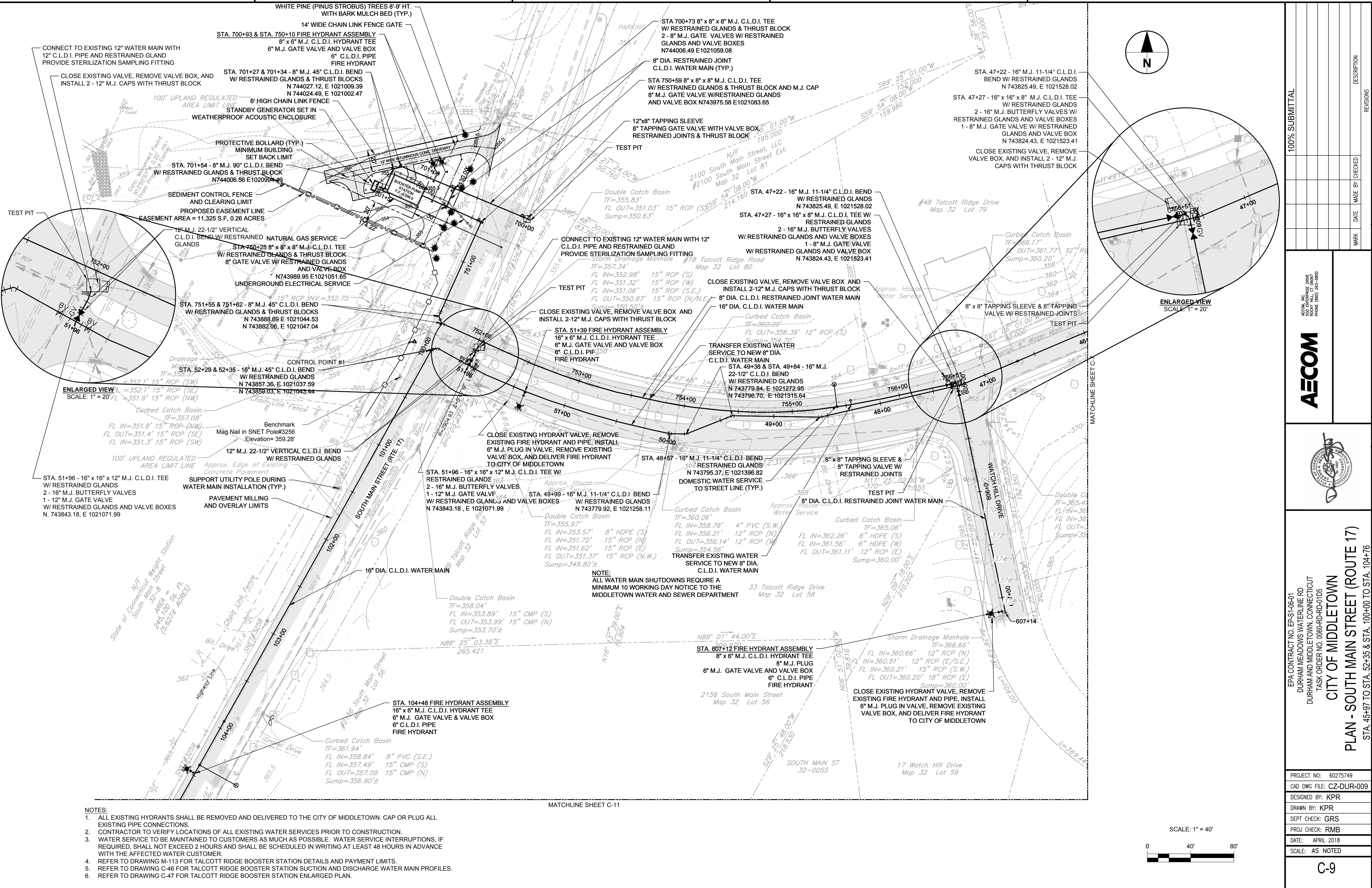
PROFILE

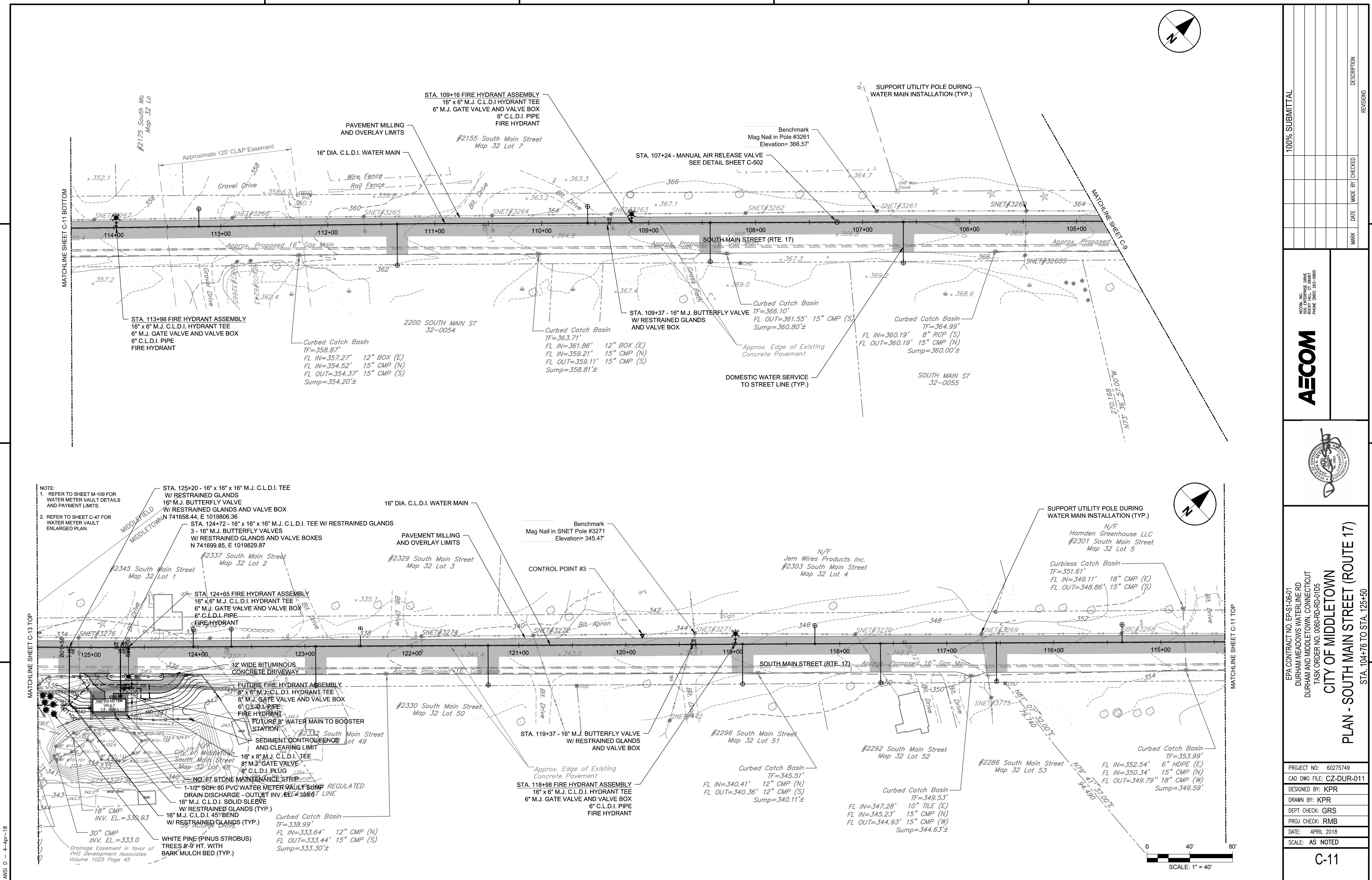
NSI D - 29-Jan-18

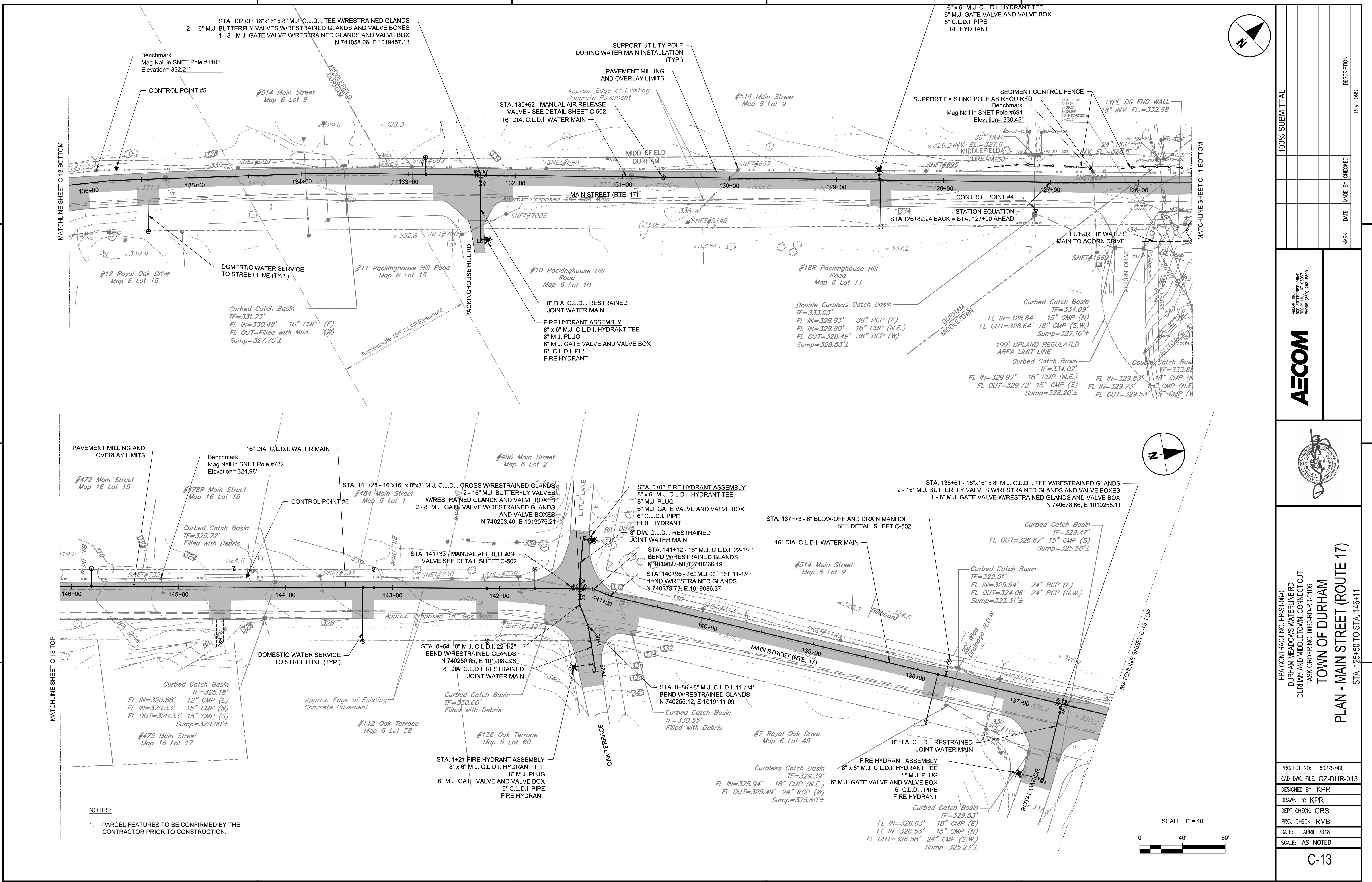


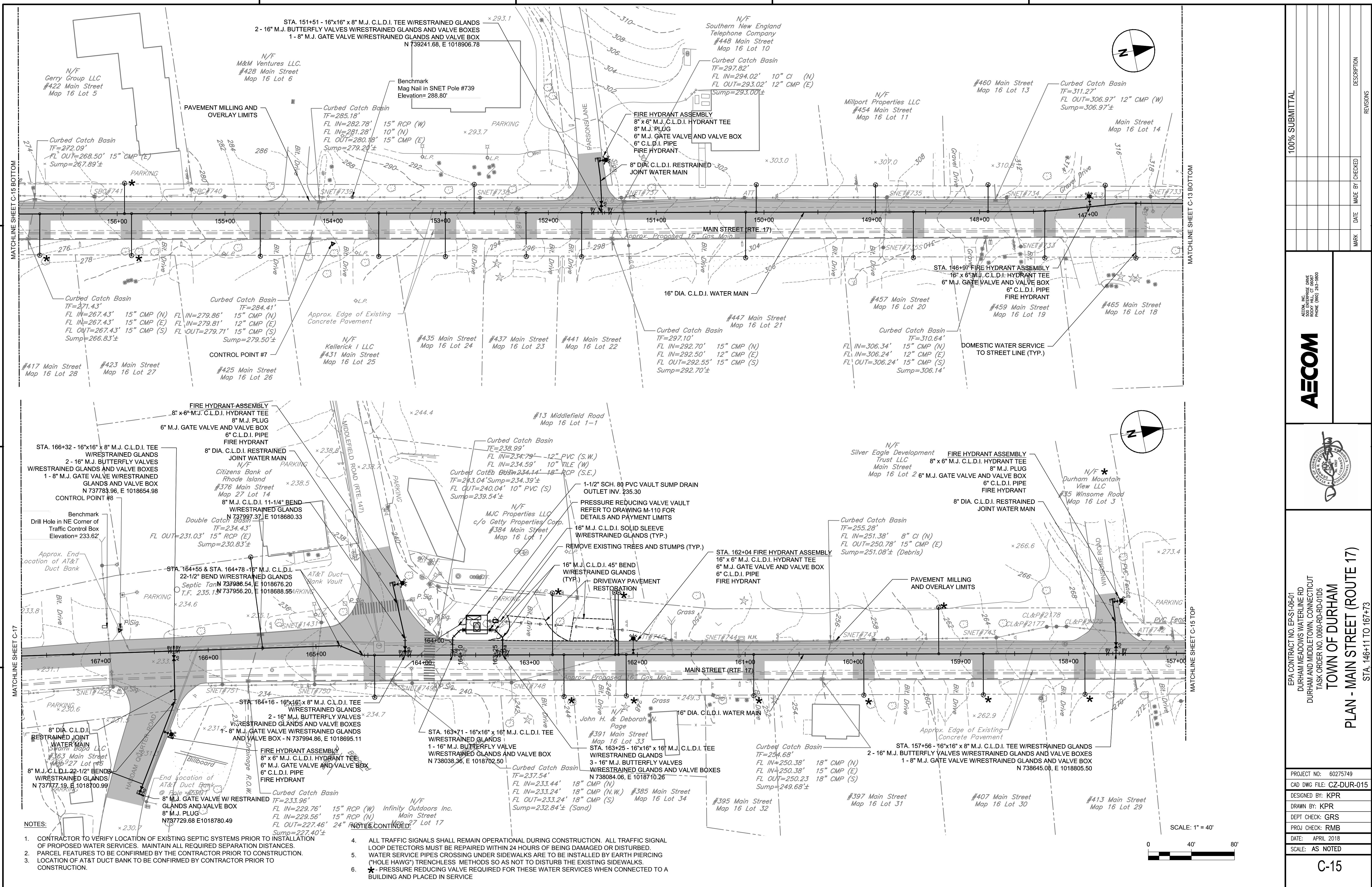






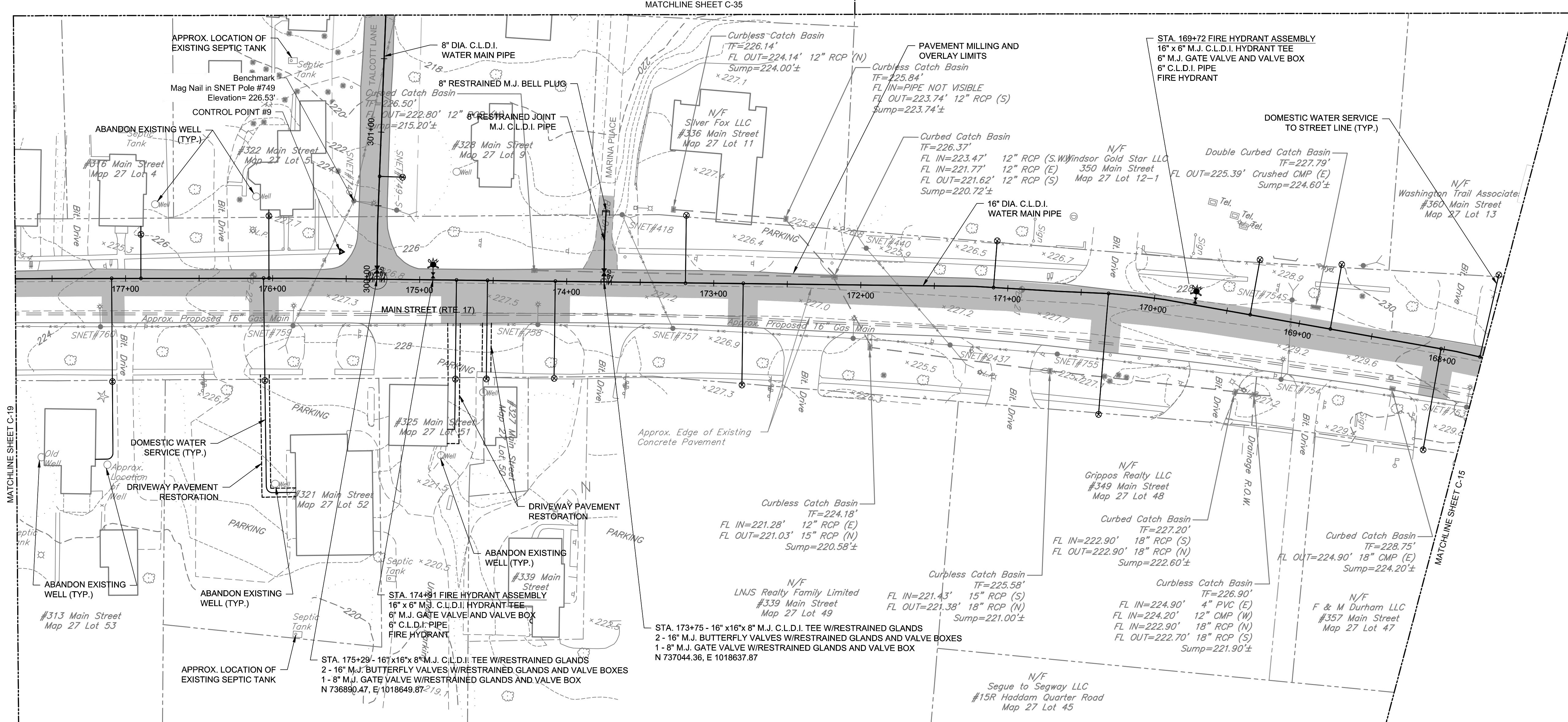
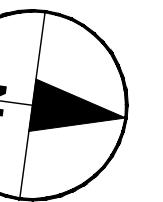






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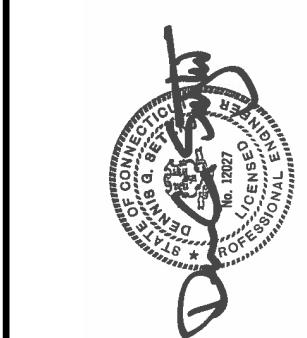


EPA CONTRACT NO. EP-SI-0601
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETON CONNECTICUT
TASK ORDER NO. 00860-RD-RD-0105
TOWN OF DURHAM
STA. 169+72 TO STA. 177+75

PROJECT NO: 60275749
CAD DWG FILE: CZ-DUR-017
DESIGNED BY: KPR
DRAWN BY: KPR
DEPT CHECK: GRS
PROJ CHECK: RMB
DATE: APRIL 2018
SCALE: AS NOTED
C-17

100% SUBMITTAL

AECOM, INC.
500 ENTERPRISE DRIVE
PHONE (860) 243-5800

AECOM

- NOTES:**
1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATION DISTANCES.
 2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 3. ALL TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. TRAFFIC LOOP DETECTORS DAMAGED DURING CONSTRUCTION MUST BE REPAIRED WITHIN 24 HOURS OF BEING DAMAGED.
 4. WATER SERVICE PIPES CROSSING UNDER SIDEWALKS ARE TO BE INSTALLED BY EARTH PIERCING ("HOLE HAWG") TRENCHLESS METHODS SO AS NOT TO DISTURB THE EXISTING SIDEWALKS.
 5. REFER TO DRAWING C-36 FOR TALCOTT LANE PROFILE VIEW.

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

DESCRIPTION

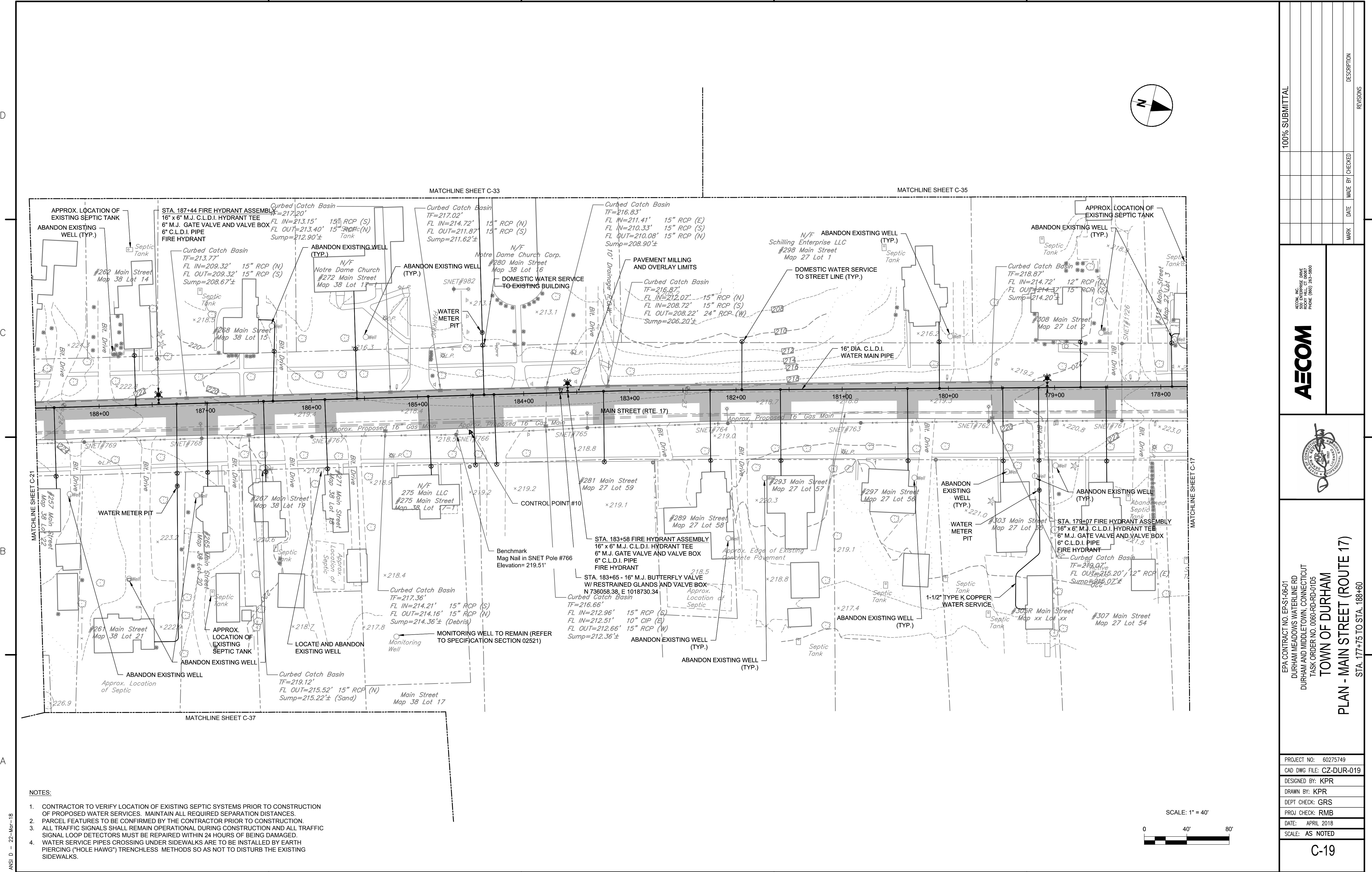
REVISIONS

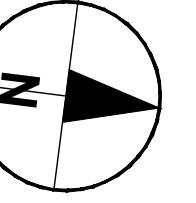
MARK

DATE

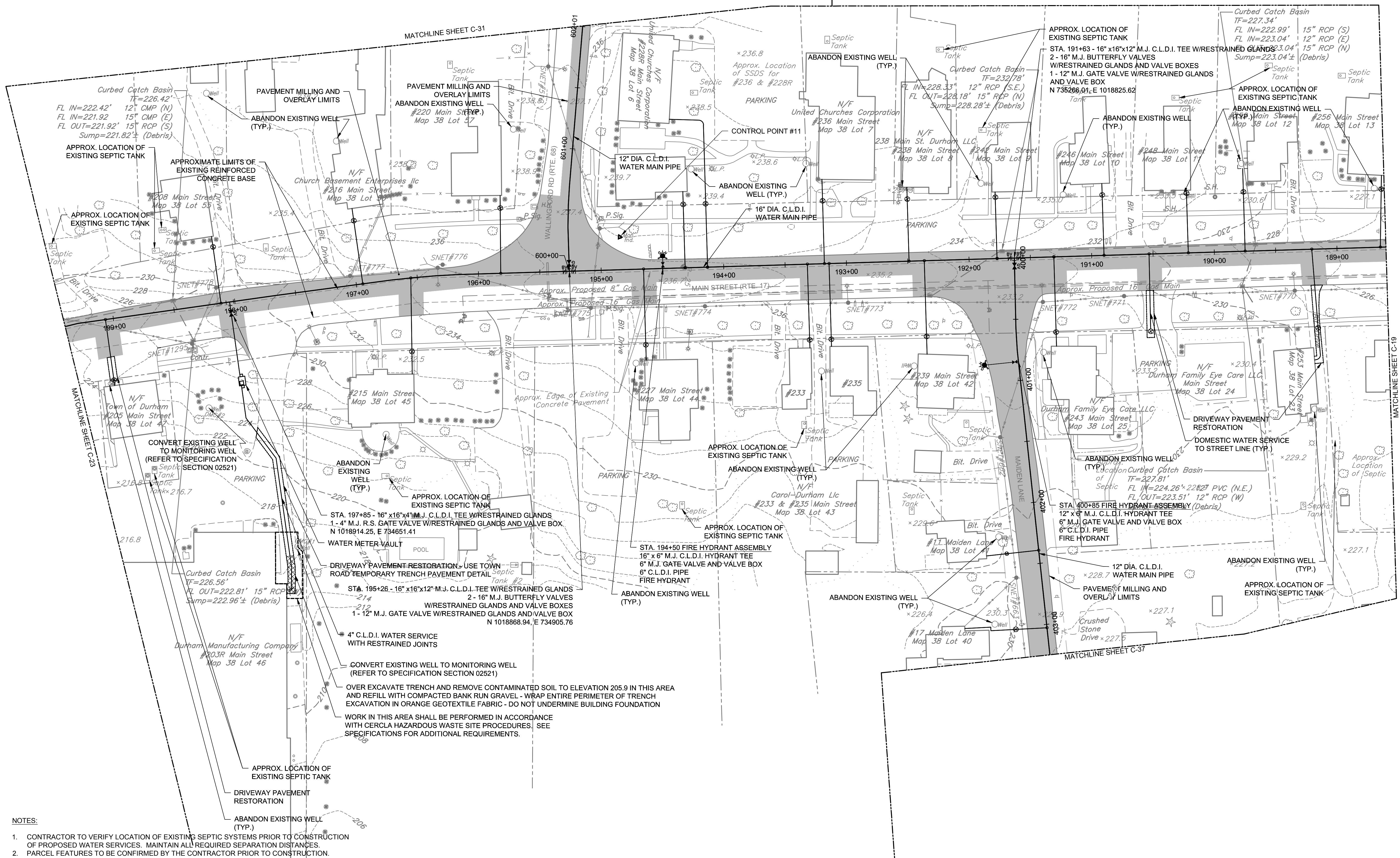
MADE BY

CHECKED





MATCHLINE SHEET C-33



ANSI D = ZZ-Mdr=18

NOT

- (TYP.)

 1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATION DISTANCES.
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 5. REFER TO DRAWING C-38 FOR MAIDEN LANE PROFILE VIEW .
 6. REFER TO DRAWING C-45 FOR WALLINGFORD ROAD PROFILE VIEW.

SCALE: 1" = 40'



S
T NO: 60275749
G FILE: CZ-DUR-021
CD BY: KPR
BY: KPR
HECK: GRS
HECK: RMB
APRIL 2018
AS NOTED
C-21

DURHAM AND MIDDLE TOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

PLAN - MAIN STREET (ROUTE 17)

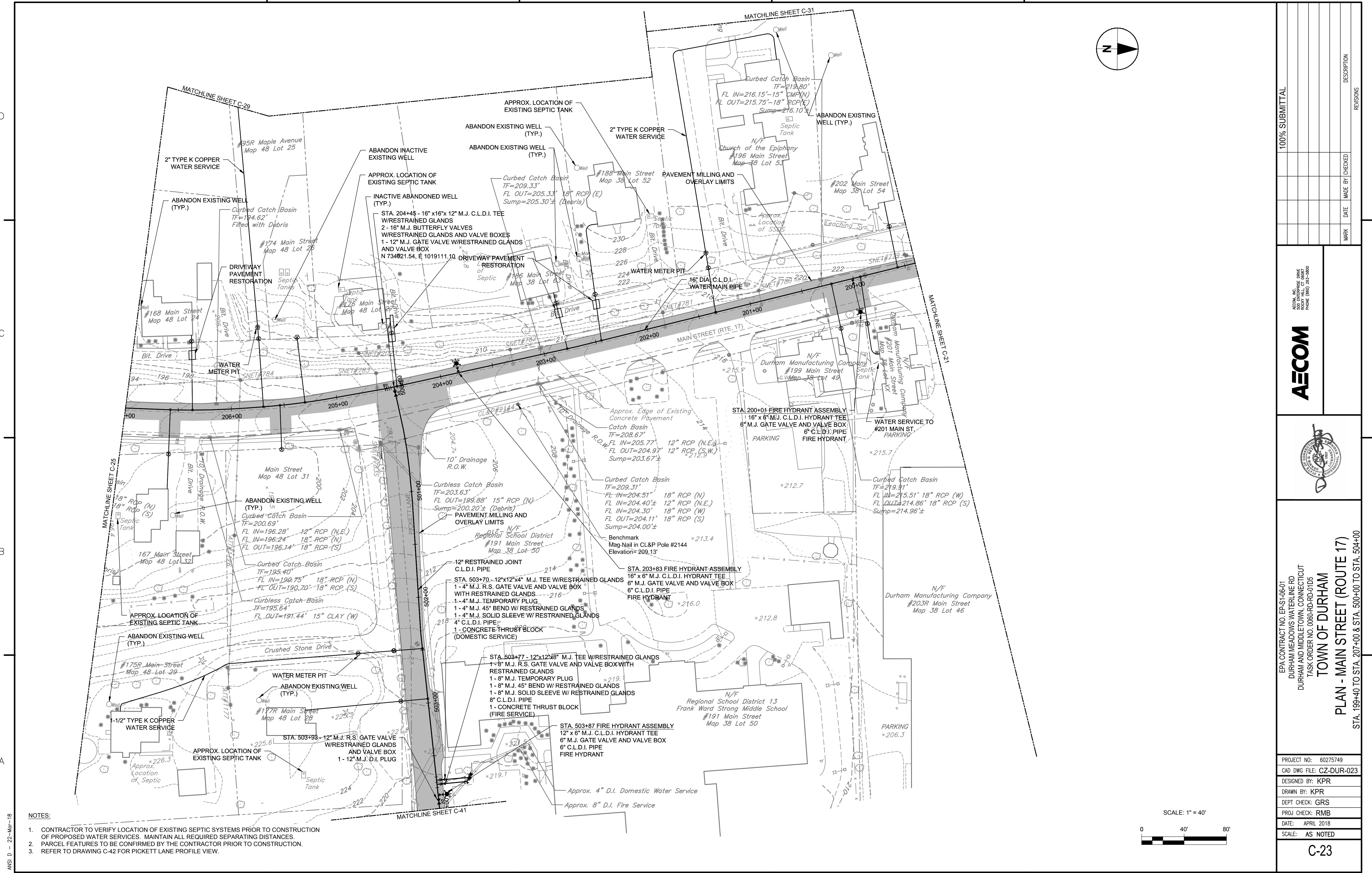
STA.188+60-STA.199+40, STA.400+00-STA.403+25 & STA.600+00-STA.602+01

A circular professional engineer's license seal. The outer ring contains the text "STATE OF CONNECTICUT" at the top and "DENNIS G. SETTE" at the bottom. The inner circle contains "PROFESSIONAL ENGINEER" at the top and "No. 12027" at the bottom. A small five-pointed star is located at the bottom left of the inner circle.

AECOM

ROCKY HILL, CT 06067
PHONE (860) 263-5800

ANSWER



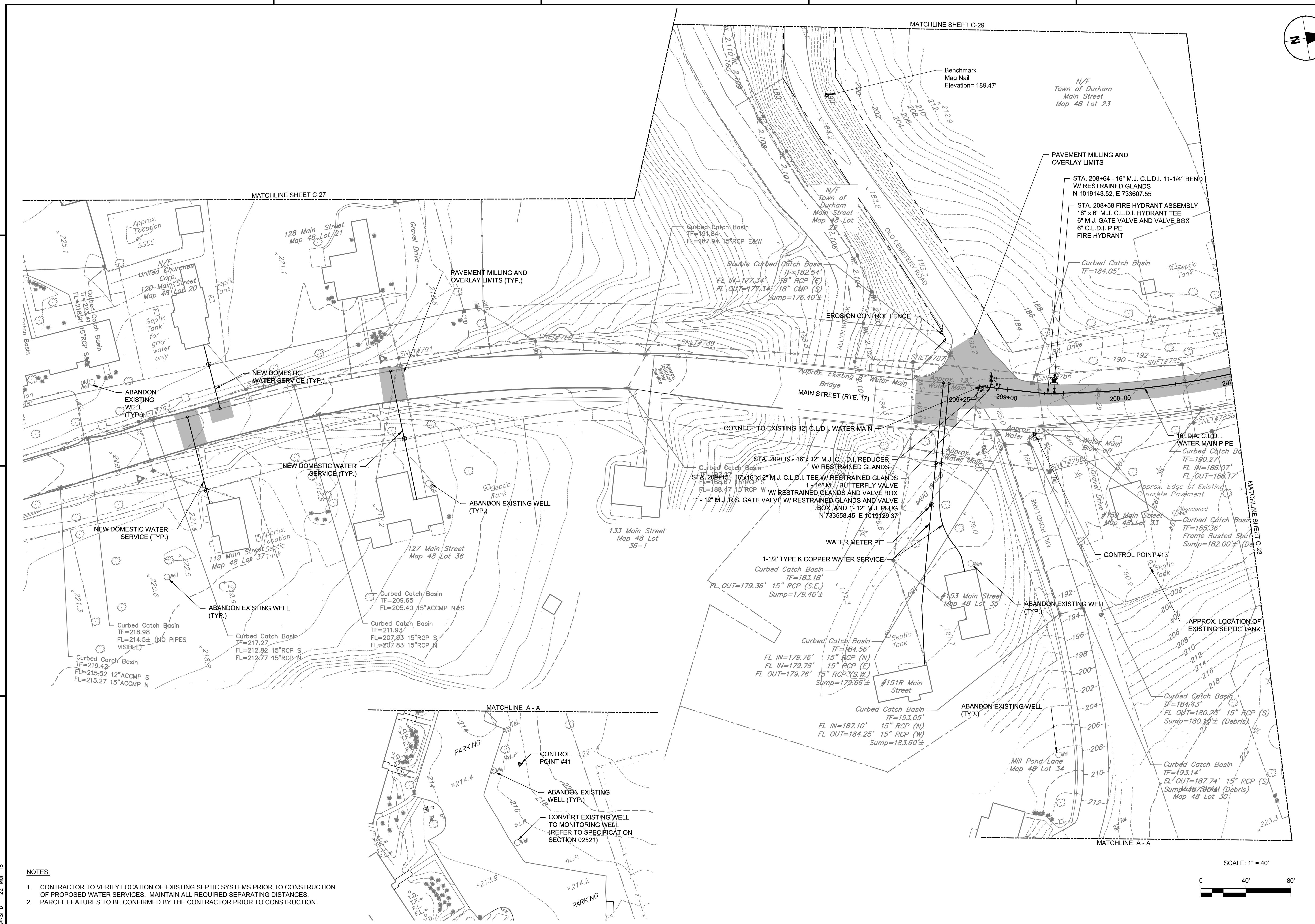
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| | | | | 100% SUBMITTAL | |

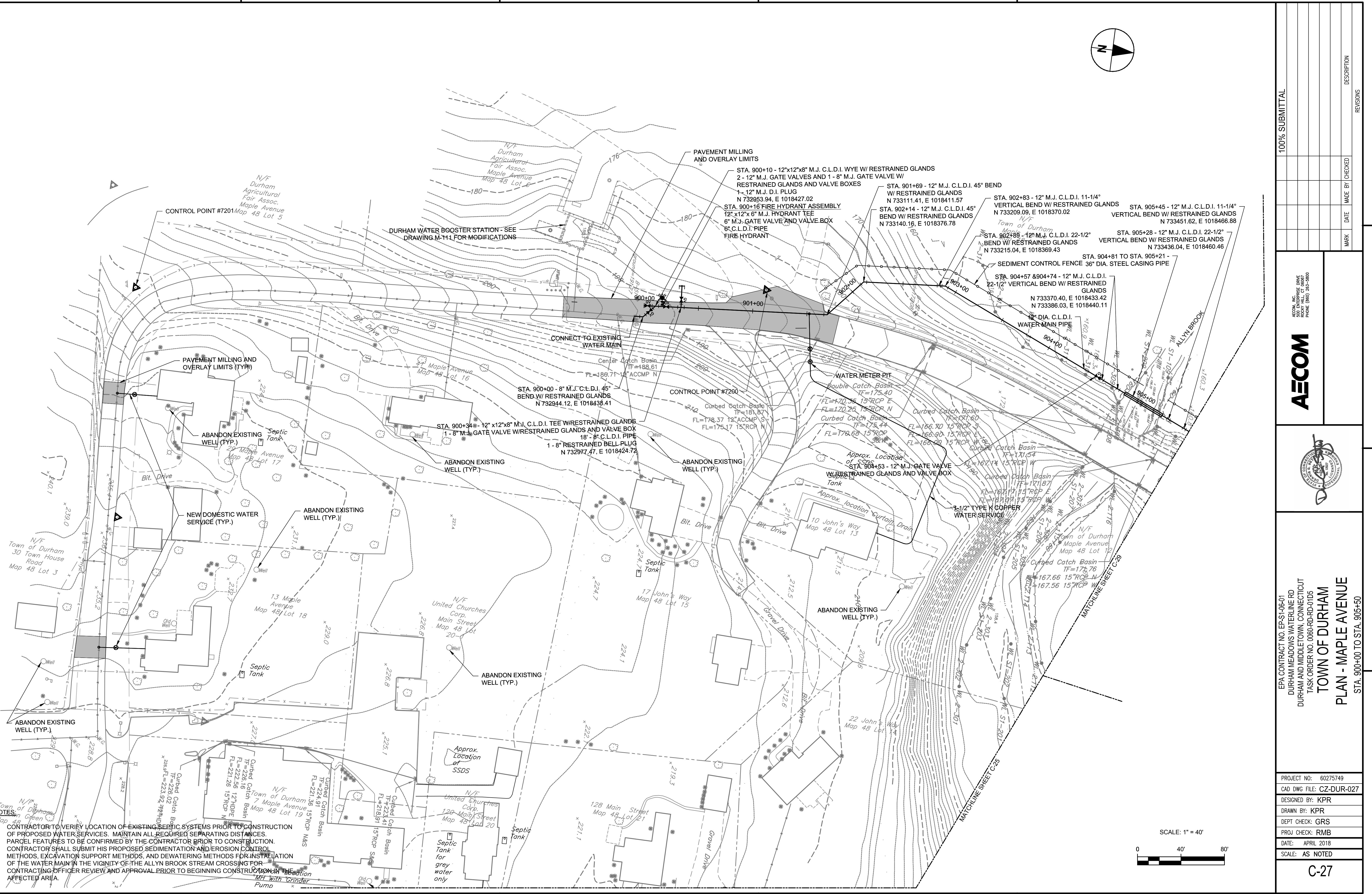
AECOM
ACCOM, INC.
500 ENTERPRISE DRIVE
PHONE (609) 423-5800

PLAN - MAIN ST (ROUTE 17)
STATION 209+00 TO STA. 209+25
EPA CONTRACT NO. EP-SI-0601
DURHAM AND MIDDLETON CONNECTICUT
TASK ORDER NO. 0086-RD-RD-0105

PROJECT NO: 60275749
CAD DWG FILE: CZ-DUR-025
DESIGNED BY: KPR
DRAWN BY: KPR
DEPT CHECK: GRS
PROJ CHECK: RMB
DATE: APRIL 2018
SCALE: AS NOTED

C-25



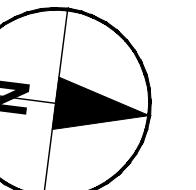


NOTES:

Map 48

1. CONTRACTOR TO
OF PROPOSED WATER
PIPELINE
2. PARCEL FEATURES
3. CONTRACTOR SHARING
METHODS, EXCAVATION
OF THE WATER MAIN
CONTRACTING OFFICE
AFFECTED AREA.

1



D

| DURHAM AND MIDDLETOWN, CONNECTICUT | | | |
|------------------------------------|-------------|---------------|-------------|
| TASK ORDER NO. 0060-RD-RD-01D5 | | | |
| TOWN OF DURHAM | | | |
| PLAN - MAPLE AVENUE | | | |
| DWG. NO.: 905±50 | STA. 912±88 | WATERLINE NO. | |
| DWG FILE: CZ-DUR-029 | | | |
| SIGNED BY: KPR | | | |
| SWN BY: KPR | | | |
| CHECK: GRS | | | |
| CHECK: RMB | | | |
| DATE: APRIL 2018 | | | |
| REMARKS: AS NOTED | | | |
| MARK | DATE | MADE BY | CHECKED |
| | | | DESCRIPTION |
| | | | REVISIONS |

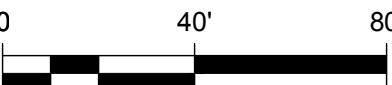
[Handwritten signature over stamp]

ANSI D 22 Min 18

- NOTES:

 1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
 2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

SCALE: 1" = 40'



C-29

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-5800

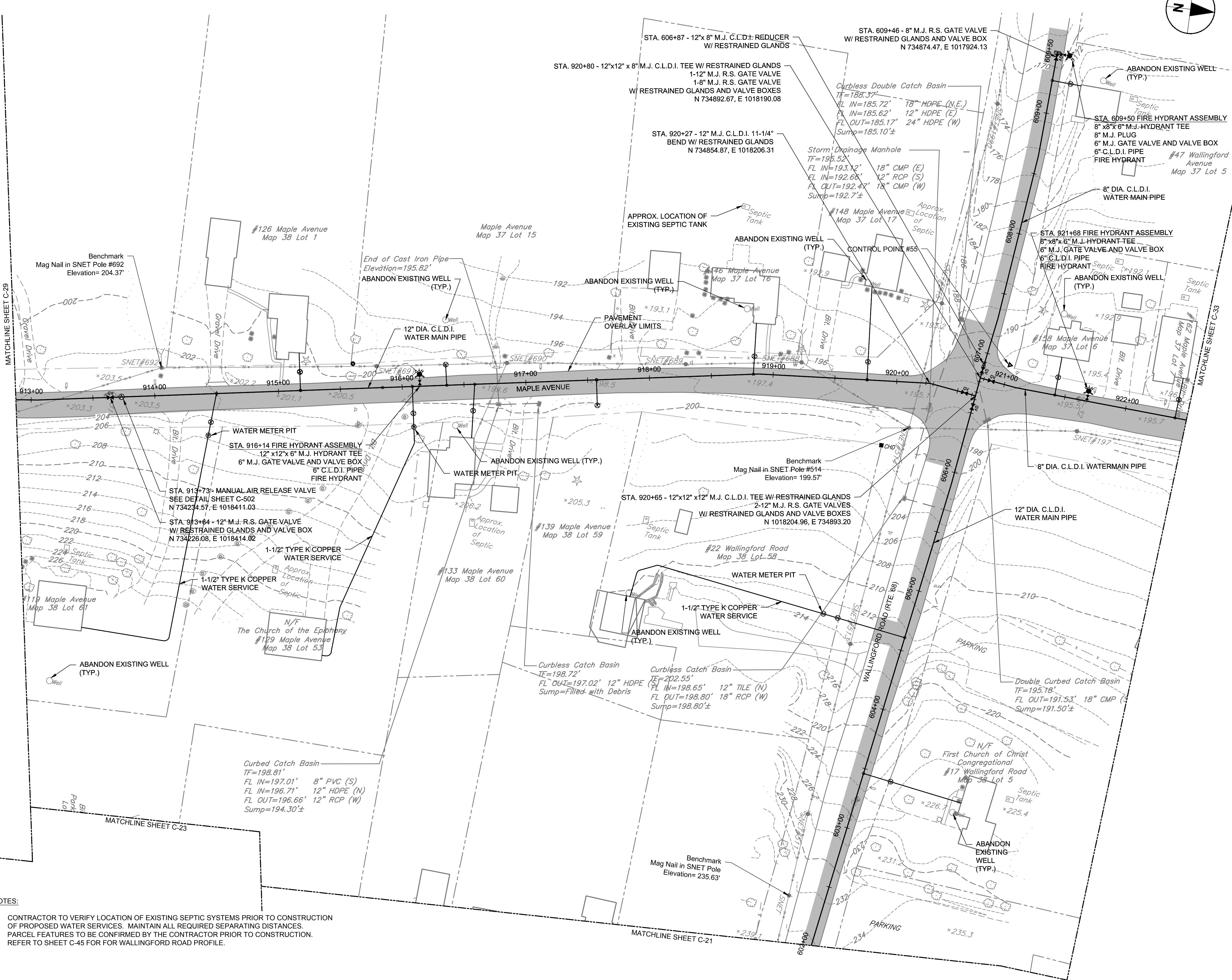
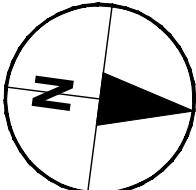
DURHAM MIDDLETOWN WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

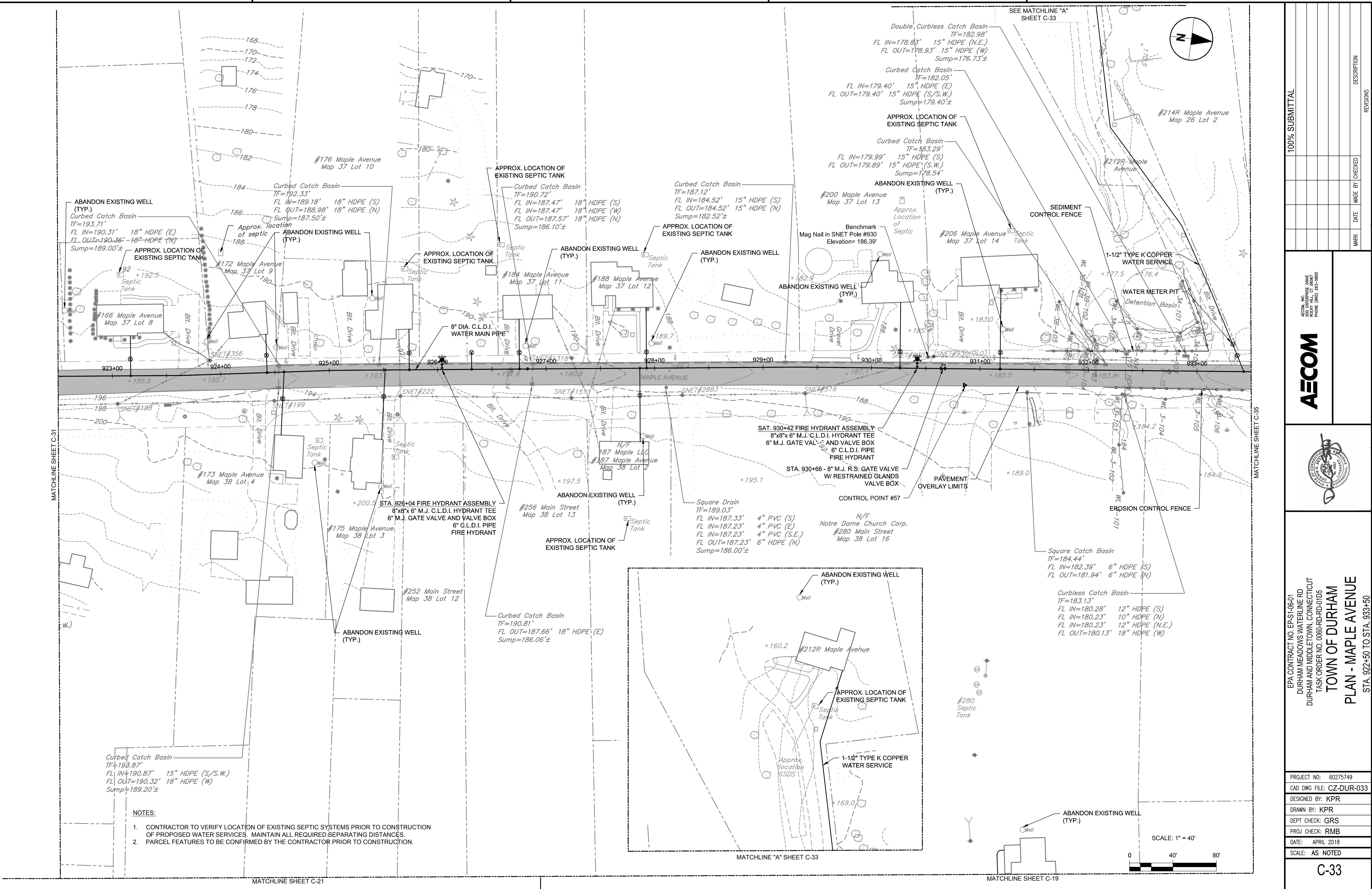
TOWN OF DURHAM

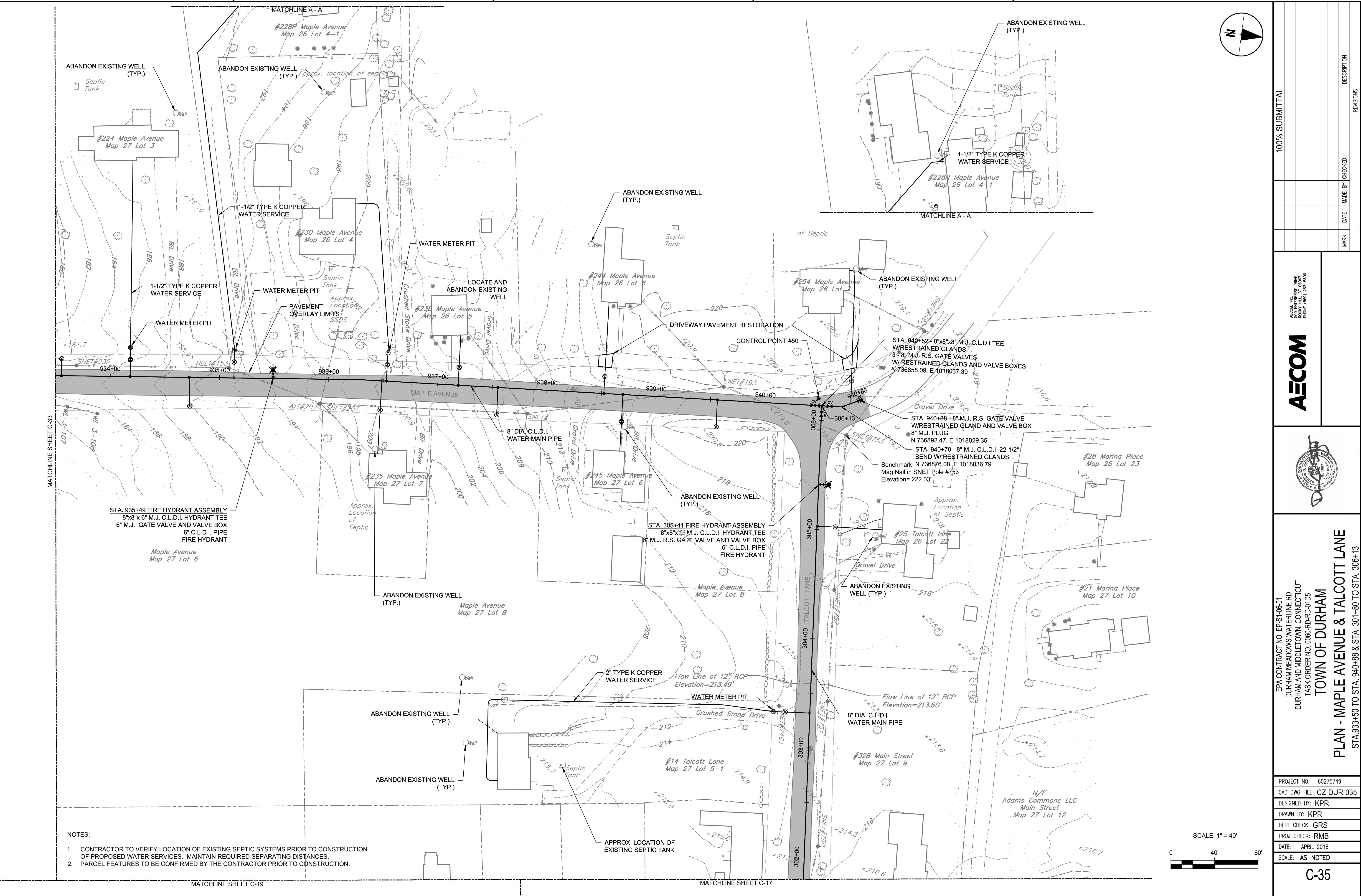
PLAN - MAPLE AVENUE

STA 905+50 TO STA 912+88

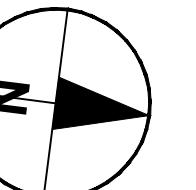
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VN BY: KPR
CHECK: GRS
CHECK: RMB
: APRIL 2018
E: AS NOTED



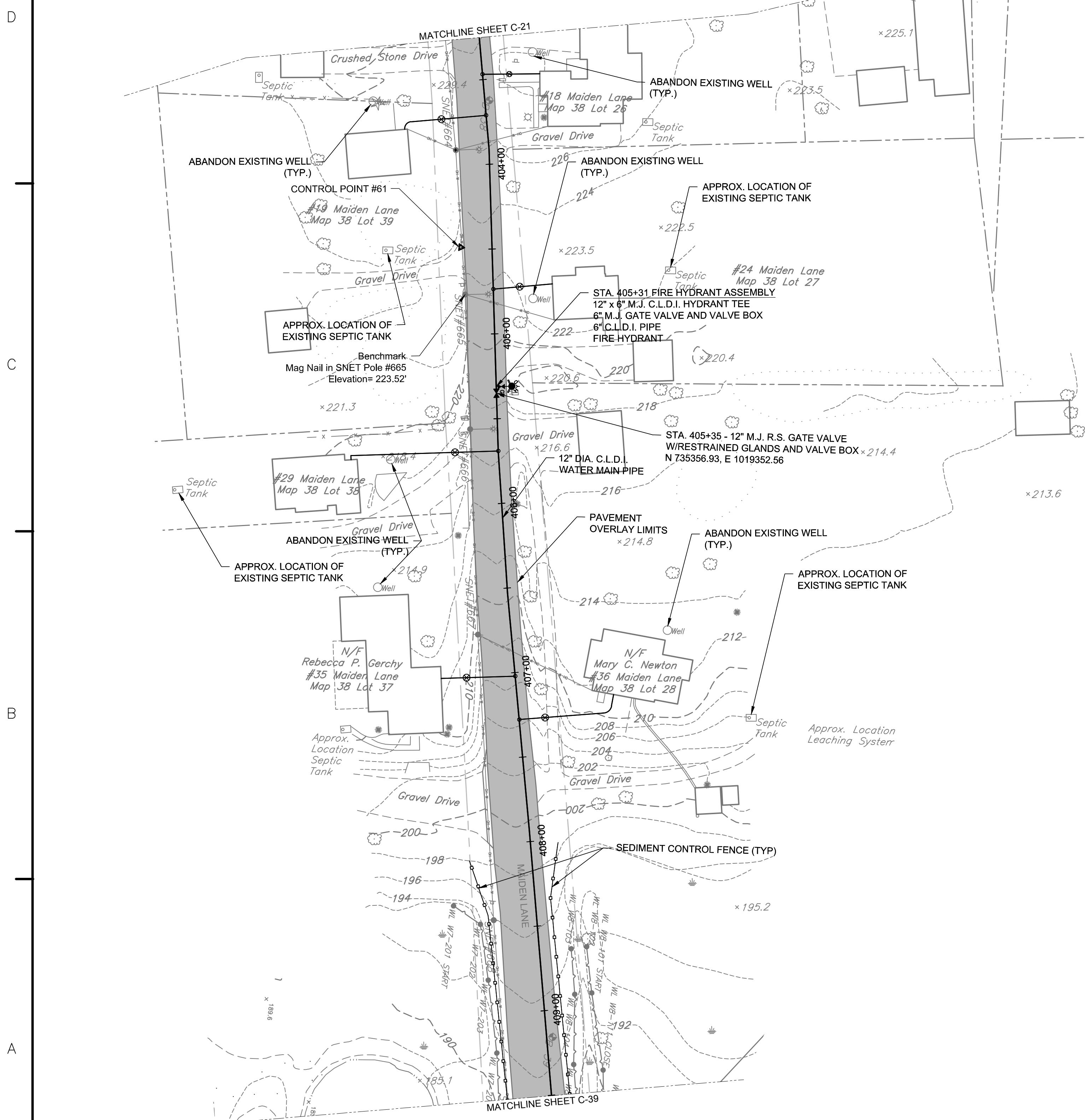




1 2 3 4 5



MATCHLINE SHEET C-19

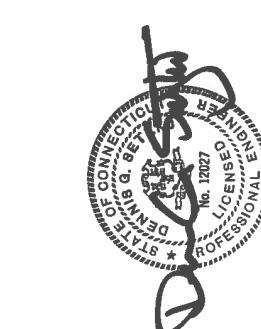


NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

AECOM
INC.
500 ENTERPRISE DRIVE
PHONE (609) 243-5800

AECOM

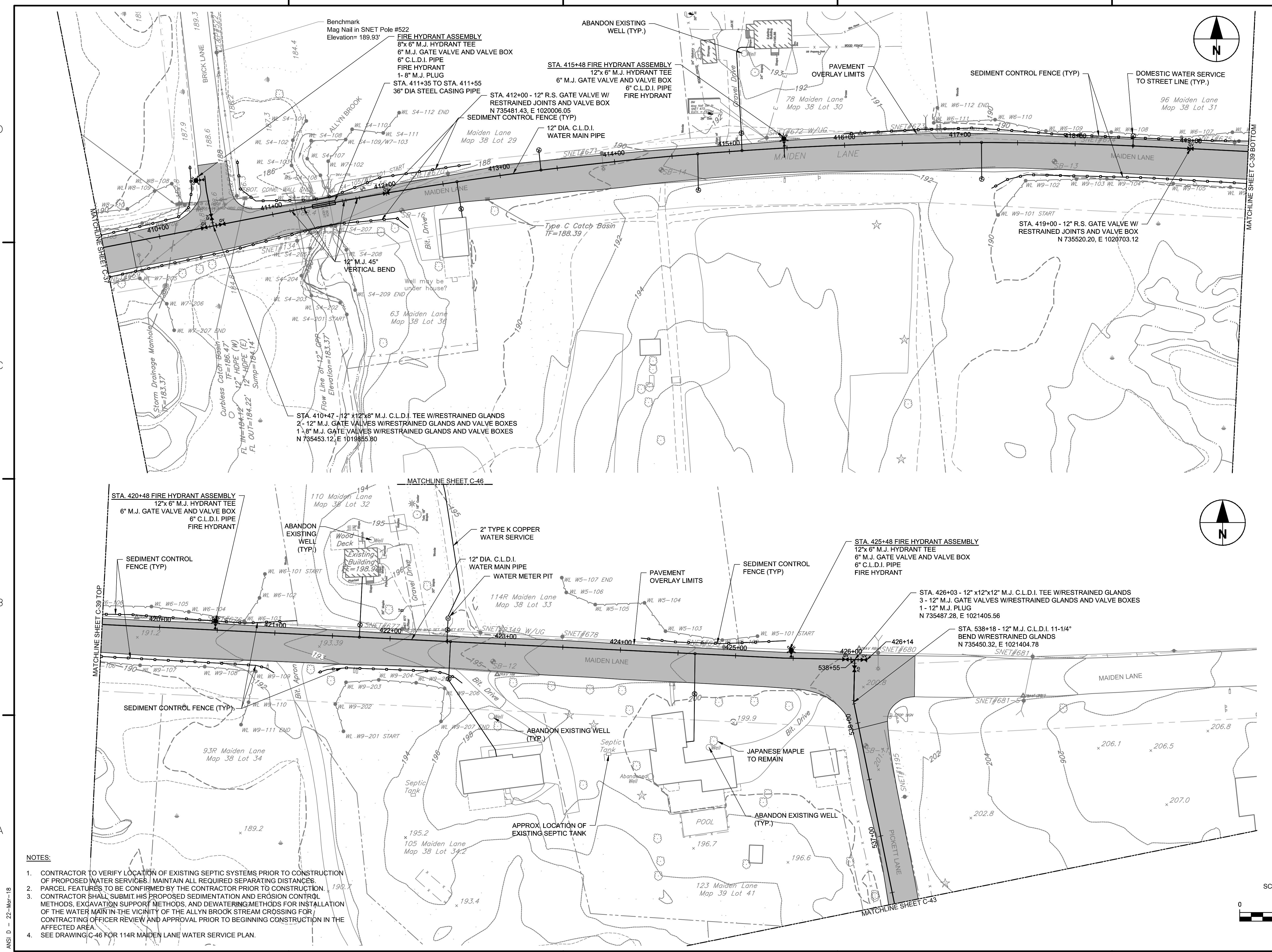


EPA CONTRACT NO. EP-SI-0601
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETON CONNECTICUT
TASK ORDER NO. 0060-RD-RD-0105
TOWN OF DURHAM
PLAN - MAIDEN LANE
STA. 403-25 TO STA. 409-50

| |
|--------------------------|
| PROJECT NO.: 60275749 |
| CAD DWG FILE: CZ-DUR-037 |
| DESIGNED BY: KPR |
| DRAWN BY: KPR |
| DEPT CHECK: GRS |
| PROJ CHECK: RMB |
| DATE: APRIL 2018 |
| SCALE: AS NOTED |

C-37

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



| 100% SUBMITTAL | | | |
|---|------|---------|-------------|
| AECOM  AECOM, INC. 500 ENTERPRISE DRIVE ROCKY HILL, CT 06067 PHONE (860) 263-5800 | | | |
| MARK | DATE | MADE BY | DESCRIPTION |
| | | | REVISIONS |
| EPA CONTRACT NO. EP-S1-06-01 DURHAM MEADOWS WATERLINE RD DURHAM AND MIDDLETON, CONNECTICUT TASK ORDER NO. 0060-RD-RD-01D5 TOWN OF DURHAM PLAN - MAIDEN LANE STA. 409+50 TO STA. 426+14 & STA. 536+40 TO STA. 538+55 | | | |
| PROJECT NO: 60275749 CAD DWG FILE: CZ-DUR-039 DESIGNED BY: KPR DRAWN BY: KPR DEPT CHECK: GRS PROJ CHECK: RMB DATE: APRIL 2018 SCALE: AS NOTED | | | |
|  | | | |

