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April 3, 2025

Co3197 – Colchester HES NH 5600(14) C/2 Re-Ad

ADDENDUM #3

Bidders:

Changes have been made to the documents located on the Bid Opportunity website as noted below:

REVISED:

- Invitation for Bids has been revised to extend Bid Opening to April 11, 2025.
- The Proposal has been revised to update the schedule of items.
- Plan sheets 3, 8, 11, 63-65, 101, 104, 187-189, 228, 248, 304, 306, 307, 319-320, 332 and 339.
- CR-160 has been updated, replacing pages 164-169; contractors should ensure that the newest form is included.

ADDED: Special Specification for Remove and Reset Private Sign Assembly.

DELETED: None.

VTrans Mission and Vision

Through excellent customer service, provide for the safe and efficient movement of people and goods.
A safe, reliable, and multimodal transportation system that grows the economy, is affordable to use and



operate, and serves vulnerable populations.



VERMONT AGENCY OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION

Disadvantaged Business Enterprise Utilization

The Disadvantaged Business Enterprise (DBE) program is designed to ensure equal opportunity in transportation contracting markets and to address the effects of discrimination in transportation contracting. The program establishes a flexible 10 percent aspirational goal at the national level for the participation of disadvantaged business enterprises, including small firms owned and controlled by women and minorities. The detailed goal setting methodology and current overall DBE goal may be viewed on the VTrans website at: <http://vtrans.vermont.gov/civil-rights/doing-business/dbe-center/program-goals> . VTrans is a recipient of funds from USDOT and is implementing the following bidding procedure to assure that all such firms are offered the maximum opportunity to participate in the performance of subcontracts financed in whole or in part with federal funds.

A. Definitions

As used in this supplemental specification, the following terms shall have the following meaning:

1. **Disadvantaged Business Enterprise, (DBE)**, means a small business concern:
 - (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individuals, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individuals,
 - (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it, and
 - (c) is certified by the Vermont Agency of Transportation as being owned and controlled by socially and economically disadvantaged individuals.
2. **Socially and Economically Disadvantaged Individuals** means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is:
 - (1) Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis.
 - (2) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;
 - (ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - (iii) "Native Americans," which includes persons who are American Indians,

Eskimos, Aleuts, or Native Hawaiians;

- (iv) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - (v) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
 - (vi) Women;
 - (vii) Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration (SBA), at such time as the SBA designation becomes effective.
3. **Disadvantaged Business Enterprise Participation Schedule, to be submitted if a DBE contract goal has been set for this project.** It is a schedule completed by the Bidder. Each bidder must report their participation, or lack thereof, by completing Form CR-161 and Form CR-162 through the bid submission process on iCXWeb, which can be accessed using the following link: <https://vtrans.exevision.com/icx/Index.aspx> listing the disadvantaged firm(s), the name(s) and item number of the work to be subcontracted to the DBE, contract unit price for the item(s), and the actual agreed total price for which the DBE will perform said work on this project.
5. **Specific Contract Disadvantaged Business Enterprise Goal,** means the percentage of the Bidder's total contract bid amount to be subcontracted to contractors, suppliers, consultants, etc. owned and controlled by socially and economically disadvantaged individuals that are currently certified and in good standing in the VTrans DBE Program.
6. **Good Faith Solicitation Effort,** means the Bidder's degree of effort to meet the specific contract DBE goals, including but not limited to the following:
- (a) whether the Bidder attended any pre-solicitation or pre-bid meeting that was scheduled by the Agency to inform DBEs of the contracting and subcontracting opportunities;
 - (b) whether the Bidder advertised in general circulation, trade association, and other media readily available to DBEs of subcontracting opportunities;
 - (c) whether the Bidder provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited in sufficient time (at a minimum one (1) week in advance of the bid opening date) to allow DBEs to participate effectively;

- (d) whether the Bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether DBEs were interested;
- (e) whether the Bidder selected portions of the work to be performed by DBEs to increase the likelihood of meeting the DBE goals (including where appropriate, breaking down contracts into economically feasible units to facilitate DBE participation);
- (f) whether the Bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
- (g) whether the Bidder negotiated in good faith with interested DBEs, and did not reject DBEs as unqualified without sound reasons based on a thorough investigation of the DBE's capabilities;
- (h) whether the Bidder made efforts to assist interested DBEs in obtaining bonding, lines of credit or insurance required by the Agency of Bidder;
- (i) whether the Bidder effectively used the services of available community organizations, contractor's groups, local, state and federal business assistance offices, and other organizations that provide assistance in the recruitment and placement of DBEs. Bidders will be expected to solicit outside the State of Vermont for available, qualified DBE subcontractors; and
- (j) whether the Bidder provided proof of the unavailability of DBEs in accordance with the Disadvantaged Business Enterprise Unavailability Certification.

7. **Responsive Bid** means a bid which is responsive to Standard Agency Specifications and Procedures.

B. Specific Contract DBE Goal

The specific contract DBE goal for this project shall be the percentage specified in the Project Special Provisions. This percentage shall reflect the actual dollar amount to be paid to the DBE(s) by the Contractor.

C. Bid Submission

Each bidder, must submit the following documents with the proposal:

1. A completed Disadvantaged Business Enterprise Participation Schedule, (CR-161) listing the qualified DBEs with which the Bidder intends to contract for the performance of portions of the work under the Contract, specifying the agreed price to be paid to each DBE for said work, identifying in detail the contract items or parts thereof to be performed by each such DBE, contract unit prices, total prices and other information required by the Schedule. No work shall be included in the Schedule which the Bidder has reason to believe will be performed by the prime contractor, or that the listed DBE will subcontract, at any

- tier, to a non-DBE; or
2. In the event the work listed on the Disadvantaged Business Enterprise Participation Schedule is not sufficient to fulfill the Specific Contract DBE Goal the Bidder must submit both the Disadvantaged Business Enterprise Participation Schedule (CR-161) and the Disadvantaged Business Enterprise Unavailability Certification (CR-162) listing the DBEs contacted by the Bidder, the items for which prices were solicited, and the reason the DBEs were not used.
 3. The purpose of submitting the above documents is to show the Bidder's intent to:
 - a. Achieve the Specific Contract DBE Contract Goal; or
 - b. Partially achieve the Specific Contract DBE Goal, due to insufficient availability of DBEs; or
 - c. Not achieve the Specific Contract DBE Goal, due to unavailability of qualified DBEs.

In the event that the Bidder shows intent to either not achieve the specified DBE goal, or partially achieve the specified DBE goal, the Agency's evaluation of the bidder's good faith efforts, as required by Section D.2. of this specification, will focus only on those efforts made prior to bid opening. No good faith efforts conducted after the bid opening will be considered adequate to fulfill these bid submission requirements. Required bid submission information provided on the Disadvantaged Business Enterprise Participation Schedule and the Disadvantaged Business Enterprise Unavailability Certification will be used in determining the lowest responsive bidder. **Failure to provide Contract DBE participation information on these forms will result in the bid being declared informal.**

D. Award of the Contract

The Vermont Agency of Transportation reserves the right to reject all bids. The award of the contract will be to the lowest bidder responsive to the following criteria:

1. If the low Bidder fulfills Bid Submission requirements and meets or exceeds the specific contract DBE goals, the Agency considers the amount of the bid to be reasonable, and all other pre-award criteria are met, such a bidder will be successful Bidder.
2. If the apparent low bidder does not meet the DBE contract goal and the Agency considers the amount of the bid to be reasonable, such a bidder will be the successful bidder if he or she can show good faith efforts to meet the contract goals. Documentation supporting a Bidder's good faith efforts must be presented at the time of bid with the following information:
 - a. A written explanation of the efforts made by the low Bidder to meet the requirements of the Project Special Provisions Notice to Bidders – Disadvantaged Business Enterprises Requirements. Each of the items (a) through (j) must be addressed individually and all supporting

- documentation demonstrating the low Bidder's efforts must be included.
 - b. A written explanation of other efforts made, or methods used to encourage DBE participation on the project. Documentation that verifies these efforts must also be included.
- 3. If the low Bidder cannot satisfy the Agency that good faith efforts have been made, then the bid will be rejected, and second low Bidder will be evaluated in the same manner. This procedure will continue, evaluating bids in ascending order, until either the contract DBE goal is attained or good faith efforts can be verified. The first bid meeting these criteria will be accepted, provided the total bid amount is considered reasonable by the Agency.
- 4. Final determination of the low Bidder will not be made until the Agency is satisfied that all provisions of these Supplemental Specifications have been met.
- 5. Prior to the award of the contract to the low Bidder the participation of all listed DBEs will be verified and evaluated in accordance with the Agency's pre-award audit criteria.

E. Changing or Substituting DBE Firms After Award and Verification of Payment

Any substitution of named DBE firms must be approved in writing by the VTrans Office of Civil Rights and Labor Compliance. If the Contractor alters the list of DBE firms scheduled to participate in the contract and/or the specific items that the DBE was scheduled to perform, the Contractor must be able to demonstrate that the listed DBE is unable to perform because of default or over-extension on other jobs or provide other similar justification. There must be a solid basis for change. It is not intended that a Contractor's ability to negotiate a more advantageous contract with another subcontractor be considered a valid basis for change.

If a listed DBE subcontractor is unable, following award to the low Bidder, to perform the items listed in the participation schedule, the Contractor must replace the listed DBE with another DBE subcontract of equal value or provide the Agency with documentation of good faith solicitation efforts as detailed in Part A 6(a) through (j) of this Supplemental Specification and explain why a substitute DBE could not be located. When a Contractor fulfills this requirement, a waiver will be issued by the Agency releasing the contractor from the DBE participation obligation.

Contractors are required to provide the Agency with copies of project work invoice payments to DBE subcontractors. These invoices shall be submitted to the Agency as payments are made and will be used to determine the final amount of project DBE participation, and whether Contract sanctions for non-compliance will be considered.

F. Sanctions for Non-Compliance

Each Contractor or subcontractor who fails to carry out the requirements set forth in these Specifications will be subject to a breach of contract and, after giving notification to the Federal Highway Administration; the Agency may terminate the Contract or subcontract or initiate any other remedy which it considers to be appropriate.

The standard penalty for failing to comply with this Supplemental Specification for DBE Utilization will be as follows:

An amount of money equal to the amount in which the Contractor fails to achieve the specific contract goal may be deducted from the final estimate and/or biweekly progress payments as the penalty for non-compliance with this specification.

SECTION 675-0002 – REMOVE AND RESET PRIVATE SIGN ASSEMBLY

675-0002.01 DESCRIPTION. This work shall consist of removing and resetting private sign assemblies and appurtenances, including posts and lighting, at the locations indicated on the Plans and as directed by the Engineer.

The work under this section shall be performed in accordance with these provisions, the Plans, Section 541, Section 625, Section 675, Section 678, and Section 679.

675-0002.02 MATERIALS. Materials shall meet the requirements of the following subsections:

Anchor Bolts for Signals, Lighting, and Overhead Signs.....	714.09
Electrical Conduit	752.06
Junction Boxes	752.09(a)
Grounding Electrodes.....	752.11
Highway Illumination Conductor Cable.....	753.06

Existing materials shall be re-used. If existing materials are not re-usable as determined by the Engineer, they shall be replaced in-kind using new, commercially available materials that match the existing materials as closely as possible.

Concrete for sign foundations, if deemed necessary, shall conform to the requirements of Section 541 for Concrete, Class B.

Any incidentals necessary to provide lighting to the sign shall conform to the requirements of Section 625, Section 678, and Section 679.

Backfill shall be in situ material.

675-0002.03 CONSTRUCTION REQUIREMENTS. Unless otherwise shown on the Plans, prior to performing the work, the Contractor shall coordinate with the property owner and the Engineer to determine an acceptable location in which to reset the sign assembly following construction, as well as a temporary location to place the sign assembly during construction, if needed.

Sign materials to be re-used shall be removed and handled in a manner that will prevent damage. Signs designated for re-use that are damaged by the Contractor’s operations shall be repaired or replaced at no additional cost to the Agency.

Foundations shall be removed in their entirety. Holes resulting from the removal of sign posts and foundations shall be backfilled with suitable material and the area restored to a condition similar to that of the adjacent area.

Existing electric services shall be capped and abandoned unless otherwise shown on the Plans.

Special Provisions Part II – Special Specifications

The Contractor shall construct the foundation for the private sign to be reset matching the size and depth of the foundation of the sign at its existing location. The Contractor shall supply new hardware and accessories as needed for resetting and anchoring of the existing sign.

Existing post conditions are indicated on the Plans. Posts found in satisfactory condition shall be removed and re-installed in a manner consistent with the original placement of the posts or as directed by the Engineer. Posts shall be erected plumb.

The Contractor shall provide necessary electrical connections including new conduit, junction boxes, conductors and any other incidentals required to provide lighting to the sign in working order. Relocated signs and lighting shall be mounted in a manner consistent with the original configuration. Relocated lighting shall be in working order as acceptable to the Engineer.

675-0002.04 METHOD OF MEASUREMENT. The quantity of Remove Private Sign Assembly, Non-Lighted and Remove Private Sign Assembly, Lighted to be measured for payment will be the number or private sign assemblies removed in the complete and accepted work. A sign assembly shall consist of a single set of posts, all signs attached to those posts, all lighting elements attached to or associated with those signs, and any foundation attached to the posts.

The quantity of Remove and Reset Private Sign Assembly, Non-Lighted and Remove and Reset Private Sign Assembly, Lighted to be measured for payment will be the number of private sign assemblies removed and reset in the complete and accepted work.

675-0002.05 BASIS OF PAYMENT. The accepted quantity of Remove Private Sign Assembly, Non-Lighted and Remove Private Sign Assembly, Lighted will be paid for at the Contract unit price per each. Payment will be full compensation for removing the signs and posts; abandoning necessary electrical components; performing any required foundation excavation and backfilling; and for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

The accepted quantity of Remove and Reset Private Sign Assembly, Non-Lighted and Remove and Reset Private Sign Assembly, Lighted will be paid for at the Contract unit price per each. Payment will be full compensation for removing the signs and posts; performing any required excavation; transporting, handling, and temporarily storing the sign assembly components; resetting in a temporary location during construction as needed; providing new hardware components, accessories, concrete, and other materials as needed; furnishing and installing any electrical components needed for lighting elements; disposing of any materials deemed unusable; resetting the sign assembly in the location indicated on the Plans or as directed by the Engineer; performing any required foundation design, excavation, construction, and backfilling; and for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

Special Provisions Part II – Special Specifications

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
675.5000001 Remove Private Sign Assembly, Non-Lighted	Each
675.5000002 Remove Private Sign Assembly, Lighted	Each
675.6000001 Remove and Reset Private Sign Assembly, Non-Lighted	Each
675.6000002 Remove and Reset Private Sign Assembly, Lighted	Each

GENERAL NOTES

GENERAL

1. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. THE PAY LIMIT SPLIT AT STA.18+51.28 INDICATES THE LOCATION WHERE FEDERAL FUNDING IS BOUND. THIS LIMIT IS FOR VTRANS STAFF ADMINISTRATION ONLY, AND HAS NO BEARING ON BID ITEMS OR PRICES. THE FOLLOWING ESTIMATE CATEGORIES APPLY TO THE FOLLOWING LOCATIONS:

LOCATION	CATEGORIES
STA. 00+00.00 TO 18+51.28	1011, 1031, 1041, 1051, 1999
STA. 18+51.28 TO 55+62.89	2011, 2031, 2041, 2051, 2999

3. THE ENGINEER'S OFFICE SHALL HAVE A MINIMUM AREA OF 1300 SQUARE FEET AND SPACE CAPABLE OF HOSTING PERIODIC CONSTRUCTION MEETINGS.

WORK SEQUENCING AND TIMING

4. THIS PROJECT CONSISTS OF MANY ROADWAY ACTIVITIES THAT WILL REQUIRE NIGHTTIME WORK. CERTAIN WORK WITHIN THE ROADWAY WILL BE ALLOWED DURING THE DAYTIME. THOSE ACTIVITIES WILL BE RESTRICTED TO THOSE THAT CAN BE ACCOMPLISHED WITH ONE TRAVEL LANE CLOSED IN EACH DIRECTION ALONG US ROUTES 2/7. AT ANYTIME DURING CONSTRUCTION, THE ENGINEER WILL HAVE THE DISCRETION OF CEASING DAYTIME WORK ACTIVITIES AND REQUIRE PARTICULAR ACTIVITIES TO SHIFT TO NIGHTTIME WORK. SEE TRAFFIC CONTROL GENERAL NOTES FOR MORE INFORMATION.
5. DUE TO THE SCHEDULE OF THE WINOOSKI MAIN STREET REVITALIZATION PROJECT, THE CONTRACTOR SHALL COMPLETE ALL EXCAVATION, CONDUIT INSTALLATION, AND NECESSARY BACKFILL FOR THE TIGAN STREET TRAFFIC SIGNAL PRIOR TO ANY OTHER ACTIVITY COMMENCING.
6. OPENING OF FINAL INTERCHANGE CONFIGURATION TO TRAFFIC SHALL OCCUR NEAR THE END OF NIGHTTIME HOURS, SO THAT IN THE EVENT ADJUSTMENTS ARE REQUIRED, TRAFFIC WOULD BE MINIMAL. THIS INCLUDES LANE OPENINGS AND THE ACTIVATION OF THE NEW TRAFFIC SIGNAL SYSTEMS AND STREET LIGHTING. ONCE TRAFFIC HAS BEEN SWITCHED TO THE NEW CROSSOVER PATTERNS, TRAFFIC SHALL NOT BE SWITCHED BACK TO THE ORIGINAL CONFIGURATION.
7. ALL CONSTRUCTION EQUIPMENT SHALL BE MOVED OUTSIDE OF THE CLEAR ZONE OR PROTECTED BY APPROVED BARRIERS DURING NON-WORKING HOURS.
8. BLASTING OF LEDGE SHALL OCCUR ONLY DURING DAYTIME HOURS.

TRAFFIC SIGNALS

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEVEN SIGNALIZED INTERSECTIONS IN THE PROJECT CORRIDOR FOR THE DURATION OF THE PROJECT, BEGINNING WITH THE FIRST ACTIVITY THAT PHYSICALLY AFFECTS ANY OF THE EXISTING TRAFFIC SIGNAL EQUIPMENT RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO: RETIMING, MAINTAINING TIME-BASED COORDINATION, AND MAINTAINING IN GOOD WORKING CONDITION ALL PHYSICAL SIGNAL EQUIPMENT INSIDE AND OUTSIDE THE CABINET, AND SHALL INCLUDE TIME AND MATERIALS IN THE EVENT OF EQUIPMENT FAILURE FOR REPLACEMENT. PAYMENT WILL BE INCIDENTAL TO ALL OTHER TRAFFIC SIGNAL PAY ITEMS. THE CONTRACTOR RELINQUISHES RESPONSIBILITY AFTER THE SUCCESSFUL COMPLETION OF THE 30-DAY TEST PERIOD OF THE FINAL TRAFFIC SIGNAL.
10. A MOVISION SYSTEM EXISTS AT THREE SIGNALIZED INTERSECTIONS IN THE CORRIDOR (THE TWO RAMP TERMINALS AND AT MOUNTAIN VIEW DRIVE). IT IS EXPECTED THAT THIS SYSTEM REMAIN OPERATIONAL UNTIL THE NEW TRAFFIC SIGNAL SYSTEMS ARE READY FOR INSTALLATION. THE CONTRACTOR MAY REQUEST REMOTE ACCESS TO THIS SYSTEM TO ASSIST IN TRAFFIC SIGNAL MAINTENANCE AND MONITORING AS INDICATED IN NOTE 9.
11. AT ANY SINGLE INTERSECTION, THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE DEACTIVATED AND REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL INFRASTRUCTURE IS INSTALLED AND OPERATIONAL UNLESS A TEMPORARY SIGNAL SYSTEM IS INSTALLED. TRAFFIC SHALL NOT BE SWITCHED TO THEIR PROPOSED PATTERNS UNTIL THE PROPOSED TRAFFIC SIGNAL INFRASTRUCTURE IS INSTALLED AND OPERATIONAL.

TRAFFIC MANAGEMENT & MAINTENANCE

12. THIS PROJECT CLASSIFIES AS A 'SIGNIFICANT PROJECT' ACCORDING TO THE VERMONT AGENCY OF TRANSPORTATION WORK ZONE SAFETY & MOBILITY POLICY AND GUIDANCE, FEBRUARY 2021. AS SUCH, A TRANSPORTATION MANAGEMENT PLAN (TMP) WAS DEVELOPED TO STUDY MITIGATION OF TRAFFIC ISSUES DURING CONSTRUCTION. THE TMP CONTAINS TRAFFIC MOBILITY SCHEMES AND TRAFFIC ZONE IMPACT MANAGEMENT STRATEGIES TO ACHIEVE THIS GOAL. THE TMP IS PROVIDED AS INFORMATIONAL DOCUMENTATION ONLY BUT CAN ASSIST THE CONTRACTOR TO DEVELOP ITS TRAFFIC CONTROL PLAN.
13. FOR ANY DISCREPANCIES OR CONTRADICTIONS BETWEEN THE TRANSPORTATION MANAGEMENT PLAN (TMP) AND THE PLANS, THE PLANS WILL PREVAIL.
14. IN THE EVENT OF WINTER SHUTDOWNS, SIDEWALKS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE TEMPORARILY PAVED WITH 2" OF TYPE IVS BITUMINOUS CONCRETE PAVEMENT OR AS APPROVED BY THE ENGINEER. SIDEWALKS SHALL BE PAVED IN A MANNER THAT PROVIDES POSITIVE DRAINAGE, AND SHALL BE FREE OF SAGS OR LOW POINTS THAT CAN CAUSE SLIPPERY CONDITIONS IN FREEZING TEMPERATURES. CURBING REPLACED DURING CONSTRUCTION SHALL BE REPLACED WITH TEMPORARY BITUMINOUS CURB, UTILIZING HAND OR MACHINE METHODS, TO THE SATISFACTION OF THE ENGINEER. THE CURB HEIGHT WILL VARY DEPENDING UPON LOCATION. THESE ACTIVITIES WILL BE PAID FOR INCIDENTAL TO ALL OTHER ITEMS.
15. THE CONTRACTOR SHALL SUBMIT ITS OWN SITE-SPECIFIC CONSTRUCTION PHASING PLAN. THE PHASING PLAN SHALL BE DEVELOPED TO BE CONGRUENT WITH THE PROJECT SCHEDULE AND, IN ADDITION TO THE REQUIREMENTS IDENTIFIED WITH SECTION 641 OF THE STANDARD SPECIFICATION, SHALL INCLUDE THE FOLLOWING INFORMATION:
- A. NARRATIVE OF THE CONSTRUCTION PHASES DESCRIBING THE SPECIFIC ELEMENTS OF CONSTRUCTION THAT WILL BE INCLUDED IN EACH PHASE;
- B. APPROXIMATE DATES THAT EACH PHASE WILL HAVE ACTIVE FIELD CONSTRUCTION;
- C. SUMMARY OF ANTICIPATED TRAFFIC IMPACTS FOR EACH PHASE OF WORK.

EXCAVATION

16. CONSTRUCTION VIBRATION MONITORING SHALL OCCUR ON BOTH INTERSTATE BRIDGES AND ANY STRUCTURE OR BUILDING WITHIN 500 FEET OF ALL ANTICIPATED BLASTING AREAS. SEE SECTION 250 FOR MORE INFORMATION.
17. THE PROJECT WILL INVOLVE A NUMBER OF TRENCHES TO BE DUG THROUGH EXISTING ROADWAY, SIDEWALK, DRIVEWAYS, PARKING AREAS AND LAWNS FOR WATER, DRAINAGE, DUCT BANK, AND ELECTRICAL CONDUIT INSTALLATIONS. THESE TRENCHES ARE ANTICIPATED TO OCCUR PRIOR TO FULL DEPTH ROADWAY RECONSTRUCTION ACTIVITIES. TRENCHES SHALL BE BACKFILLED OR PROPERLY PROTECTED AT THE END OF EACH WORK DAY TO ENSURE SAFE MOTORIST AND PEDESTRIAN TRAVEL THROUGH THE WORK ZONE. BACKFILL MATERIALS INCLUDING TEMPORARY SUBBASE SHALL BE INCIDENTAL TO OTHER CONTRACT ITEMS.
18. THE CONTRACTOR MAY SUBSTITUTE SUBBASE OF DENSE GRADED CRUSHED STONE FOR SAND BORROW IN THE ROAD SUBGRADE, EXCEPT FOR 1 FOOT ABOVE, BELOW, AND BESIDE ANY NATURAL GAS LINE. IF SUBBASE OF DENSE GRADED CRUSHED STONE IS USED IN LIEU OF SAND BORROW, THE CONTRACTOR SHALL PLACE GEOTEXTILE MEETING THE REQUIREMENTS OF SECTION 649 OF THE SPECIFICATIONS BETWEEN THE SUBGRADE AND THE SUBBASE MATERIAL. ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING THE GEOTEXTILE FABRIC SHALL BE INCIDENTAL TO CONTRACT ITEM 203.3100 - SAND BORROW.

ENVIRONMENTAL

19. DUE TO CHLORIDE IMPAIRMENT OF SUNNYSIDE BROOK, THE USE OF CALCIUM CHLORIDE FOR DUST CONTROL OR OTHER CHLORIDES FOR ALL CONSTRUCTION ACTIVITIES SHALL BE PROHIBITED.
20. TEMPORARY CONSTRUCTION DEWATERING MAY BE REQUIRED TO INSTALL UTILITIES, DRAINAGE AND STORMWATER INFRASTRUCTURE. DEWATERING CAN LIKELY BE ACCOMPLISHED BY OPEN PUMPING FROM SHALLOW SUMPS, TEMPORARY DITCHES, AND TRENCHES WITHIN AND AROUND THE EXCAVATION LIMITS. WATER TRAPPED BY TEMPORARY DEWATERING CONTROLS SHALL BE DISCHARGED TO SETTLING BASINS OR AN APPROVED FILTER BAG SO THAT FINE PARTICLES SUSPENDED IN THE DISCHARGE HAVE ADEQUATE TIME TO SETTLE OUT PRIOR TO DISCHARGE.

PAVEMENT

21. COARSE-MILLING TO BE COMPLETED ACCORDING TO TYPICALS OR AS NOTED OTHERWISE ON THE PLANS. THE COARSE-MILLING AND PAVING SHALL MATCH THE EXISTING CONDITIONS AT THE BEGINNING AND END OF CONSTRUCTION AREAS BY USE OF A VERTICAL MILLED JOINT, DETAILED IN MISCELLANEOUS DETAILS SHEETS.
22. TRAVEL LANES SHALL NOT HAVE A GRAVEL SURFACE FOR MORE THAN 5 CALENDAR DAYS. IF ANY PART OF A TRAVEL LANE IS PROPOSED TO BE GRAVEL FOR LONGER THAN 5 CALENDAR DAYS, THE LANE SHALL BE PAVED, USING THE 406.0410 PAY ITEM, AT A MINIMUM THICKNESS OF TWO INCHES OR AT THE DISCRETION OF THE ENGINEER.

DRAINAGE

23. GRATES FOR DRAINAGE STRUCTURES CALLED FOR REHAB HAVE ALREADY BEEN PROCURED BY THE AGENCY OF TRANSPORTATION. THOSE GRATES CAN BE ACQUIRED BY THE CONTRACTOR BY COORDINATING WITH THE ENGINEER AND CONTACTING THE DISTRICT 5 OFFICE IN COLCHESTER AT (802) 655-1580 AT LEAST TWO BUSINESS DAYS IN ADVANCE.

LANDSCAPING

24. IN THE EVENT THAT CERTAIN CULTIVARS OF TREES AND SHRUBS ARE UNAVAILABLE FOR PROCUREMENT IN A REASONABLE TIMEFRAME AND FROM A REASONABLE LOCATION OR NURSERY, THE CONTRACTOR SHALL SUBMIT SUBSTITUTIONS FOR APPROVAL BY BOTH THE ENGINEER AND THE VTRANS LANDSCAPE ARCHITECT.

UTILITIES

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF WORK. IN THE EVENT OF DAMAGE TO THESE SYSTEMS, THE REPAIRS OR REPLACEMENT SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AS APPROVED BY THE ENGINEER.
26. BLASTING OF LEDGE IN CLOSE PROXIMITY OF EXISTING WATER LINES IS ANTICIPATED. CHAMPLAIN WATER DISTRICT SHALL BE CONTACTED PRIOR TO ANY PLANNED BLASTING ACTIVITY WITHIN 50 FEET OF AN EXISTING WATER LINE. BLASTING WITHIN 500 FEET OF A WATER LINE DURING THE WINTER CONSTRUCTION SEASON SHALL BE PROHIBITED.

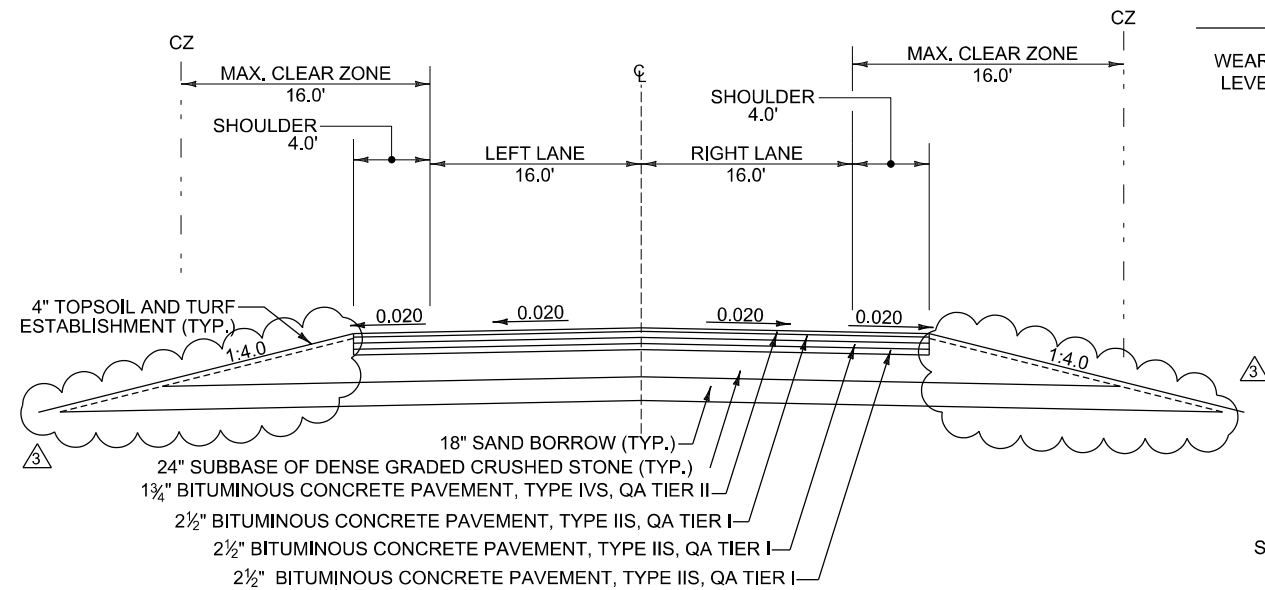
3

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	CHANGED LANGUAGE OF NOTE 9	BJT

PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(14) C/2 (Re-Ad)	
FILE NAME: gen_notes01.dgn	PLOT DATE: 4/2/2025
PROJECT LEADER: M. LACROIX	DRAWN BY: HSD
DESIGNED BY: B. TIETZE	CHECKED BY: HSD
GENERAL NOTES SHEET	SHEET 3 OF 405

TYPICAL SECTIONS

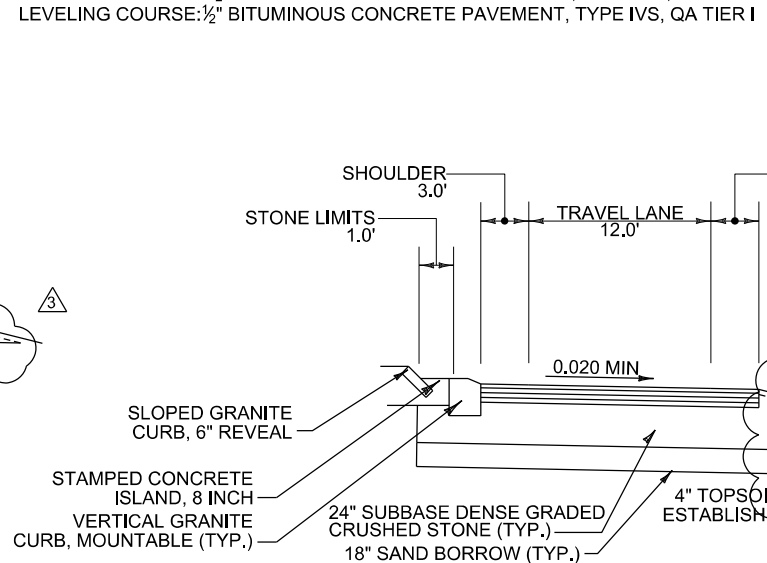
US ROUTE 7 WIDENING, SIDE ROAD WIDENING
WEARING COURSE: 1½" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS, QA TIER I
LEVELING COURSE: ½" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS, QA TIER I
INTERMEDIATE COURSE: 2 LIFTS OF 3½" BITUMINOUS CONCRETE PAVEMENT, TYPE IIS, QA TIER I



INTERSTATE OFF-RAMPS SECTION
NOT TO SCALE

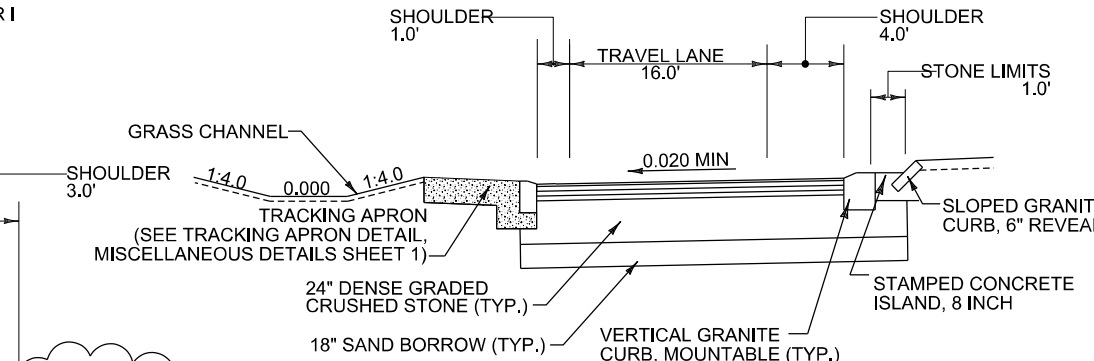
US ROUTE 7 OVERLAY
COARSE MILLING: 2"
WEARING COURSE: 1½" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS, QA TIER I
LEVELING COURSE: ½" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS, QA TIER I

SIDE ROADS OVERLAY
COARSE-MILLING: 2"
WEARING COURSE: 1½" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS, QA TIER I
LEVELING COURSE: ½" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS, QA TIER I



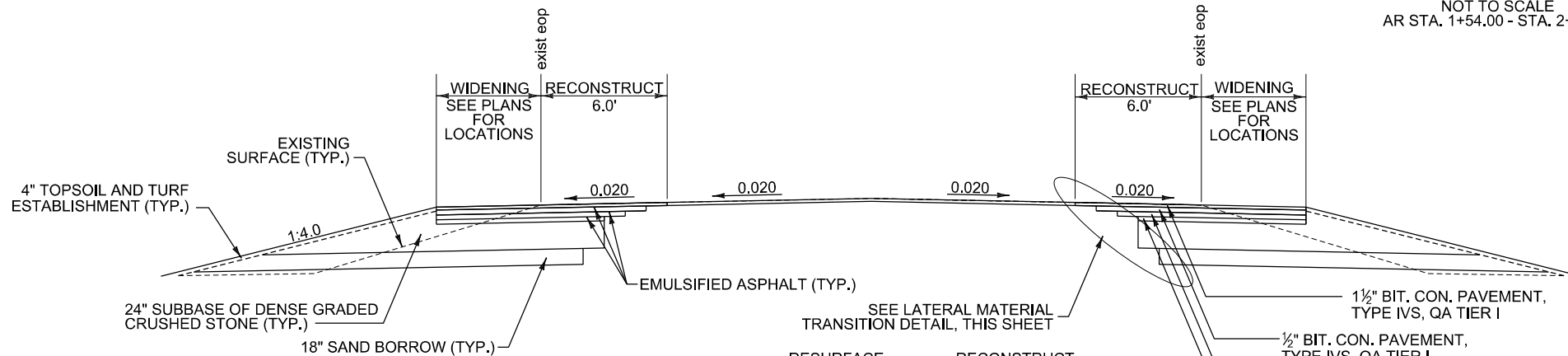
RAMP AR SECTION
NOT TO SCALE
AR STA. 1+54.00 - STA. 2+17.00

INTERSTATE OFF-RAMPS, PAVEMENT
WEARING COURSE: 1¾" BITUMINOUS CONCRETE PAVEMENT, TYPE IIIS, QA TIER II
BASE COURSE: 3 LIFTS OF 2½" BITUMINOUS CONCRETE PAVEMENT, TYPE IIS, QA TIER I
RAMPS SUBGRADE
24" SUBBASE OF DENSE GRADED CRUSHED STONE
18" SAND BORROW

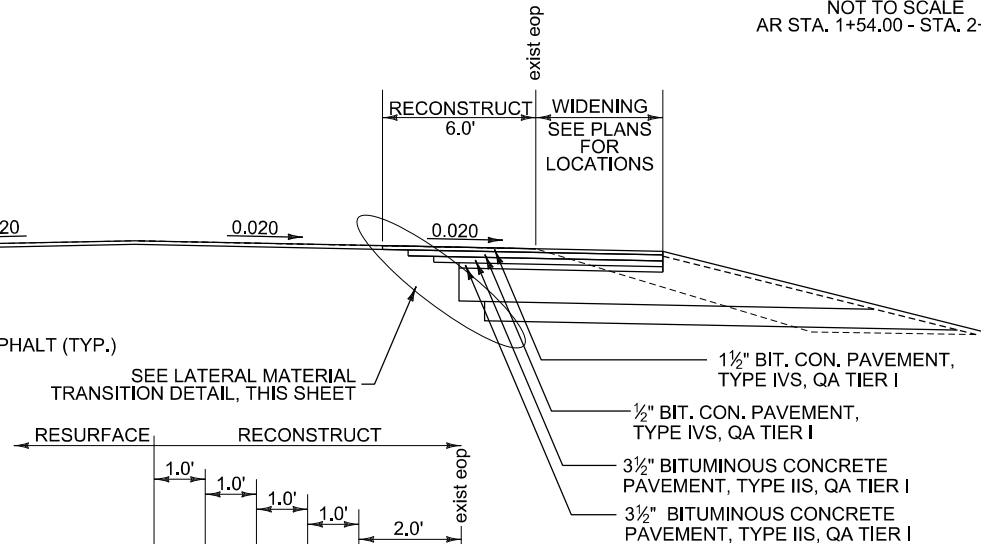


RAMP A, B, C, D SECTION

NOT TO SCALE
AL STA. 1+52.00 - STA. 2+08.00
BL STA. 0+55.00 - STA. 1+20.00
CL STA. 0+74.00 - STA. 1+33.00
DL STA. 1+75.00 - STA. 2+10.00

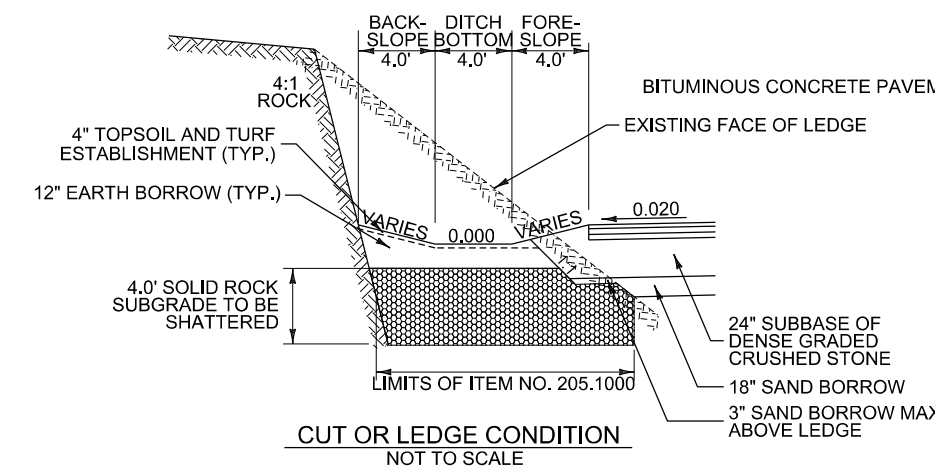


FILL CONDITION
NOT TO SCALE

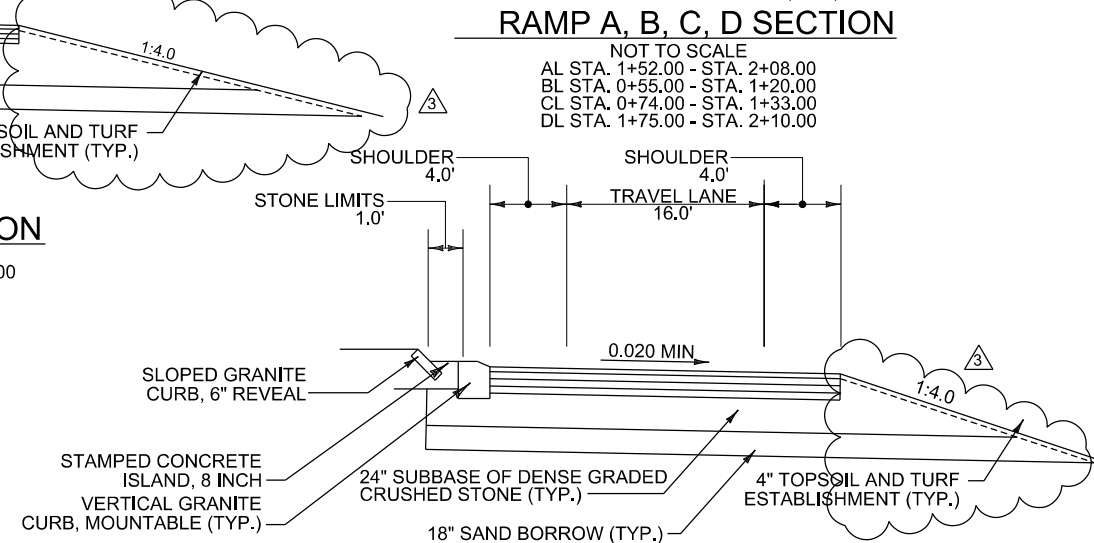


WIDENING SECTIONS

NOT TO SCALE
LOCATIONS:
- US ROUTE 7
- MT. VIEW DR.
- LOWER MT. VIEW DR.
- HERCULES DR.
- RATHE RD.
- CHAMPLAIN DR.

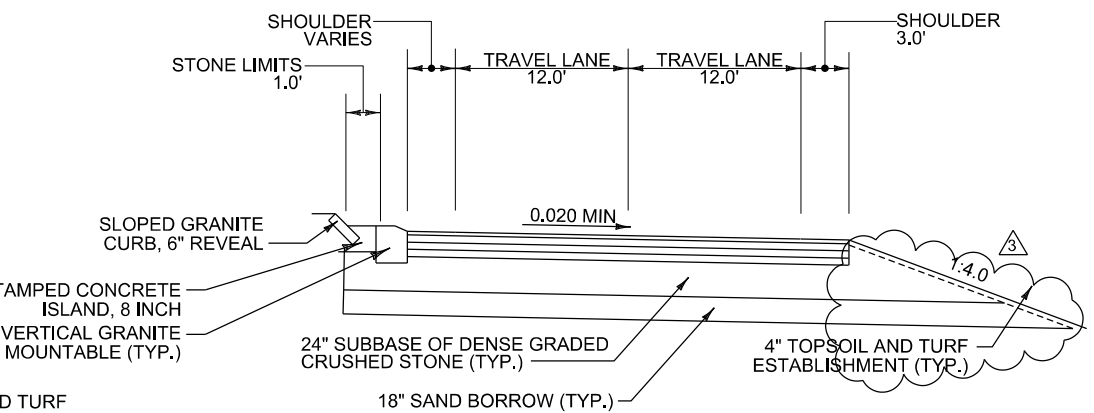


CUT OR LEDGE CONDITION
NOT TO SCALE



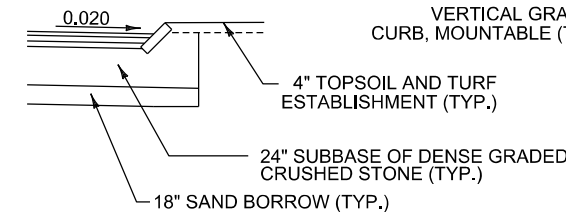
RAMP BR & CR SECTIONS

NOT TO SCALE
BR STA. 0+40.00 - STA. 0+96.00
CR STA. 1+09.00 - STA. 1+61.00



RAMP DR SECTION

NOT TO SCALE
DR STA. 1+66.00 - STA. 2+16.00

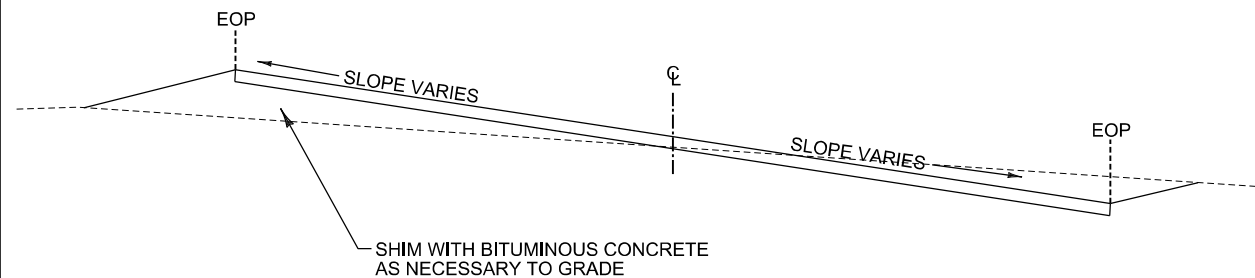


CURB AND/OR ISLAND CONDITION
NOT TO SCALE

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	ADJUSTED SUBBASE LIMITS ON RAMP TYPICALS	BJT

PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)
FILE NAME: typ04.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
TYPICAL SECTION SHEET 4
PLOT DATE: 4/2/2025
DRAWN BY: HSD
CHECKED BY: HSD
SHEET 8 OF 405

MISCELLANEOUS DETAILS

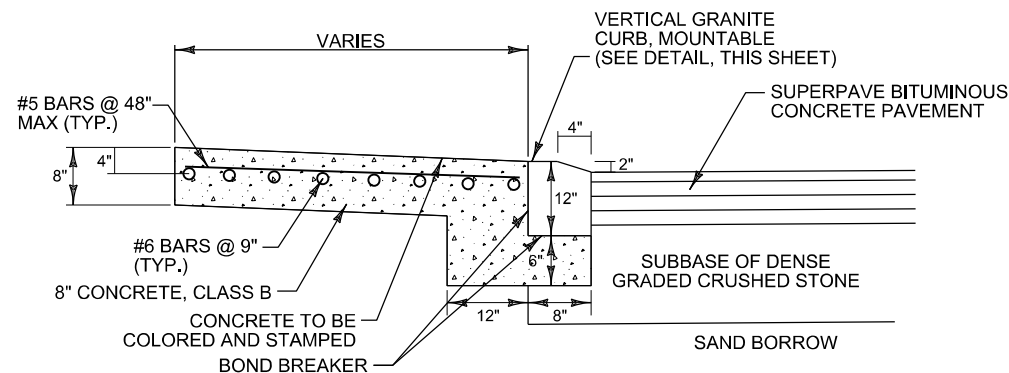


SUPERELEVATION CORRECTION

NOT TO SCALE
CURVE #5 = STA. 23+63.21 - STA. 32+54.10 (E_{max} = 2.4%)
CURVE #8 = STA. 47+79.12 - STA. 53+70.46 (E_{max} = 7.0%)

NOTES:

1. SEE BANKING DIAGRAM FOR MORE INFORMATION.

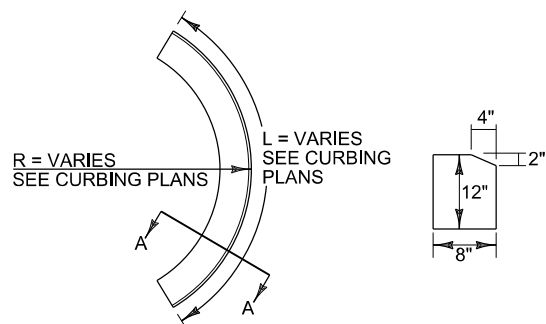


NOTES:

1. TO BE PAID FOR UNDER CONTRACT ITEM 618.4108 - STAMPED CONCRETE ISLAND, 8 INCH.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED, SHALL BE PAID UNDER CONTRACT ITEM 507.1100
3. THE COLOR OF THE CONCRETE SHALL BE IDENTICAL TO SCOFIELD SOLACHROME "COOL TAUPE." THE ENGINEER SHALL APPROVE THE COLOR PRIOR TO THE CASTING OF THE TRACKING APRONS.
4. THE PATTERN OF THE SURFACE SHALL BE IDENTICAL TO REDI-ROCK "LEDGESTONE." THE ENGINEER SHALL APPROVE THE PATTERN PRIOR TO THE CASTING OF THE TRACKING APRONS.

TRACKING APRON DETAIL

NOT TO SCALE



PLAN
NOT TO SCALE

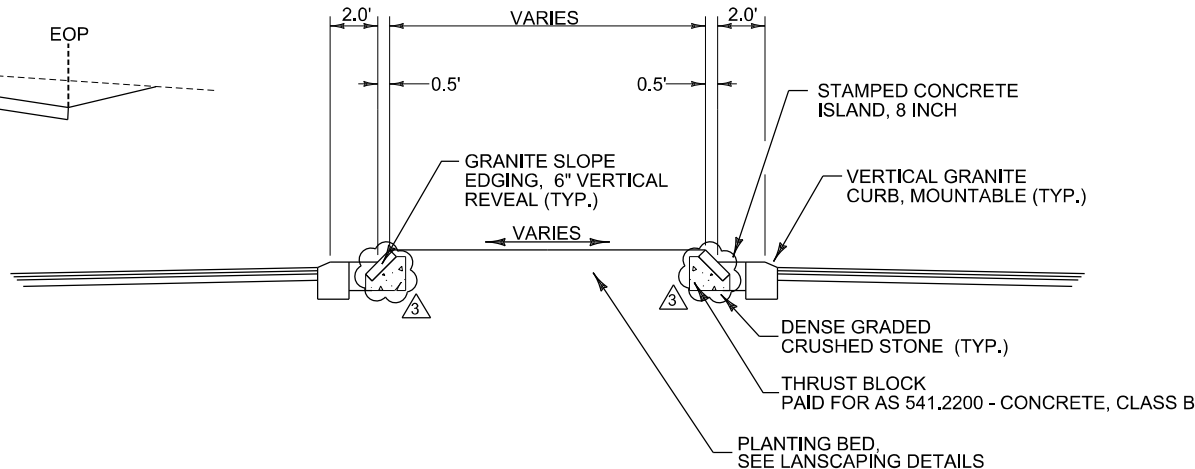
SECTION A-A
NOT TO SCALE

VERTICAL GRANITE CURB, MOUNTABLE DETAIL

NOT TO SCALE

NOTES:

1. CURBING SHALL BE PAID FOR UNDER CONTRACT ITEM 616.2150 - VERTICAL GRANITE CURB, MOUNTABLE

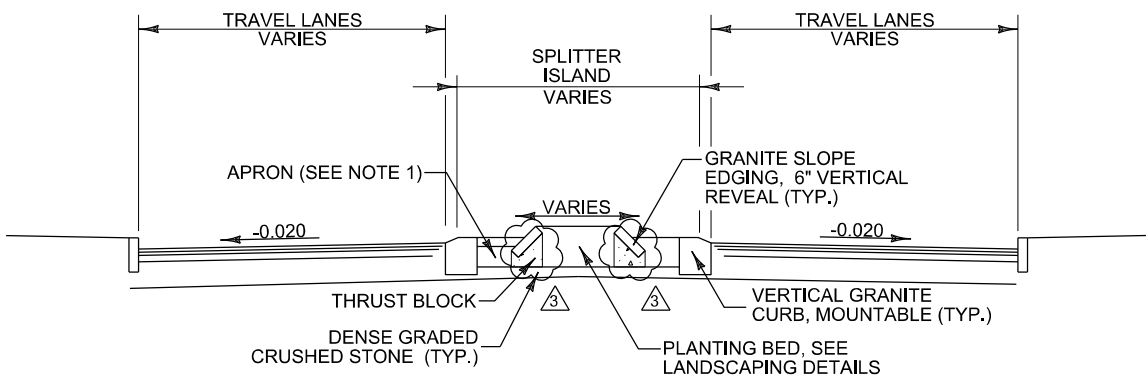


TERMINAL ISLAND DETAIL

NOT TO SCALE

NOTES:

1. CONCRETE FOR THE APPROACH ISLANDS SHALL BE PAID FOR UNDER ITEM NO. 618.4108 - STAMPED CONCRETE ISLAND, 8 INCH.
2. THE COLOR OF THE CONCRETE SHALL BE IDENTICAL TO SCOFIELD SOLACHROME "COOL TAUPE." THE ENGINEER SHALL APPROVE THE COLOR PRIOR TO THE CASTING OF THE TERMINAL ISLANDS.
3. THE PATTERN OF THE SURFACE SHALL BE IDENTICAL TO REDI-ROCK "LEDGESTONE." THE ENGINEER SHALL APPROVE THE PATTERN PRIOR TO THE CASTING OF THE TERMINAL ISLANDS.

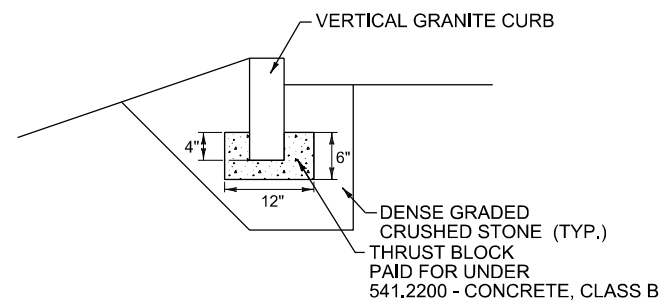


SPLITTER ISLAND APPROACH SECTION

NOT TO SCALE

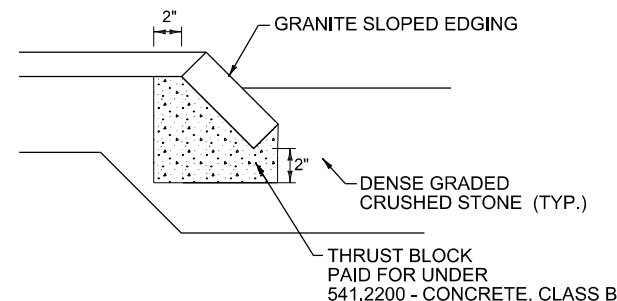
NOTES:

1. CONCRETE FOR THE APPROACH ISLANDS SHALL BE PAID FOR UNDER ITEM NO. 618.4108 - STAMPED CONCRETE ISLAND, 8 INCH.
2. THE COLOR OF THE CONCRETE SHALL BE IDENTICAL TO SCOFIELD SOLACHROME "COOL TAUPE." THE ENGINEER SHALL APPROVE THE COLOR PRIOR TO THE CASTING OF THE SPLITTER ISLANDS.
3. THE PATTERN OF THE SURFACE SHALL BE IDENTICAL TO REDI-ROCK "LEDGESTONE." THE ENGINEER SHALL APPROVE THE PATTERN PRIOR TO THE CASTING OF THE SPLITTER ISLANDS.



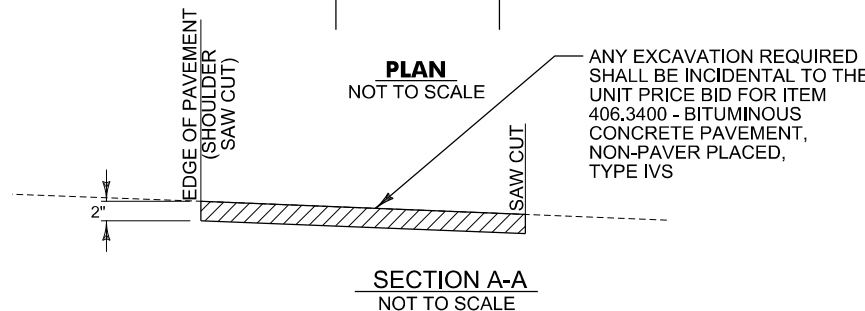
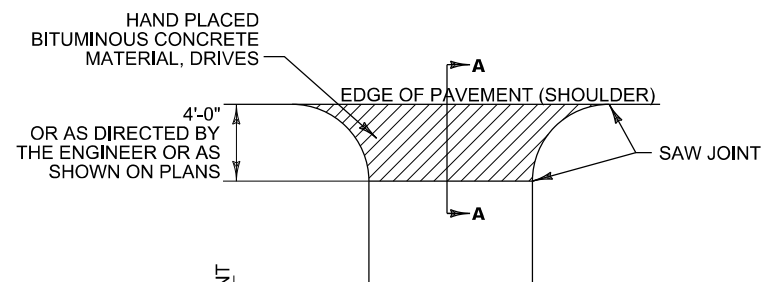
VERTICAL GRANITE CURB THRUST BLOCK DETAIL

NOT TO SCALE



SLOPED GRANITE EDGING THRUST BLOCK DETAIL

NOT TO SCALE



SECTION A-A
NOT TO SCALE

AREAS FOR 406.3400 - BITUMINOUS CONCRETE PAVEMENT, NON-PAVER PLACED, TYPE IVS

HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES

NOT TO SCALE

PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)
FILE NAME: ms_det01.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
MISCELLANEOUS DETAIL SHEET I
PLOT DATE: 4/2/2025
DRAWN BY: HSD
CHECKED BY: HSD
SHEET II OF 405

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	ADJUSTED THRUST BLOCKS TO MATCH DETAIL	BJT

QUANTITY SHEET 3

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY	ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	1 APRIL 2025	ADDED ITEM POWER DROP STANCHION	BJT	3	1	1 APRIL 2025	ADJUSTED QUANTITY AND CHANGED MATERIAL FOR UTILITY SLEEVE	BJT
3	1	1 APRIL 2025	ROWS SHIFTED	BJT	3	1	1 APRIL 2025	UPDATED QUANTITY OF WIRED CONDUIT 2 INCH	BJT
					3	1	1 APRIL 2025	UPDATED QUANTITY OF JUNCTION BOX	BJT
					3	1	1 APRIL 2025	UPDATED QUANTITY OF SIGNAL INTERCONNECT	BJT

PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(14) C/2 (Re-Ad)	
FILE NAME: sum-q03.dgn	PLOT DATE: 4/3/2025
PROJECT LEADER: M. LACROIX	DRAWN BY: HSD
DESIGNED BY: B. TIETZE	CHECKED BY: HSD
QUANTITY SUMMARY SHEET 3	SHEET 63 OF 405

QUANTITY SHEET 4

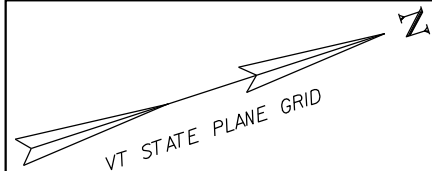
PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(14) C/2 (Re-Ad)	
FILE NAME: sum-q04.dgn	PLOT DATE: 4/3/2025
PROJECT LEADER:M. LACROIX	DRAWN BY: HSD
DESIGNED BY: B. TIETZE	CHECKED BY:HSD
QUANTITY SUMMARY SHEET 4	SHEET 64 OF 405

FILE NAME:sum-q04.dgn	PLOT DATE: 4/3/2025
PROJECT LEADER:M. LACROIX	DRAWN BY: HSD
DESIGNED BY: B. TIETZE	CHECKED BY:HSD
QUANTITY SUMMARY SHEET 4	SHEET 64 OF 405

QUANTITY SHEET 5



PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(14) C/2 (Re-Ad)	
FILE NAME: sum-q05.dgn	PLOT DATE: 4/3/2025
PROJECT LEADER:M. LACROIX	DRAWN BY: HSD
DESIGNED BY: B. TIETZE	CHECKED BY:HSD
QUANTITY SUMMARY SHEET 5	SHEET 65 OF 405



NOTES:

1. REMOVAL OF EXISTING RETAINING WALL SHALL BE PAID FOR UNDER CONTRACT PAY ITEM 203.1600 - SOLID ROCK EXCAVATION.
2. CONCRETE BUS PAD SHALL BE PAID FOR UNDER CONTRACT PAY ITEM 618.1008 - CONCRETE SIDEWALK, 8 INCH
3. REMOVAL OF EXISTING CONCRETE BARRIERS SHALL BE PAID FOR UNDER CONTRACT PAY ITEM 203.1600 - SOLID ROCK EXCAVATION.

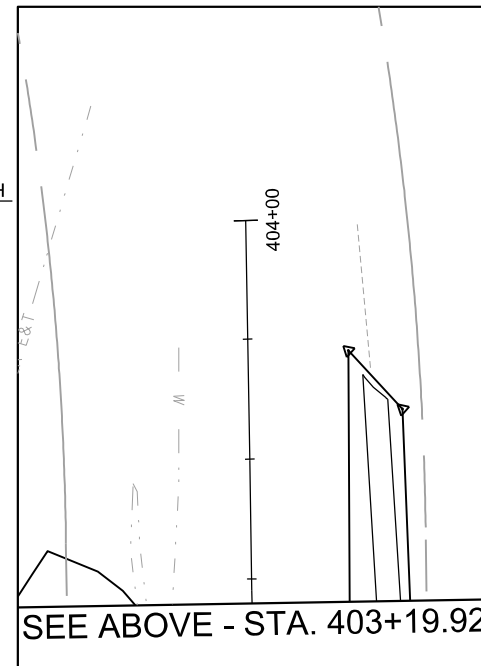
REMOVAL OF EXISTING FENCE
STA. 15+98.00 - 17+05.00, RT (107.1')
CONSTRUCT SIDEWALK RAMP TYPE 1 (SEE STD. C-3A)
STA. 402+87.51, RT
STA. 500+59.11, LT
CONSTRUCT SIDEWALK RAMP TYPE 2 (SEE STD. C-3A)
STA. 18+48.77, LT
STA. 18+48.77, RT
STA. 400+84.01, RT
CONSTRUCT SIDEWALK RAMP TYPE 6 (SEE STD. C-2B)
STA. 400+83.01, LT
STA. 500+61.58, LT
CONSTRUCT CONCRETE BUS PAD
STA. 400+90.50 - STA. 400+95.50, LT
REMOVE AND RESET PRIVATE LIGHT ASSEMBLY
STA. 15+00.80 - STA. 15+78.00, RT (HAMPTON INN)
REMOVAL OF EXISTING RETAINING WALL (SEE NOTE 1)
STA. 15+98.4 - 17+05.3, RT
RETAINING WALL, CONCRETE
SEE RETAINING WALL PLANS
PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
STA. 400+91 - 400+96, LT
STA. 402+82 - 403+72, RT
REMOVE AND RESET PRIVATE SIGN ASSEMBLY, LIGHTED
STA. 15+90, 65' RT



MATCHLINE - STA. 403+19.92 - SEE INSET

REMOVE AND RESET PRIVATE LIGHT ASSEMBLY
STA. 400+76.95, RT
STA. 400+80.10, RT
STA. 400+87.75, RT
8 FOOT PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA. 13+61 - 16+08, LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 17+06.00 - 17+56.00, RT (77')
CONSTRUCT CROWN SHIFT
STA. 15+03.2 CL - STA. 15+88.9, LT
STA. 17+00.7, LT - STA. 18+52.3, RT
STA. 19+97.3, RT - STA. 20+75.0, RT
STAMPED CONCRETE ISLAND, 8 INCH
STA. 13+40.10 - 15+03.40, CL
PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA. 14+06 - 502+10, RT
STA. 15+88, LT - 400+91, LT
STA. 402+82, RT - 18+51.28, LT
STA. 18+08 - 18+51.28, RT
REMOVAL OF EXISTING CURB
SEE CURBING PLAN 3
VERTICAL GRANITE CURB
SEE CURBING PLAN 3
DETECTABLE WARNING SURFACE
STA. 15+93, LT
STA. 17+38, RT
STA. 17+39, LT
STA. 18+03, LT
STA. 18+10, RT
STA. 18+49, RT
STA. 18+49, LT



SEE ABOVE - STA. 403+19.92

MATCHLINE - STA. 14+75.00 - SEE GENERAL PLAN 2

MATCHLINE - STA. 20+75.00 - SEE GENERAL PLAN 6

US ROUTE 7 STA. 17+13.78
END OF FULL DEPTH

PORTLAND CEMENT
CONCRETE BUS PAD
(8' X 5', ELEV. = 350.25')
8" THICKNESS

TEMPORARILY RELOCATE GROUND LIGHTS
PAID FOR UNDER CONTRACT ITEM 679.2600- REMOVE
AND RESET PRIVATE LIGHT ASSEMBLY

US ROUTE 7 STA. 18+51.28
PAY LIMIT SPLIT

RETAIN AND PROTECT
HYDRANT DURING CONSTRUCTION

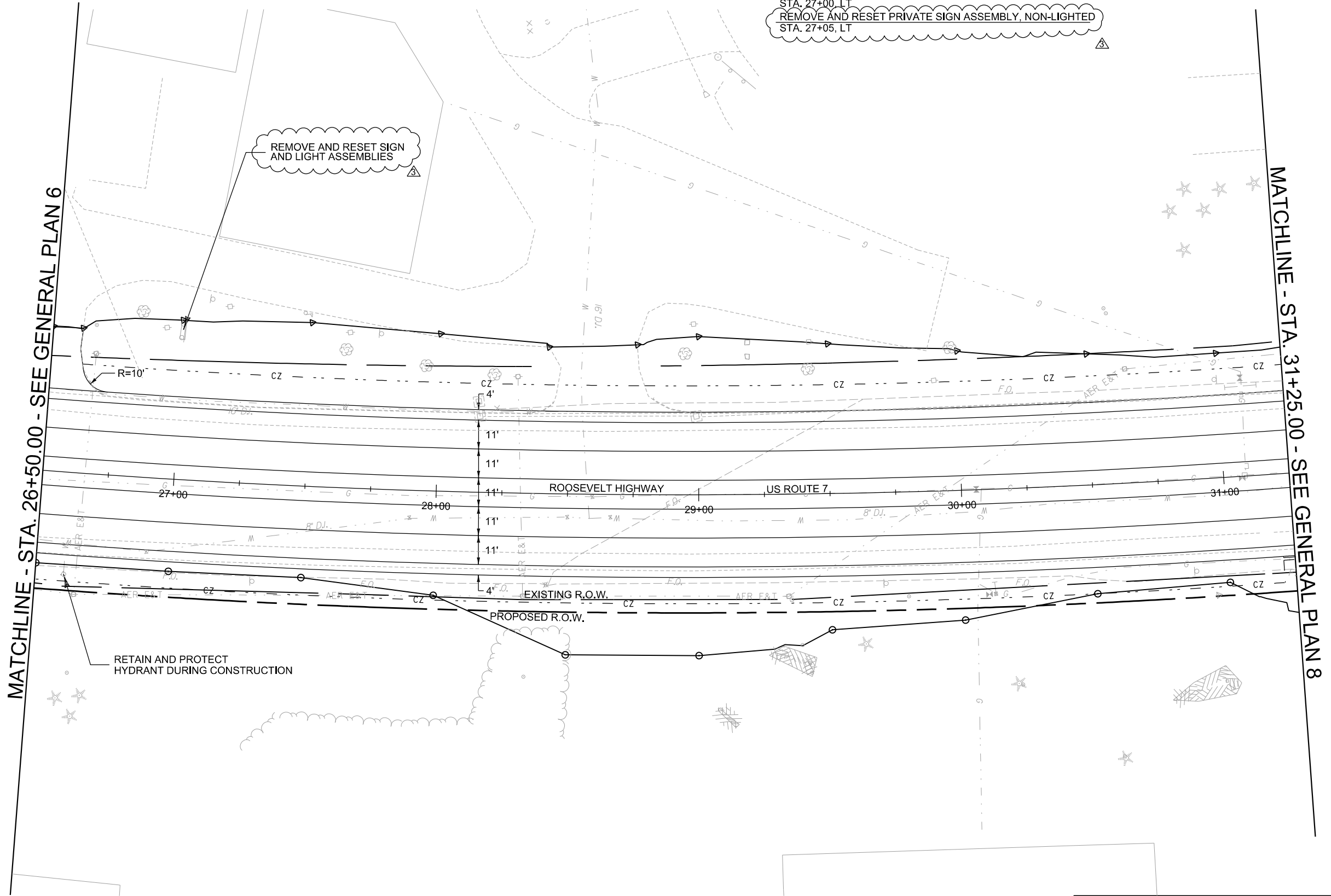
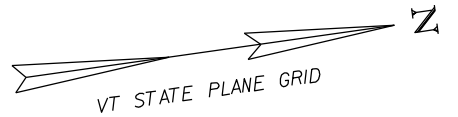
MATCHLINE - STA. 500+75.00 - SEE GENERAL PLAN 5



PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)
FILE NAME: gen04.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
GENERAL PLAN SHEET 4
PLOT DATE: 4/2/2025
DRAWN BY: HSD
CHECKED BY: HSD
SHEET 101 OF 405

BITUMINOUS CONCRETE PAVEMENT, NON-PAVER PLACED, TYPE IVS
STA. 26+53.00, LT
COARSE-MILLING, BITUMINOUS PAVEMENT
STA. 22+43.46 - 33+73.85
EXCAVATION OF SURFACES AND PAVEMENTS
STA. 28+40.00 - 29+95.00, LT

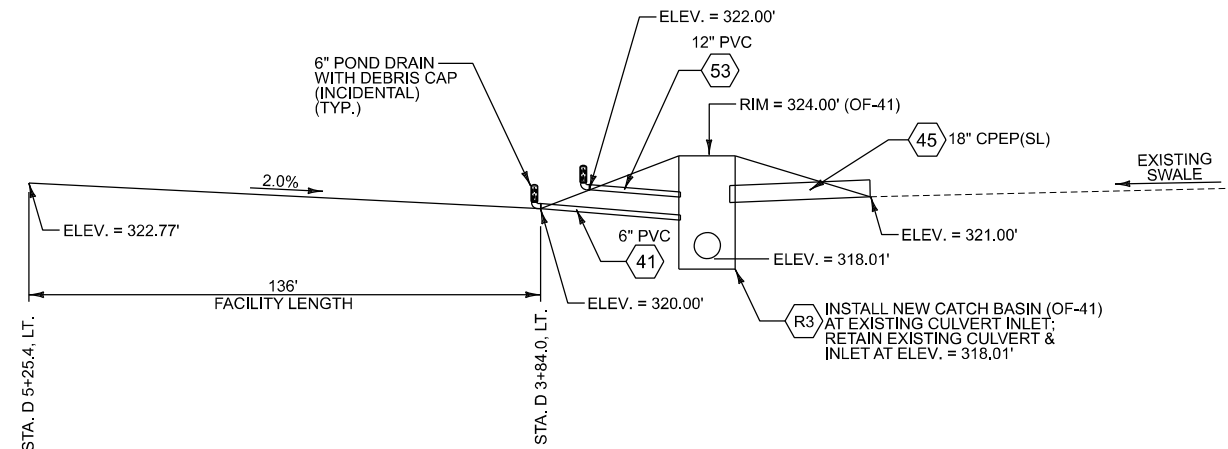
CHANGE ELEVATION OF DROP INLETS, CATCH BASINS OR MANHOLES
STA. 28+17, LT
EXCAVATION OF SURFACES AND PAVEMENTS
STA. 28+60, LT
REMOVE AND RESET PRIVATE LIGHT ASSEMBLY
STA. 26+90, LT
STA. 27+20, LT
CONCRETE, CLASS B
STA. 27+00, LT
REMOVE AND RESET PRIVATE SIGN ASSEMBLY, NON-LIGHTED
STA. 27+05, LT



ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
△	1	31 MARCH 2025	ADDED CONSTRUCTION NOTE	BJT
△	2	31 MARCH 2025	CONSTRUCTION CALLOUT CHANGED	BJT

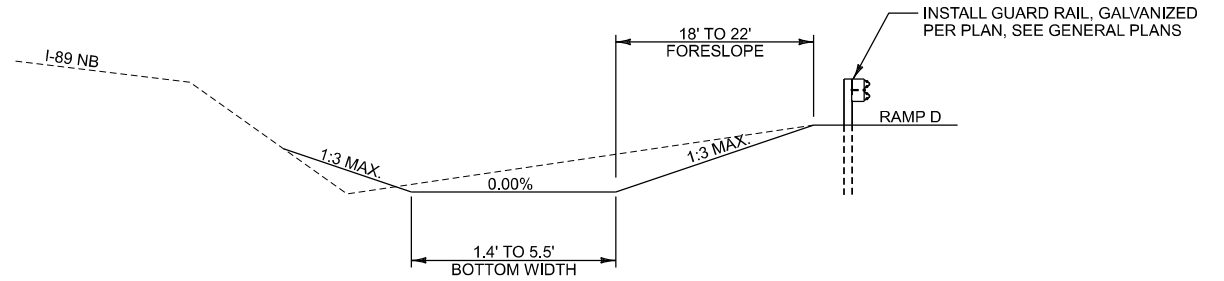


PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)	
FILE NAME: gen07.dgn	PLOT DATE: 4/2/2025
PROJECT LEADER: M. LACROIX	DRAWN BY: HSD
DESIGNED BY: B. TIETZE	CHECKED BY: HSD
GENERAL PLAN SHEET 7	SHEET 104 OF 405



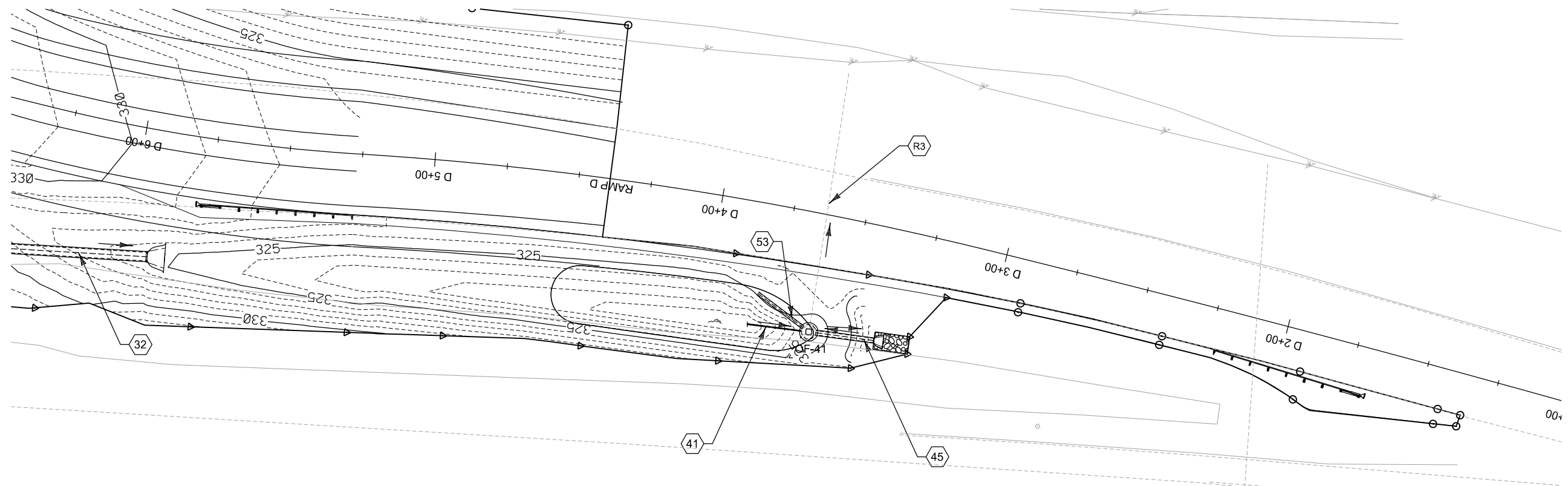
**STORMWATER DRY POND
PROFILE**

NOT TO SCALE
STA. D 3+84 - STA. D 5+25, LT.



**STORMWATER DRY POND
TYPICAL SECTION**

NOT TO SCALE
STA. D 3+84 - STA. D 5+25, LT.



DRY POND #8 PLAN

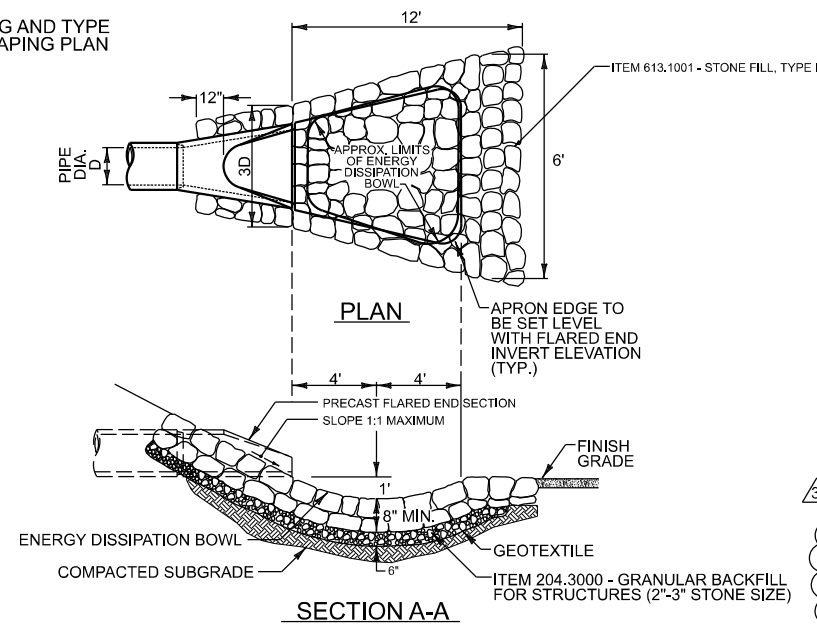
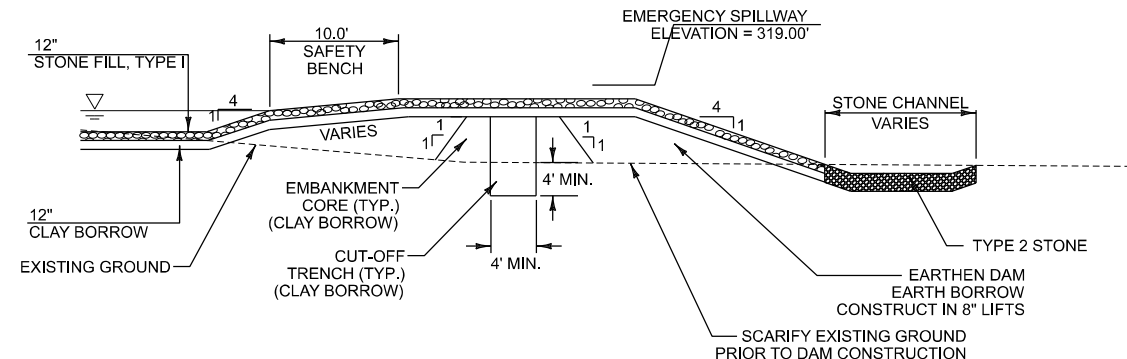
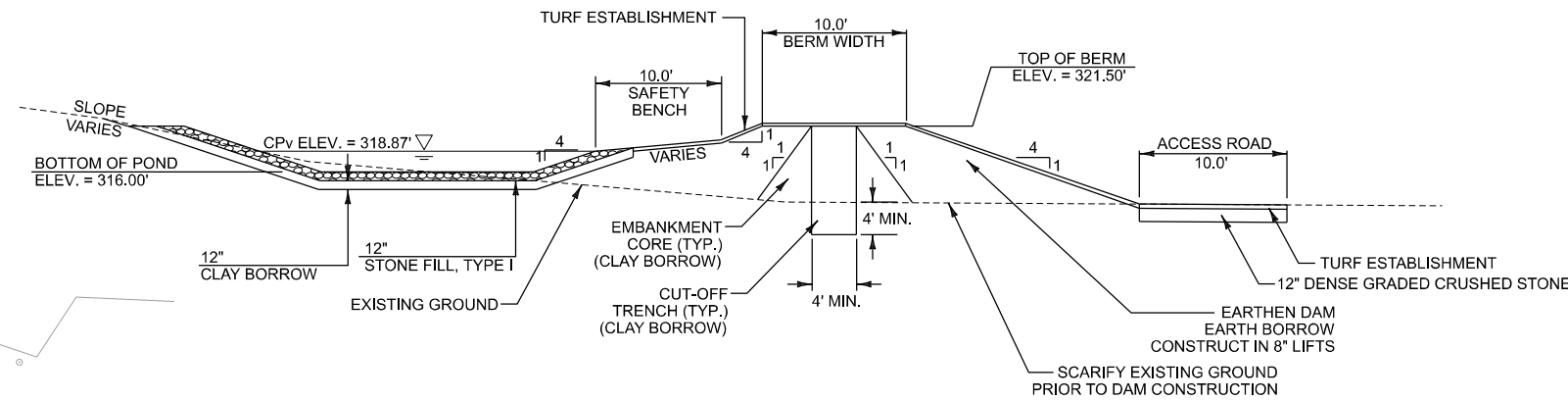
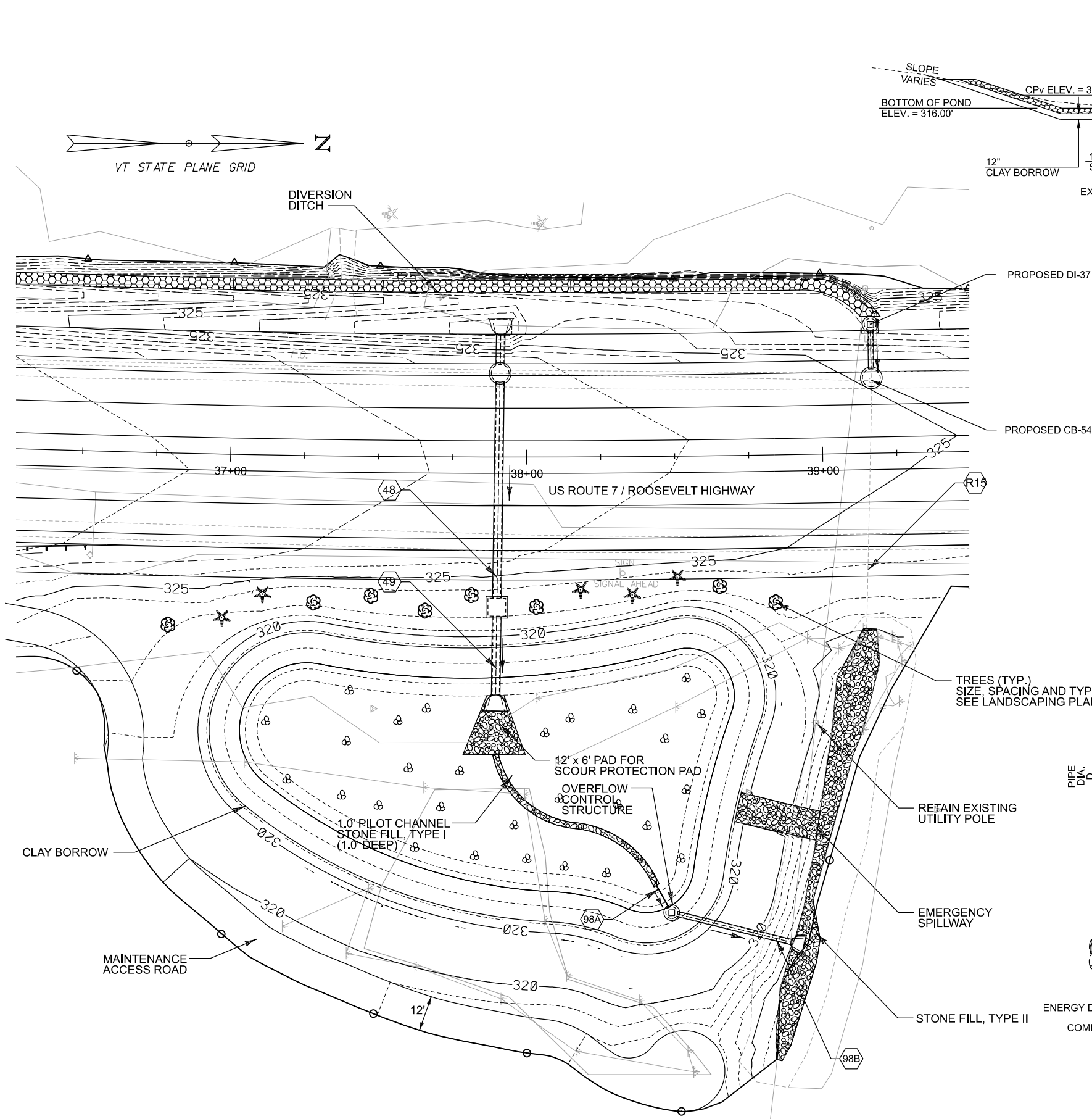
0 20 40
SCALE IN FEET

NOTES:

- ALL PVC PIPES AND TRASH GRATE ASSOCIATED WITH OVERFLOW CONTROL STRUCTURE WILL BE PAID INCIDENTAL TO ITEM 604.2000 PRECAST REINFORCED CATCH BASIN WITH CAST IRON GRATE.

PROJECT NAME: COLCHESTER		PLOT DATE: 4/2/2025	
PROJECT NUMBER: HES NH 5600(14) C/2 (Re-Ad)		DRAWN BY: HSD	
FILE NAME: swm_det02.dgn		CHECKED BY: HSD	
PROJECT LEADER: M. LACROIX		SHEET 187 OF 405	
DESIGNED BY: B. TIETZE			
DRY POND PLAN SHEET 1			

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	ADJUSTED THRUST BLOCKS TO MATCH DETAIL	BJT

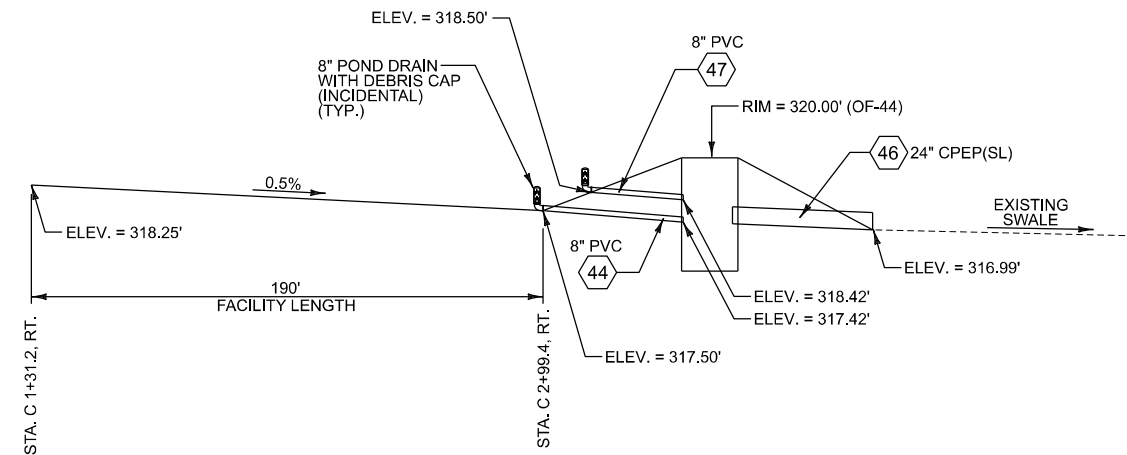


NOTES:

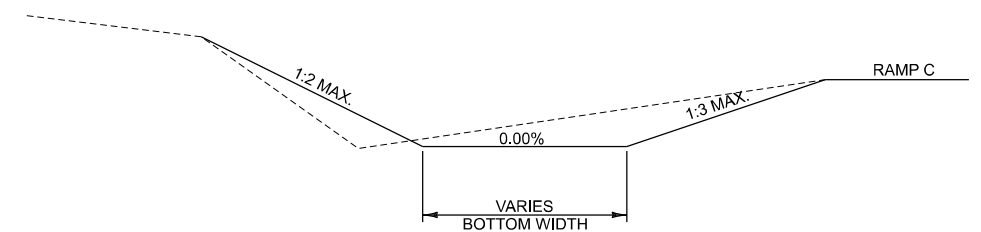
1. ALL PVC PIPES ASSOCIATED WITH CONTROL STRUCTURE WILL BE PAID INCIDENTAL TO ITEM 604.2000 PRECAST REINFORCED CATCH BASIN WITH CAST IRON GRATE.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(14) C/2 (Re-Ad)
FILE NAME: swm_det03.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
DRY POND PLAN SHEET 2
PLOT DATE: 4/2/2025
DRAWN BY: HSD
CHECKED BY: HSD
SHEET 188 OF 405

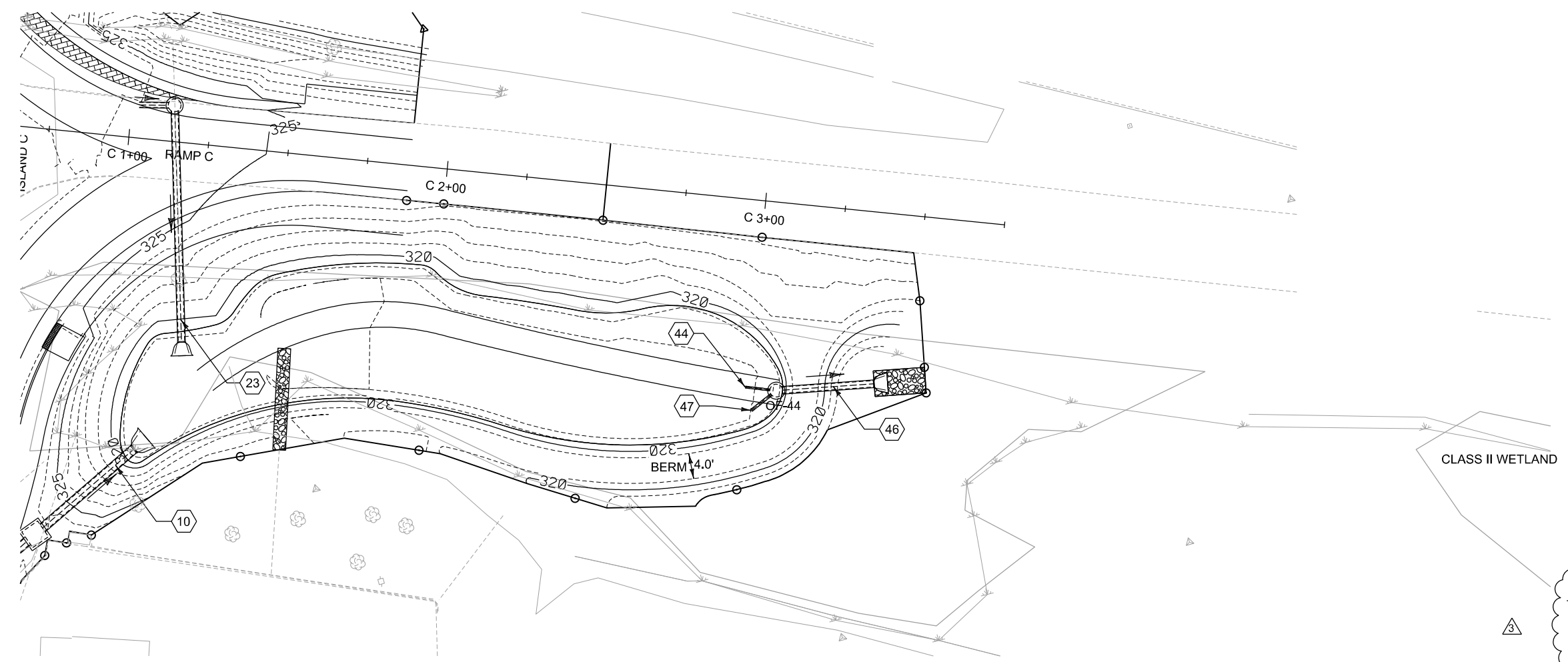
ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	ADJUSTED THRUST BLOCKS TO MATCH DETAIL	BJT



**STORMWATER DRY POND
PROFILE**
NOT TO SCALE
STA. C 1+31 - STA. C 2+99, RT.



**STORMWATER DRY POND
TYPICAL SECTION**
NOT TO SCALE
STA. C 1+31 - STA. C 2+99, RT.



DRY POND #7 PLAN
SCALE IN FEET
0 20 40

NOTES:

- ALL PVC PIPES AND TRASH GRATE ASSOCIATED WITH OVERFLOW CONTROL STRUCTURE WILL BE PAID INCIDENTAL TO ITEM 604.2000 PRECAST REINFORCED CATCH BASIN WITH CAST IRON GRATE.

PROJECT NAME: COLCHESTER		PLOT DATE: 4/2/2025	
PROJECT NUMBER: HES NH 5600(14) C/2 (Re-Ad)		DRAWN BY: HSD	
FILE NAME: swm_det04.dgn		CHECKED BY: HSD	
PROJECT LEADER: M. LACROIX		SHEET 189 OF 405	
DESIGNED BY: B. TIETZE			
DRY POND PLAN SHEET 3			

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	ADJUSTED THRUST BLOCKS TO MATCH DETAIL	BJT

VAOT NATURALIZED AREA TYPE I				
WEIGHT	NAME	LATIN NAME	GERM	PURITY
38%	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	INERTS			
100%				

VAOT NATURALIZED AREA TYPE II				
WEIGHT	NAME	LATIN NAME	GERM	PURITY
37.5%	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%				

SEED RATE: BROADCAST: 75 LBS/ACRE
HYDROSEED: PER MANUFACTURER'S RECOMMENDATIONS

APPLY AMENDMENTS PER SOIL TEST RESULTS

FERTILIZER (755.06):
IF NO SOIL TEST IS PERFORMED, A SLOW OR CONTROLLED RELEASE FERTILIZER SHALL BE APPLIED AT A RATIO OF 1:1:1 (N:P:K). NITROGEN AND PHOSPHORUS SHALL BE APPLIED AT NO MORE THAN 1 LB. PER 1,000 SQ.FT.

LIMESTONE (755.08 & 755.09):
IF NO SOIL TEST IS PERFORMED, APPLY LIMESTONE PER MANUFACTURER'S RECOMMENDATIONS.

COMPOST (755.05):
COMPOST MAY BE APPLIED PER SOIL TEST RESULTS.

CONSTRUCTION GUIDANCE

- THESE SEED MIXES SHALL BE USED IN AREAS THAT WILL NATURALIZE, RECEIVING LIMITED ANNUAL MOWING THROUGH THE GROWING SEASON.
- USE SEED MIX AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON-WETLAND) AREAS DISTURBED BY THE CONTRACTOR. IF THE PLANS DO NOT SPECIFY A SEED TYPE, NATURALIZED AREA TYPE I OR TYPE II SHALL BE USED.
- SEED MIXES SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- HAY MULCH TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE. ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
- FERTILIZER SHOULD NOT BE APPLIED WITHIN 2 WEEKS OF APPLYING LIMESTONE.
- FOR BEST ESTABLISHMENT, REAPPLY FERTILIZER 2-3 WEEKS AFTER GERMINATION.
- THIS SEED MIX WILL BE USED THROUGHOUT THE PROJECT EXCEPT WHERE OTHERWISE SPECIFIED

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.1500 TURF ESTABLISHMENT, GENERAL SEED)	REVISIONS	
	JANUARY 12, 2015	WHF
	JUNE 15, 2023	BKD

VAOT LAWN				
WFIGHT	NAMF	I ATIN NAMF	GERM	PURITY
42.5%	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
20.0%	PERENNIAL RYE GRASS	LOLIUM PERENNE	90%	95%
32.5%	KENTUCKY BLUE GRASS	POA PRATENSIS	85%	85%
5.0%	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%				

SEED RATE: BROADCAST: 75 LBS/ACRE
HYDROSEED: PER MANUFACTURER'S RECOMMENDATIONS

APPLY AMENDMENTS PER SOIL TEST RESULTS

FERTILIZER (755.06):
IF NO SOIL TEST IS PERFORMED, A SLOW OR CONTROLLED RELEASE FERTILIZER SHALL BE APPLIED AT A RATIO OF 1:1:1 (N:P:K). NITROGEN AND PHOSPHORUS SHALL BE APPLIED AT NO MORE THAN 1 LB. PER 1,000 SQ.FT.

LIMESTONE (755.08 & 755.09):
IF NO SOIL TEST IS PERFORMED, APPLY LIMESTONE PER MANUFACTURER'S RECOMMENDATIONS.

COMPOST (755.05):
COMPOST MAY BE APPLIED PER SOIL TEST RESULTS.

CONSTRUCTION GUIDANCE

- THIS SEED MIX SHALL BE USED IN AREAS THAT WILL BE MANAGED AS TRADITIONAL LAWNS, RECEIVING FREQUENT MOWING.
- THIS SEED MIX SHALL NOT BE USED IN WETLANDS OR ANY WATERS OF THE STATE OF VERMONT.
- USE SEED MIX ONLY AS INDICATED IN THE PLANS. IF THE PLANS DO NOT SPECIFY A SEED TYPE, NATURALIZED AREA TYPE I OR TYPE II SHALL BE USED.
- SEED MIX SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- HAY MULCH TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE. ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
- FERTILIZER SHOULD NOT BE APPLIED WITHIN 2 WEEKS OF APPLYING LIMESTONE.
- FOR BEST ESTABLISHMENT, REAPPLY FERTILIZER 2-3 WEEKS AFTER GERMINATION.

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.1500 TURF ESTABLISHMENT, GENERAL SEED)	REVISIONS	
	JANUARY 12, 2015	WHF
	JUNE 15, 2023	BKD

WET AREA SEED

WET AREA SEED (DETENTION) TO BE PAID FOR UNDER 651.1600 SPECIALTY SEED. APPLICATION RATES VARY BY SEED MIX. WET AREA SEED TO BE ONE OF THE FOLLOWING, OR APPROVED EQUAL:- VERMONT WET MEADOW & DETENTION BASIN MIX SUPPLIER: VERMONT WETLAND PLANT SUPPLY
APPLICATION RATE: 35 LBS/ACRE.

- NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES
SUPPLIER: NEW ENGLAND WETLAND PLANTS, INC.
APPLICATION RATE: 35 LBS/ACRE.

- NATIVE DETENTION AREA MIX
SUPPLIER: ERNST CONSERVATION SEEDS, INC.
APPLICATION RATE: 20 LBS/ACRE WITH A COVER CROP (GRAIN RYE (1 SEP TO 30 APR; 30 LBS/ACRE), JAPANESE MILLET OR BARNYARD GRASS (1 MAY TO 31 AUG; 10 LBS/ACRE))

NOTE

- SEEDED AREAS SHALL BE PROTECTED IN ACCORDANCE WITH SPECIFICATION SUBSECTION 651.07 PROTECTION.
- IF AREAS WITHIN PDF OR BARRIER FENCE ARE NOT DISTURBED, THEY SHOULD REMAIN VEGETATED, AND ADDITIONAL REVEGETATION IS NOT REQUIRED
- PROVIDING SUFFICIENT MOISTURE IS CRITICAL DURING THE ENTIRE PLANT ESTABLISHMENT PERIOD. WATERING TO BE PAID FOR UNDER 656.6500 LANDSCAPE WATERING.

SEED LOCATIONS

VAOT WET AREA SEED MIX

POND #4
POND #7
POND #8

VAOT LAWN SEED MIX

STA. 3+25 LT - STA. 8+75 LT
STA. 49+25 LT - STA. 53+25 LT
STA. 4+00 RT - STA. 8+50 RT
STA. 14+00 RT - STA. 27+25 RT
STA. 28+75 RT - STA. 35+00 RT
STA. 41+00 RT - STA. 45+00 RT
STA. 400+50 RT - STA. 403+00 RT
STA. 500+25 - STA. 503+75
STA. 800+50 RT - STA. 802+75 RT
STA. 900+25 - STA. 901+50

VAOT NATURALIZED AREA SEED MIX

STA. 8+75 LT - STA. 49+25 LT
STA. 53+25 LT - STA. 55+50 LT
STA. 8+50 RT - STA. 14+00 RT
STA. 27+25 RT - STA. 28+75 RT
STA. 35+00 RT - STA. 41+00 RT
STA. 45+00 RT - STA. 55+50 RT
STA. 400+25 LT - STA. 403+00 LT
STA. 800+25 LT - STA. 802+75 LT
ALL HIGHWAY RAMPS

NOTE

- ALL SEED LIMITS ARE APPROXIMATE AND MUST BE CONFIRMED WITH THE ENGINEER AHEAD OF SEEDING.

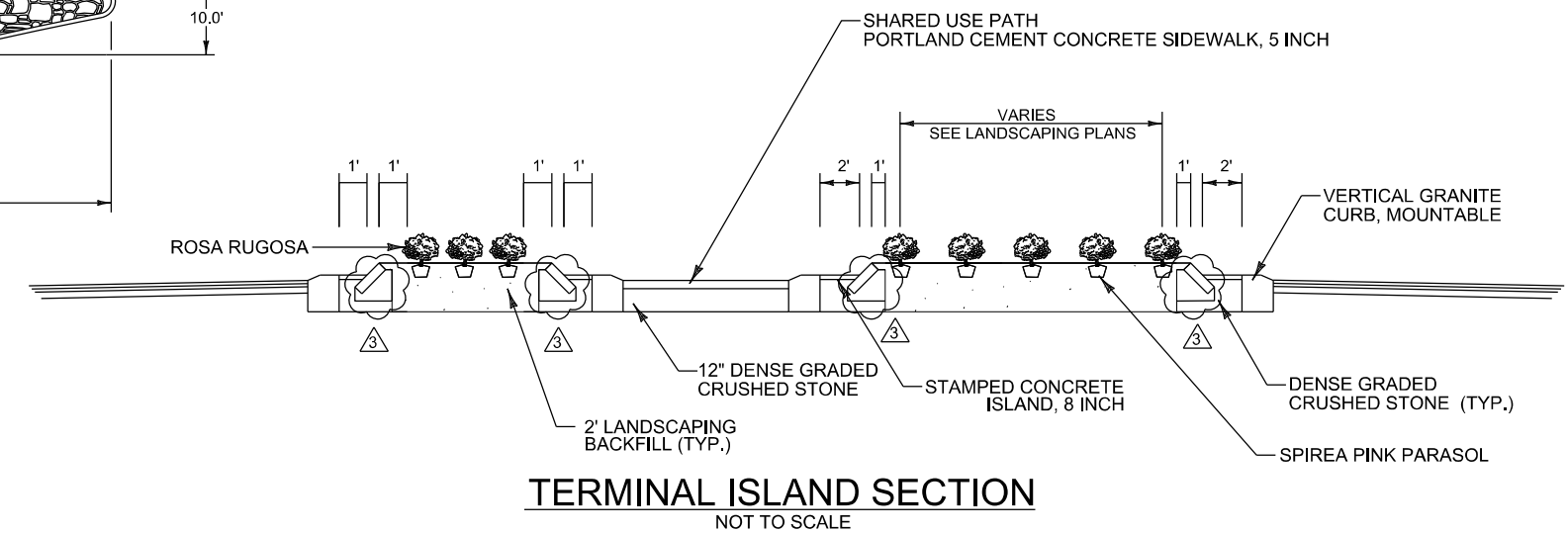
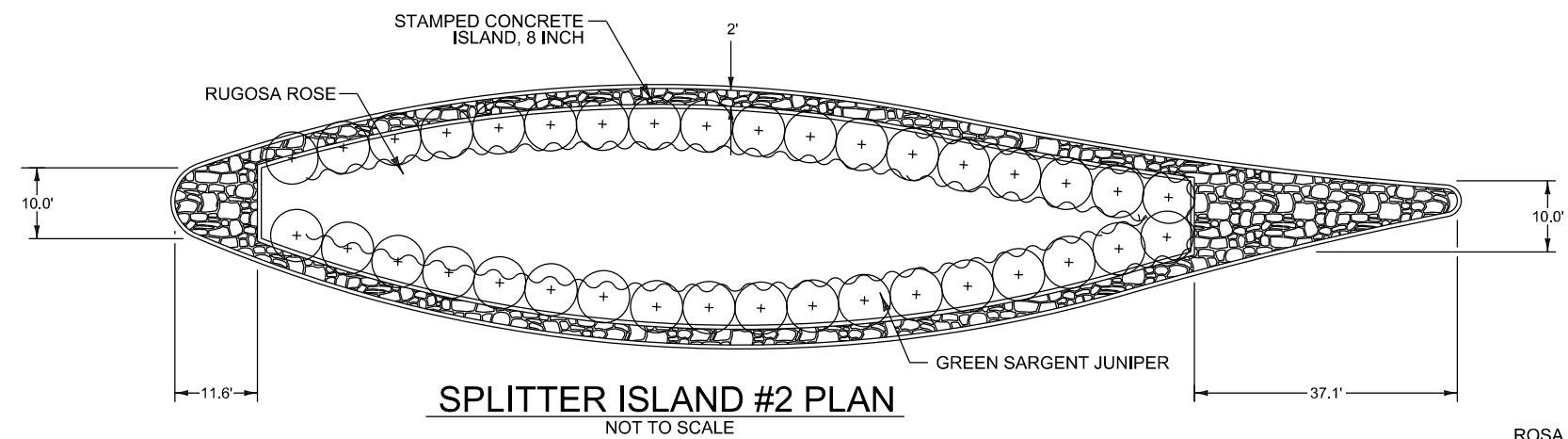
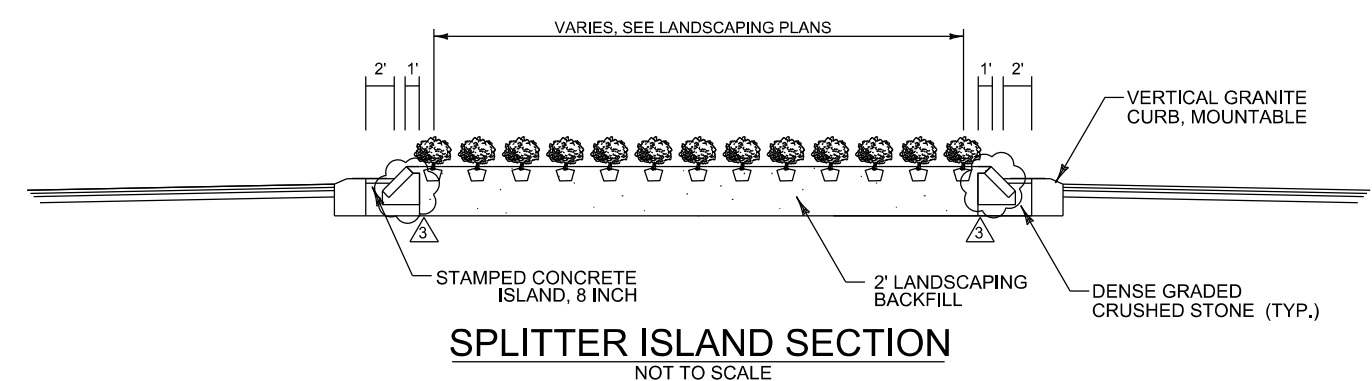
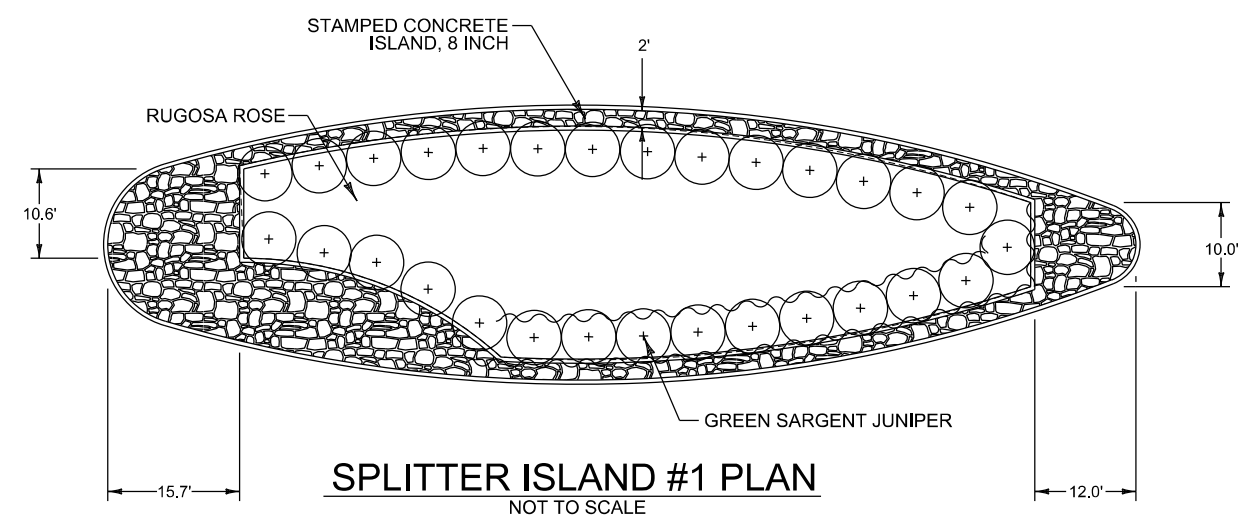
PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)

FILE NAME: ero-det01-03.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
EPSC DETAILS SHEET I

PLOT DATE: 4/2/2025
DRAWN BY: HSD
CHECKED BY: HSD
SHEET 228 OF 405

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	ADJUSTED NOTE 1	BJT
3	1	31 MAR 2025	ADDED SEED LOCATIONS	BJT

LANDSCAPING DETAILS



LANDSCAPING LEGEND	
⊙	RUGOSA ROSE
○	GREEN SARGENT JUNIPER

NOTES:
1. THE TWO OUTERMOST ROWS SHALL BE GREEN SARGENT JUNIPER .
2. THE REMAINING PLANTS SHALL BE RUGOSA ROSE.

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MAR 2025	ADJUSTED THRUST BLOCKS TO MATCH DETAIL	BJT

PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)	
FILE NAME: Ind_det05.dgn	PLOT DATE: 4/2/2025
PROJECT LEADER: M. LACROIX	DRAWN BY: A. ELHAJJ
DESIGNED BY: J. BROWN	CHECKED BY: T. SISSON
LANDSCAPING DETAILS SHEET I	
SHEET 248 OF 405	

WIRED CONDUIT	CONDUIT SIZE		DESCRIPTION
	2"	3"	
POWER TO STANCHION		24'	SERVICE
GENERATOR TO CONTROLLER		10'	BACKUP POWER
STANCHION TO CONTROLLER		13'	POWER
CONTROLLER TO JB6		10'	POWER
CONTROLLER TO JB6		10'	SIGNAL/LIGHTING
CONTROLLER TO JB6		10'	DETECTION
CONTROLLER TO JB6		10'	FUTURE USE
JB6 TO PP5	4'		SIGNAL/LIGHTING
JB6 TO PP5	4'		FUTURE USE
PP5 TO MAP5	19'		SIGNAL/LIGHTING
PP5 TO MAP5	19'		DETECTION
PP5 TO MAP5	19'		FUTURE USE
JB6 TO JB8	35'		POWER
JB6 TO JB8	35'		SIGNAL/LIGHTING
JB6 TO JB8	35'		DETECTION
JB6 TO JB8	35'		FUTURE USE
JB8 TO PP6	5'		SIGNAL/LIGHTING
JB8 TO JB9	34'		POWER
JB8 TO JB9	34'		SIGNAL/LIGHTING
JB9 TO JB9	34'		DETECTION
JB8 TO JB9	34'		FUTURE USE
JB9 TO JB38	28'		SIGNAL/LIGHTING
JB9 TO JB38	28'		DETECTION
JB9 TO JB38	28'		FUTURE USE
JB38 TO MAP6	18'		SIGNAL/LIGHTING
JB38 TO MAP6	18'		DETECTION
JB38 TO MAP6	18'		FUTURE USE
JB38 TO MAP7	19'		SIGNAL/LIGHTING
JB38 TO MAP7	19'		DETECTION
JB38 TO MAP7	19'		FUTURE USE
JB9 TO JB12	57'		POWER
JB9 TO JB12	57'		SIGNAL/LIGHTING
JB9 TO JB12	57'		DETECTION
JB9 TO JB12	57'		FUTURE USE
JB9 TO JB12	57'		FUTURE USE
JB12 TO JB37	24'		SIGNAL/LIGHTING
JB12 TO JB37	24'		DETECTION
JB12 TO JB37	24'		FUTURE USE
JB37 TO PP7	16'		SIGNAL/LIGHTING
JB37 TO PP7	16'		FUTURE USE
JB37 TO RRFB	5'		POWER
JB37 TO RRFB	5'		RRFB
JB37 TO RRFB (FAR SIDE)	36'		RRFB
JB12 TO JB11	36'		POWER
JB12 TO JB11	36'		SIGNAL/LIGHTING
JB12 TO JB11	36'		DETECTION
JB12 TO JB11	36'		FUTURE USE
JB11 TO PP4	7'		SIGNAL/LIGHTING
JB11 TO PP4	7'		FUTURE USE
JB11 TO RRFB	18'		POWER
JB11 TO RRFB	18'		RRFB
JB11 TO JB10	56'		SIGNAL/LIGHTING
JB11 TO JB10	56'		RRFB
JB11 TO JB10	56'		FUTURE USE
JB11 TO JB10	56'		FUTURE USE
JB10 TO RRFB	7'		RRFB
JB9 TO JB13	26'		POWER
JB9 TO JB13	26'		SIGNAL/LIGHTING
JB9 TO JB13	26'		DETECTION
JB9 TO JB13	26'		FUTURE USE
JB13 TO RRFB	14'		POWER
JB13 TO RRFB	14'		RRFB
JB13 TO JB14	63'		POWER
JB13 TO JB14	63'		SIGNAL/LIGHTING
JB13 TO JB14	63'		DETECTION
JB13 TO JB14	63'		FUTURE USE
JB14 TO RRFB	44'		RRFB
JB14 TO PJB1	38'		POWER
JB14 TO PJB1	38'		SIGNAL/LIGHTING
JB14 TO PJB1	38'		DETECTION
JB14 TO PJB1	38'		FUTURE USE
SUBTOTAL	1924'	77'	
ROUNDING	66'	13'	
TOTALS	1990'	90'	

LIST OF MAJOR EQUIPMENT

TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 & I-89 RAMPS SB)	QUANTITY	REMARKS
625.7000 - POWER DROP STANCHION	1	
678.2005 - NEMA P44 BASE-MOUNTED CONTROLLER CABINET (NEMA TS2, TYPE 1) WITH 15-INCH EXTENDED BASE ON A CONCRETE FOUNDATION INCLUDING TRAFFIC SIGNAL CONTROLLER, BIU, SMART MALFUNCTIONING MONITORING UNIT (MMU), CONTROLLER IDENTIFICATION PLAQUE, GPS TIME CLOCK, AND 24 V 650 W TWO-BATTERY UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM WITH SEPARATE, SIDE MOUNTED PIGGY-BACK STYLE CABINET (36" x 20" x 15"), BYPASS SWITCH, TWO 79 AH BATTERIES. BOTH CABINETS SHALL HAVE INTERIOR LED LIGHTING AND GFCI DUPLEX RECEPTACLE.	1	FLAT BLACK ECONOLITE CABINET, ECONOLITE COBALT (NEMA TS2, TYPE 2) UPS: MARATHON TRTC-0654-N1 TRACK 650, TSRC-2003-01, TBHK-009-24, TWO MK 8A24 HEI 79 AH, SNMP-CY54-04
678.2005001 - NATURAL GAS-POWERED BACKUP GENERATOR	1	
678.2010 - MAST ARM POLE FOUNDATION	3	
678.2015 - PEDESTAL POST ASSEMBLY	4	FLAT BLACK
678.2020 - PEDESTRIAN SIGNAL ASSEMBLY	2	FLAT BLACK
678.2025 - TRAFFIC SIGNAL ASSEMBLY MA-5=40' MA-6=50' MA-7A=50' (MA-7B=30' FUTURE)	3	FLAT BLACK
678.2030 - ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE LED TRAFFIC SIGNAL HEAD WITH VISORS AND 5-INCH LOUVERED BACKPLATES WITH 2-INCH RETROREFLECTIVE TAPE BORDER.	9	FLAT BLACK
678.2040 - STOP BAR DETECTOR ASSEMBLY ADVANCE DETECTOR ASSEMBLY VEHICLE DETECTION PROCESSOR	1	WAVETRONIX SMARTSENSOR MATRIX WAVETRONIX SMARTSENSOR ADVANCE (EXTENDED RANGE) WAVETRONIX CLICK 656 OR LATER MODEL
678.2045 - 360° CAMERA HARDENED NETWORK SWITCH (CISCO IE 2000)	1	
678.2050 - OPTICAL PREEMPTION DETECTORS OPTICAL PREEMPTION SIGNAL PROCESS CARD & CAGE PREEMPTION AC STROBE - RED	1	OPTICOM/GTT
679.5400 - STREET LIGHTING CONTROL DEVICE	1	

CONTROLLER TIMING CHART

PHASE	1	2	3	4	5	6	7	8	9
IN USE	X	X			X	X		X	
TRAFFIC MOVEMENT	↗	↘ ↓			↗	↖ ↘		↖ ↘	
MIN. GREEN	8	8			8	8		8	
MAX 2 - GREEN (AM)	20	33			23	13		17	
MAX 1 - GREEN (OFF)	22	31			22	7		18	
MAX 3 - GREEN (PM)	22	31			21	5		15	
YELLOW CLEARANCE	4.0	4.0			4.0	4.0		4.0	
ALL RED CLEARANCE	2.0	2.0			2.0	2.0		2.0	
VEHICLE EXTENSION	3.0	3.0			3.0	3.0		3.0	
DELAY GREEN	5	5			5	5		5	
RECALL MODE	HARD	HARD			HARD				
PED WALK									
PED CLEAR									

ACTION PLAN

PLAN NO.	PATTERN	FLASH	REFERENCE
1	1	NO	MAX 1
2	2	NO	MAX 2
3	3	NO	MAX 3
4	254 - FREE	NO	FREE

SCHEDULE PLAN

SCHEDULE NO.	DAY PLAN	DAYS	DATES
1	1	MON, TUE, WED, THU, FRI	1-31
1	2	SAT, SUN	1-31

DAY PLAN

PLAN NO.	EVENT	ACTION PLAN	START TIME
1	1	2	6:00 AM
1	2	1	9:00 AM
1	3	3	3:00 PM
1	4	1	7:00 PM
2	1	1	6:00 AM
2	2	1	6:00 PM

WEEKDAY PEAKS

HOURS			
MAX 2 - AM PEAK	6:00 AM	TO	9:00 AM
MAX 1 - OFF PEAK	9:00 AM	TO	3:00 PM
	7:00 PM	TO	6:00 AM
MAX 3 - PM PEAK	3:00 PM	TO	7:00 PM

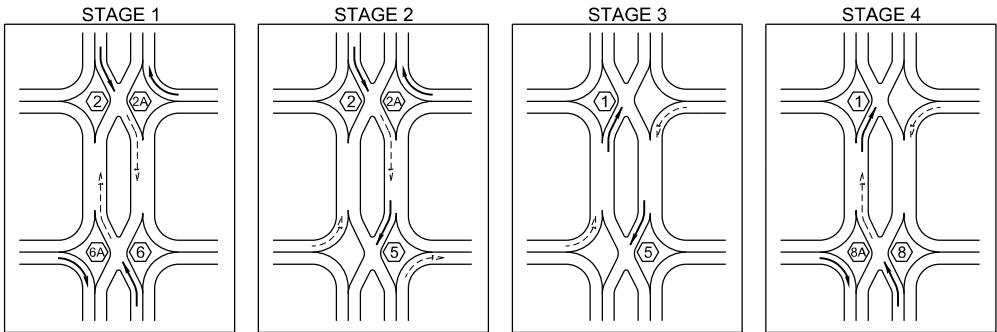
COORDINATION PLAN

PATTERN	COS	CYCLE	OFFSET	SPLIT PHASES / SPLIT TIMES							
				1	2	3	4	5	6	7	8
1	111	65	25	34	43			34	19		30
2	211	65	25	30	45			35	19		29
3	311	65	25	34	42			32	15		32

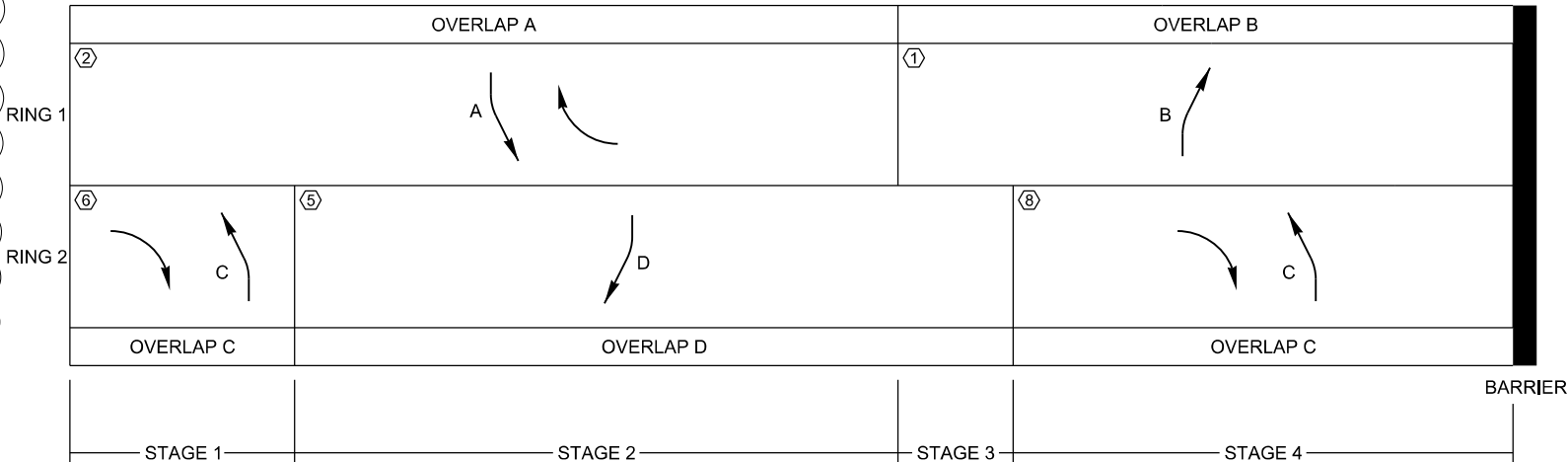
PREEMPTION TIMINGS

	PREEMPTOR		
	1	2	3
DIRECTION	NB	SB	
HOLD PHASE	2 & 5	6 & 1	
DET. LOCK	YES	YES	
DURATION TIME	18	18	
MIN. GREEN	8	8	
HOLD GREEN	12	12	
HOLD YELLOW	4	4	
HOLD RED	2	2	

TRAFFIC PROGRESSION DIAGRAM



RING-BARRIER DIAGRAM

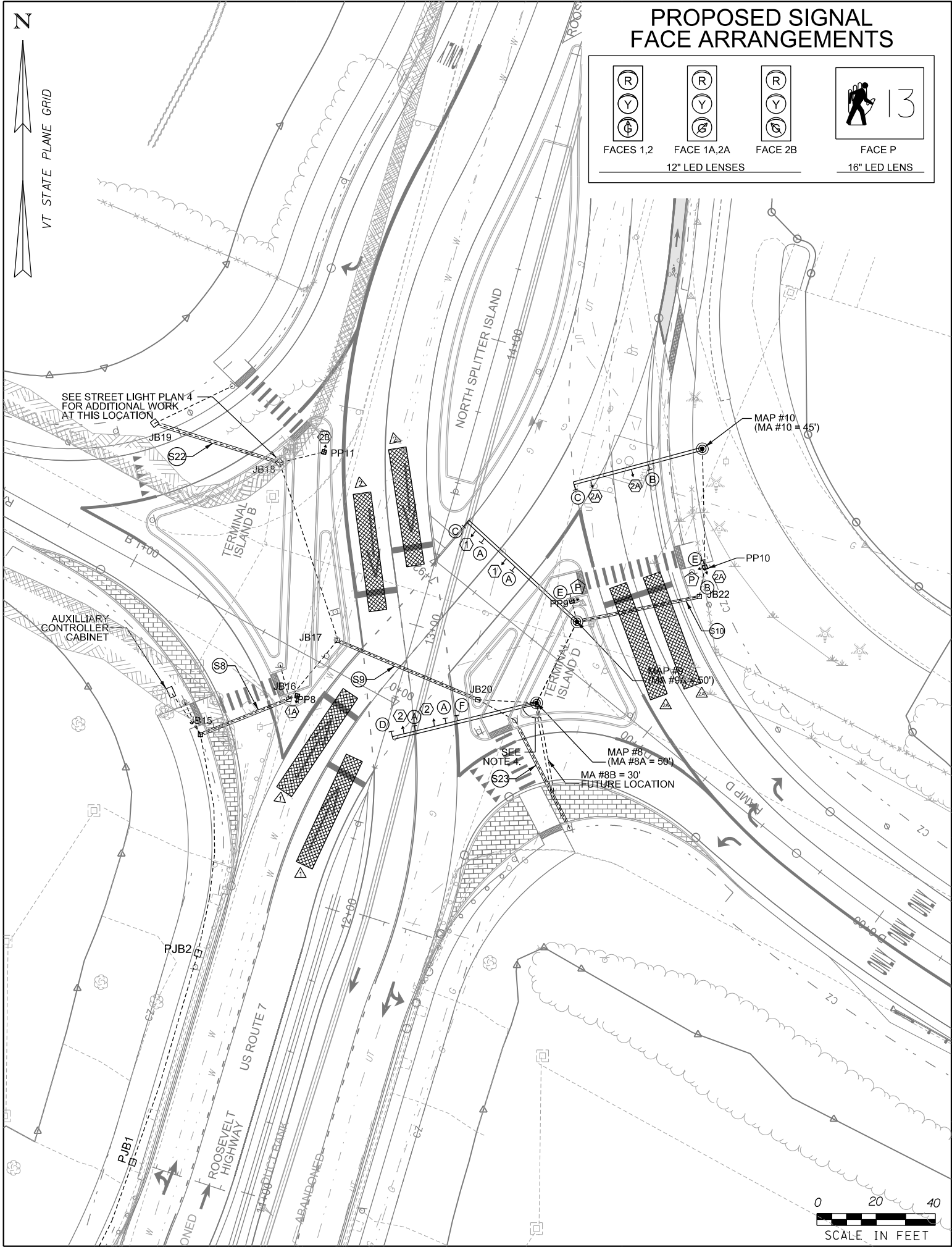


ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
△	1	31 MARCH 2025	CHANGES TO CONDUIT SCHEDULE	BJT

PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)

FILE NAME: t12d046sig2.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
TRAFFIC SIGNAL PLAN 3B - I-89 SB RAMPS

PLOT DATE: 4/2/2025
DRAWN BY: B. TIETZE
CHECKED BY: HSD
SHEET 304 OF 405



TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION
SEE LIST OF MAJOR EQUIPMENT, SIGNAL SHEET 4B

CONSTRUCT MAST ARM POLES
STA. 12+87, RT 46.26' (MAP-8)
STA. 13+16, RT 51.62' (MAP-9)
STA. 13+83, RT 76.04' (MAP-10)

CONSTRUCT SIGNAL PEDESTAL POLES WITH FOUNDATIONS
STA. 12+66, LT 31.84' (PP8)
STA. 13+46, RT 87.63' (PP10)
STA. 13+48, LT 46.52' (PP11)

CONSTRUCT PEDESTRIAN SIGNAL PEDESTAL POLES WITH FOUNDATIONS
STA. 13+22, RT 48.00' (PP9)

WIRED CONDUIT
SEE CHART, THIS SHEET

REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM
(US ROUTE 2/7 & NB RAMPS)
STA. 12+75

JUNCTION BOX
STA. 10+99, LT 40.40' (PJB1)
STA. 11+73, LT 39.05' (PJB2)
STA. 12+44, LT 59.56' (JB15)
STA. 12+64, LT 34.27' (JB16)
STA. 12+88, LT 23.97' (JB17)
STA. 13+40, LT 59.76' (JB18)
STA. 12+82, RT 27.01' (JB20)
STA. 13+36, RT 89.19' (JB22)

ELECTRICAL CONDUIT SLEEVE (12" DIA.)
S8 STA. 12+45, 58.45' LT - STA. 12+63, 35.20' LT (30')
S9 STA. 12+82, 25.33' RT - STA. 12+87, 21.49' LT (47')
S10 STA. 13+17, 57.11' RT - STA. 13+35, 87.54' RT (36')
S22 STA. 13+40, 60.79' LT - STA. 13+45, 101.66' LT (41')
S23 STA. 12+50, 67.34' LT - STA. 12+76, 43.08' LT (41')

- NOTES:**
- TRAFFIC ITEMS LISTED ARE APPROXIMATE LOCATIONS AND MAY BE MODIFIED BY THE ENGINEER IN THE FIELD.
 - TRAFFIC SIGNAL CONTROLLER FOR THIS INTERSECTION SHALL BE LOCATED AT THE INTERSECTION OF THE I-89 EXIT 16 SOUTHBOUND RAMPS AT US ROUTE 7. SEE TRAFFIC SIGNAL PLANS 3A AND 3B.
 - FOR PHASING DIAGRAM, CONTROLLER TIMING CHART, PREEMPTION TIMINGS AND TIME OF DAY PROGRAM INFORMATION FOR THIS INTERSECTION, SEE TRAFFIC SIGNAL PLAN 4B.
 - REMOVAL OF EXISTING TRAFFIC SIGNAL SYSTEM SHALL NOT OCCUR UNTIL A TEMPORARY SIGNAL SYSTEM IS OPERATIONAL OR THE PROPOSED SYSTEM IS CONSTRUCTED AND OPERATIONAL WHICHEVER IS FIRST. PAYMENT SHALL BE UNDER CONTRACT ITEM 678.1000 - REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM.
 - MAST ARM POLE #7 SHALL BE DESIGNED SUCH THAT A 35 FOOT MAST ARM WITH TWO 3-SECTION SIGNAL HEADS LOCATED AT 20' AND 30' CAN BE ADDED AT A FUTURE DATE. THE POLE SHALL INCLUDE ALL ATTACHMENTS NECESSARY TO INSTALL THE FUTURE MAST ARM #7B. ATTACHMENT LOCATION FOR FUTURE MAST ARM = 120.3 DEGREES
 - ALL TRAFFIC SIGNAL EQUIPMENT, EXCEPT FOR STRAIN POLE AND SPAN WIRES, REMOVED AND NOT RE-USED ON THE PROJECT SHALL REMAIN THE PROPERTY OF THE STATE. THE CONTRACTOR SHALL CONTACT DEREK LYMAN (802) 249-5079 A MINIMUM OF TWO WEEKS PRIOR TO BEGINNING DELIVERY TO THE DESIGNATED LOCATION.

TRAFFIC SIGNAL LEGEND	
	MAST ARM & POLE
	CONTROLLER CABINET
	JUNCTION BOX, HEAVY DUTY
	PEDESTAL POST
	SIGNAL HEAD WITH PHASE NO.
	PEDESTRIAN SIGNAL HEAD WITH PED PHASE AND PUSH BUTTON
	WIRED CONDUIT
	WIRED CONDUIT IN ELECTRICAL CONDUIT SLEEVE
	MAST ARM-MOUNTED SIGN
	STOP BAR DETECTION AREA

WIRED CONDUIT	CONDUIT SIZE		DESCRIPTION
	2"		
PJB1 TO PJB2	74'		POWER
PJB1 TO PJB2	74'		SIGNAL/LIGHTING
PJB1 TO PJB2	74'		DETECTION
PJB1 TO PJB2	74'		FUTURE USE
PJB2 TO JB15	75'		POWER
PJB2 TO JB15	75'		SIGNAL/LIGHTING
PJB2 TO JB15	75'		DETECTION
PJB2 TO JB15	75'		FUTURE USE
JB15 TO AUX. CABINET	18'		POWER
JB15 TO AUX. CABINET	18'		DETECTION
JB15 TO JB16	33'		POWER
JB15 TO JB16	33'		SIGNAL/LIGHTING
JB15 TO JB16	33'		DETECTION
JB15 TO JB16	33'		FUTURE USE
JB15 TO RRFB	13'		RRFB
JB16 TO PP8	3'		SIGNAL/LIGHTING
JB16 TO JB17	26'		POWER
JB16 TO JB17	26'		SIGNAL/LIGHTING
JB16 TO JB17	26'		DETECTION
JB16 TO JB17	26'		FUTURE USE
JB16 TO RRFB	12'		RRFB
PP8 TO JB17	23'		SIGNAL/LIGHTING
PP8 TO JB17	23'		DETECTION
PP8 TO JB17	23'		FUTURE USE
JB17 TO JB18	63'		SIGNAL/LIGHTING
JB17 TO JB18	63'		DETECTION
JB17 TO JB18	63'		FUTURE USE
JB18 TO PP11	16'		SIGNAL/LIGHTING
JB18 TO PP11	16'		FUTURE USE
JB18 TO JB19	44'		SIGNAL/LIGHTING
JB18 TO JB19	44'		FUTURE USE
JB18 TO JB19	44'		FUTURE USE
JB19 TO RRFB	30'		RRFB
JB17 TO JB20	52'		POWER
JB17 TO JB20	52'		SIGNAL/LIGHTING
JB17 TO JB20	52'		DETECTION
JB17 TO JB20	52'		FUTURE USE
JB20 TO RRFB	15'		POWER
JB20 TO RRFB	15'		RRFB
RRFB TO RRFB	41'		RRFB
JB20 TO MAP8	20'		SIGNAL/LIGHTING
JB20 TO MAP8	20'		DETECTION
JB20 TO MAP8	20'		FUTURE USE
MAP8 TO MAP9	31'		SIGNAL/LIGHTING
MAP8 TO MAP9	31'		DETECTION
MAP8 TO MAP9	31'		FUTURE USE
MAP9 TO PP9	8'		SIGNAL/LIGHTING
MAP9 TO PP9	8'		FUTURE USE
MAP9 TO JB22	43'		SIGNAL/LIGHTING
MAP9 TO JB22	43'		DETECTION
MAP9 TO JB22	43'		FUTURE USE
JB22 TO PP10	10'		SIGNAL/LIGHTING
JB22 TO PP10	10'		DETECTION
JB22 TO PP10	10'		FUTURE USE
PP10 TO MAP10	40'		SIGNAL/LIGHTING
PP10 TO MAP10	40'		DETECTION
PP10 TO MAP10	40'		FUTURE USE
SUBTOTAL	2075'		
ROUNDING	65'		
TOTALS	2140'		

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
	1	31 MARCH 2025	CHANGES TO CONDUIT SCHEDULE	BJT
	1	31 MARCH 2025	ADDED AXILIARY CABINET	BJT

PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)

FILE NAME: t12d046sigl.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
TRAFFIC SIGNAL PLAN 4A - I-89 NB RAMPS

PLOT DATE: 4/2/2025
DRAWN BY: B. TIETZE
CHECKED BY: HSD
SHEET 306 OF 405

LIST OF MAJOR EQUIPMENT

TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 & I-89 RAMPS NB)	QUANTITY	REMARKS
678.2010 - MAST ARM POLE FOUNDATION	2	
678.2015 - PEDESTAL POST ASSEMBLY	4	FLAT BLACK
678.2020 - PEDESTRIAN SIGNAL ASSEMBLY	2	FLAT BLACK
678.2025 - TRAFFIC SIGNAL ASSEMBLY MA-8A=50' (MA-8B=30' FUTURE) MA-9=50' MA-10=45'	3	FLAT BLACK
678.2030 - ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE LED TRAFFIC SIGNAL HEAD WITH VISORS AND 5-INCH LOUVERED BACKPLATES WITH 2-INCH RETROREFLECTIVE TAPE BORDER.	9	FLAT BLACK
678.2040 - STOP BAR DETECTOR ASSEMBLY ADVANCE DETECTOR ASSEMBLY VEHICLE DETECTION PROCESSOR	1	WAVETRONIX SMARTSENSOR MATRIX WAVETRONIZ SMARTSENSOR ADVANCE (EXTENDED RANGE) WAVETRONIX CLICK 656 OR LATER MODEL
678.2045 - 360° CAMERA HARDENED NETWORK SWITCH (CISCO IE 2000) DIRECTIONAL WIRELESS INTERCONNECT ANTENNA WIRELESS INTERCONNECT PROCESSOR CARD	1	
678.2050 - OPTICAL PREEMPTION DETECTORS OPTICAL PREEMPTION SIGNAL PROCESS CARD & CAGE PREEMPTION AC STROBE - RED	1	OPTICOM/GTT
678.2005 - NEMA P44 BASE-MOUNTED CONTROLLER CABINET (NEMA TS2, TYPE 1) WITH 15-INCH EXTENDED BASE ON A CONCRETE FOUNDATION INCLUDING CONTROLLER IDENTIFICATION PLAQUE, AND 24 V 650 W TWO-BATTERY UNINTERUPTIBLE POWER SUPPLY (UPS) SYSTEM WITH SEPARATE, SIDE MOUNTED PIGGY-BACK STYLE CABINET (36" x 20" x 15"), BYPASS SWITCH, TWO 79 AH BATTERIES. BOTH CABINETS SHALL HAVE INTERIOR LED LIGHTING AND GFCI DUPLEX RECEPTACLE.	1	FLAT BLACK ECONOLITE CABINET ECONOLITE COBALT (NEMA TS2, TYPE 2) UPS: MARATHON TRTC-0654-N1 TRACK 650, TSRC-2003-01, TBHK-009-24, TWO MK 8A24 HEI 79 AH, SNMP-CY54-04 WAVETRONIX SPLICE PANEL



TRAFFIC PROGRESSION DIAGRAM

SEE TRAFFIC SIGNAL PLAN 3B

RING-BARRIER DIAGRAM

SEE TRAFFIC SIGNAL PLAN 3B

CONTROLLER TIMING CHART

SEE TRAFFIC SIGNAL PLAN 3B

COORDINATION PLAN

SEE TRAFFIC SIGNAL PLAN 3B

ACTION PLAN

SEE TRAFFIC SIGNAL PLAN 3B

SCHEDULE PLAN

SEE TRAFFIC SIGNAL PLAN 3B

DAY PLAN

SEE TRAFFIC SIGNAL PLAN 3B

WEEKDAY PEAKS

SEE TRAFFIC SIGNAL PLAN 3B

OVERLAP PROGRAMMING

SEE TRAFFIC SIGNAL PLAN 3B

AM	OFF	PM
47	132	481
980	978	797

AM	OFF	PM
513	527	571
164	106	87

AM	OFF	PM
189	151	349
603	604	475

2022 HOURLY VOLUMES
US ROUTE 2/7 & NB RAMPS

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
	1	31 MARCH 2025	ADDED AUXILIARY CONTROLLER CABINET	BJT

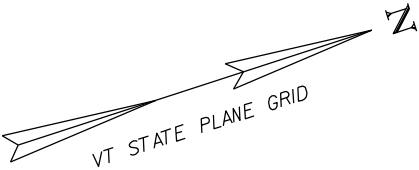
PROJECT NAME: COLCHESTER
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)

FILE NAME: t12d046sig2.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: B. TIETZE
TRAFFIC SIGNAL PLAN 4B - I-89 NB RAMPS

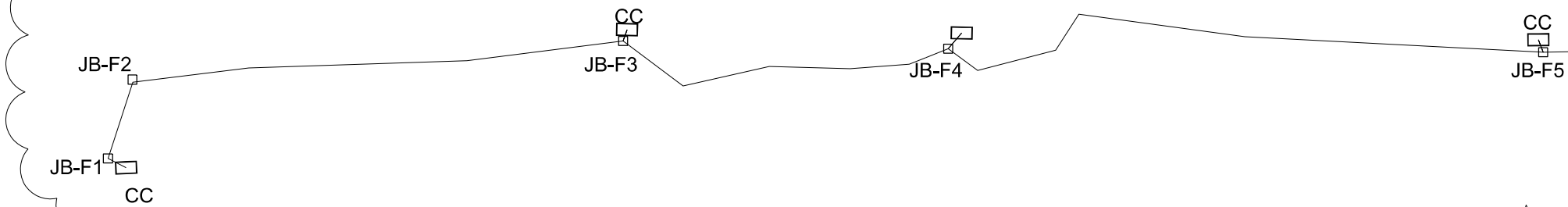
PLOT DATE: 4/2/2025
DRAWN BY: B. TIETZE
CHECKED BY: HSD
SHEET 307 OF 405

INTERCONNECTING FIBER OPTIC CABLE

STA. 4+15, 49' RT - STA. 3+98, 40' RT (CC TO JB-F1)
STA. 3+98, 40' RT - STA. 4+24, 39' LT (JB-F1 TO JB-F2)
STA. 4+24, 39' LT - STA. 9+15, 73' LT (JB-F2 TO JB-F3)
STA. 9+15, 73' LT - STA. 9+19, 81' LT (JB-F3 TO CC)
STA. 9+15, 73' LT - STA. 12+41, 58' LT (JB-F3 TO JB-F4)
STA. 12+41, 58' LT - STA. 12+55, 73' LT (JB-F4 TO CC)
STA. 12+41, 58' LT - STA. 18+36, 37' LT (JB-F4 TO JB-F5)
STA. 18+36, 37' LT - STA. 18+30, 49' LT (JB-F5 TO CC)
STA. 18+36, 37' LT - STA. 25+01, 41' LT (JB-F5 TO JB-F6)



MATCHLINE - SEE INTERCONNECTING FIBER OPTIC CABLE PLAN 2



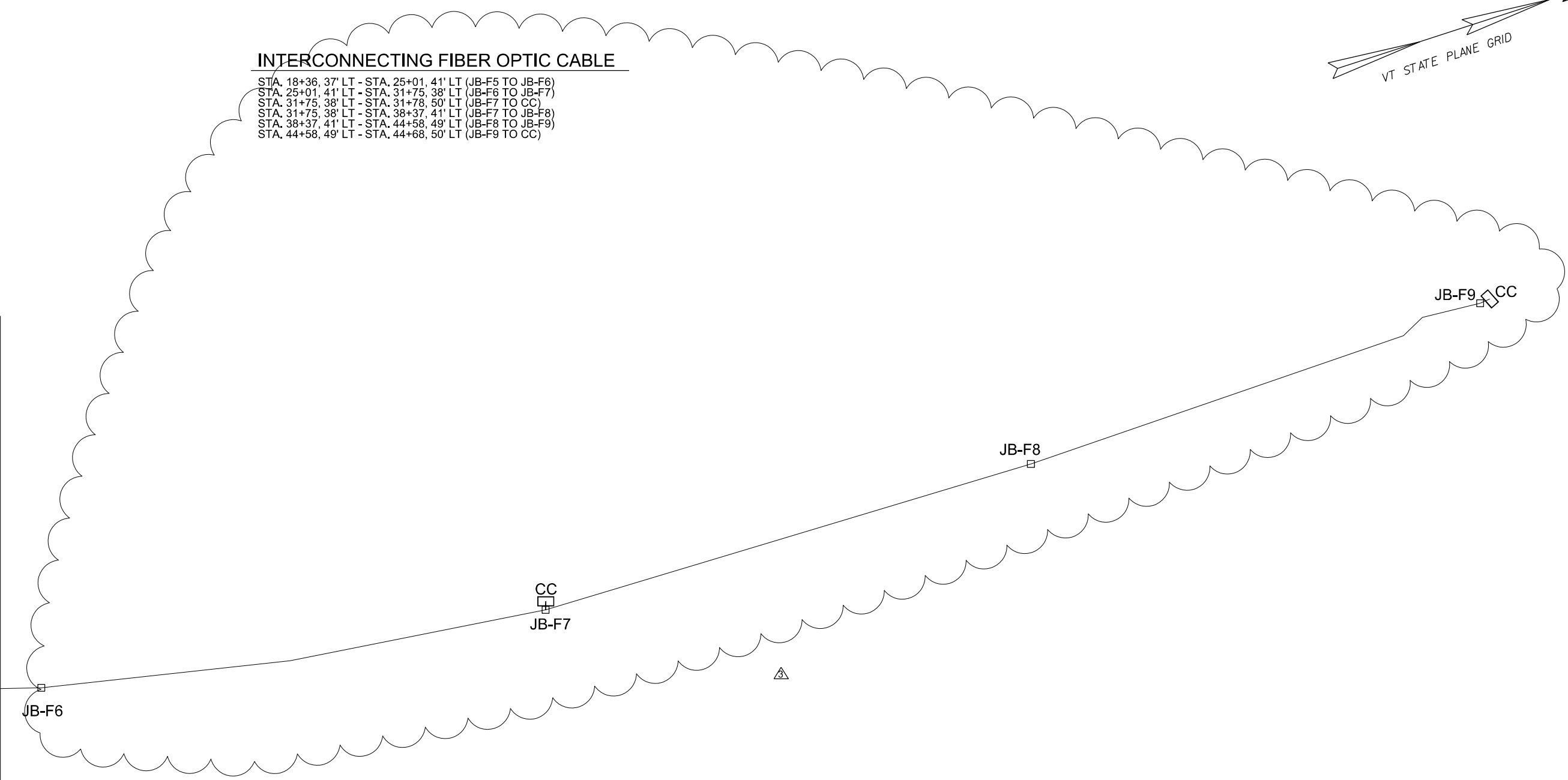
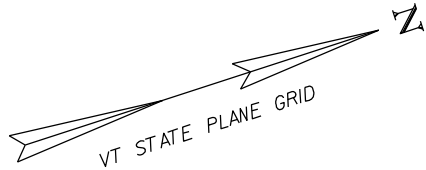
ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MARCH 2025	NEW NOTES AND LAYOUT	BJT

PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)	
FILE NAME: fibl.dgn	PLOT DATE: 4/2/2025
PROJECT LEADER: M. LACROIX	DRAWN BY: M. KEMERER
DESIGNED BY: B. TIETZE	CHECKED BY: HSD
SIGNAL INTERCONNECT PLAN SHEET 1	SHEET 319 OF 405

MATCHLINE - SEE INTERCONNECTING FIBER OPTIC CABLE PLAN 1

INTERCONNECTING FIBER OPTIC CABLE

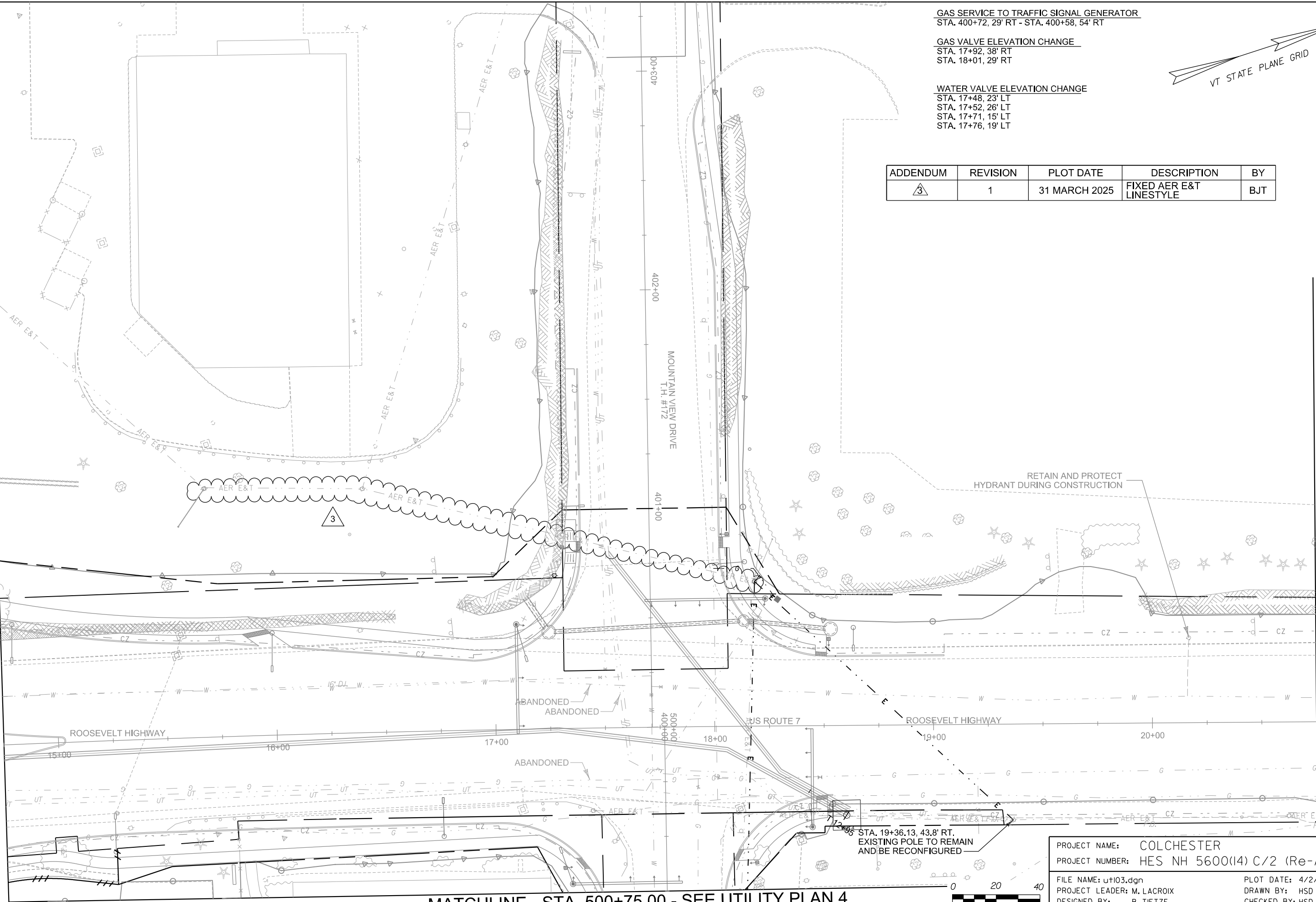
STA. 18+36, 37' LT - STA. 25+01, 41' LT (JB-F5 TO JB-F6)
STA. 25+01, 41' LT - STA. 31+75, 38' LT (JB-F6 TO JB-F7)
STA. 31+75, 38' LT - STA. 31+78, 50' LT (JB-F7 TO CC)
STA. 31+75, 38' LT - STA. 38+37, 41' LT (JB-F7 TO JB-F8)
STA. 38+37, 41' LT - STA. 44+58, 49' LT (JB-F8 TO JB-F9)
STA. 44+58, 49' LT - STA. 44+68, 50' LT (JB-F9 TO CC)



ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
△	1	31 MARCH 2025	NEW NOTES AND LAYOUT	BJT

PROJECT NAME: COLCHESTER	
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)	
FILE NAME: fib2.dgn	PLOT DATE: 4/2/2025
PROJECT LEADER: M. LACROIX	DRAWN BY: M. KEMERER
DESIGNED BY: B. TIETZE	CHECKED BY: HSD
SIGNAL INTERCONNECT PLAN SHEET 2	SHEET 320 OF 405

MATCHLINE - STA. 14+75.00 - SEE UTILITY PLAN 2



GAS SERVICE TO TRAFFIC SIGNAL GENERATOR
STA. 400+72, 29' RT - STA. 400+58, 54' RT

GAS VALVE ELEVATION CHANGE
STA. 17+92, 38' RT
STA. 18+01, 29' RT

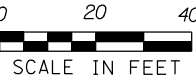
WATER VALVE ELEVATION CHANGE
STA. 17+48, 23' LT
STA. 17+52, 26' LT
STA. 17+71, 15' LT
STA. 17+76, 19' LT

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MARCH 2025	FIXED AER E&T LIFESTYLE	BJT

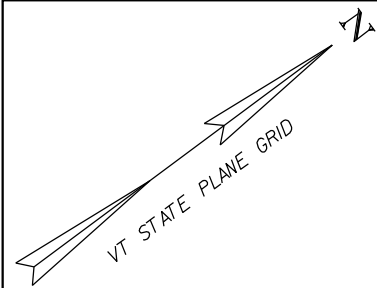
MATCHLINE - STA. 20+75.00 - SEE UTILITY PLAN 5

MATCHLINE - STA. 500+75.00 - SEE UTILITY PLAN 4

STA. 19+36.13, 43.8' RT.
EXISTING POLE TO REMAIN
AND BE RECONFIGURED



PROJECT NAME:	COLCHESTER	PLOT DATE:	4/2/2025
PROJECT NUMBER:	HES NH 5600(I4) C/2 (Re-Ad)	DRAWN BY:	HSD
FILE NAME:	ut103.dgn	CHECKED BY:	HSD
PROJECT LEADER:	M. LACROIX	SHEET	332 OF 405
DESIGNED BY:	B. TIETZE		
UTILITY PLAN SHEET	3		



MATCHLINE - STA. 48+00.00 - SEE UTILITY PLAN 9

STA. 49+06, 31' LT.
PROPOSED POLE

HAND DIG FOR
GUARDRAIL POSTS

STA. 50+80, 24' LT.
PROPOSED POLE WITH NEW
GUY WITHIN NEW ISLAND

PROPOSED RELOCATION OF DISTRIBUTION GAS LINE
TO BOX WIDENING FROM STA. 49+21, 22' RT TO
STA. 45+56, 26' RT.

ADDENDUM	REVISION	PLOT DATE	DESCRIPTION	BY
3	1	31 MARCH 2025	REMOVED E AND G LINES BEYOND MATCH LINES	BJT



PROJECT NAME: COLCHESTER		PLOT DATE: 4/2/2025
PROJECT NUMBER: HES NH 5600(I4) C/2 (Re-Ad)		DRAWN BY: HSD
FILE NAME: ut110.dgn		CHECKED BY: HSD
PROJECT LEADER: M. LACROIX		SHEET 339 OF 405
DESIGNED BY: B. TIETZE		
UTILITY PLAN SHEET 10		

MATCHLINE - STA. 53+25.00 - SEE UTILITY PLAN 11

