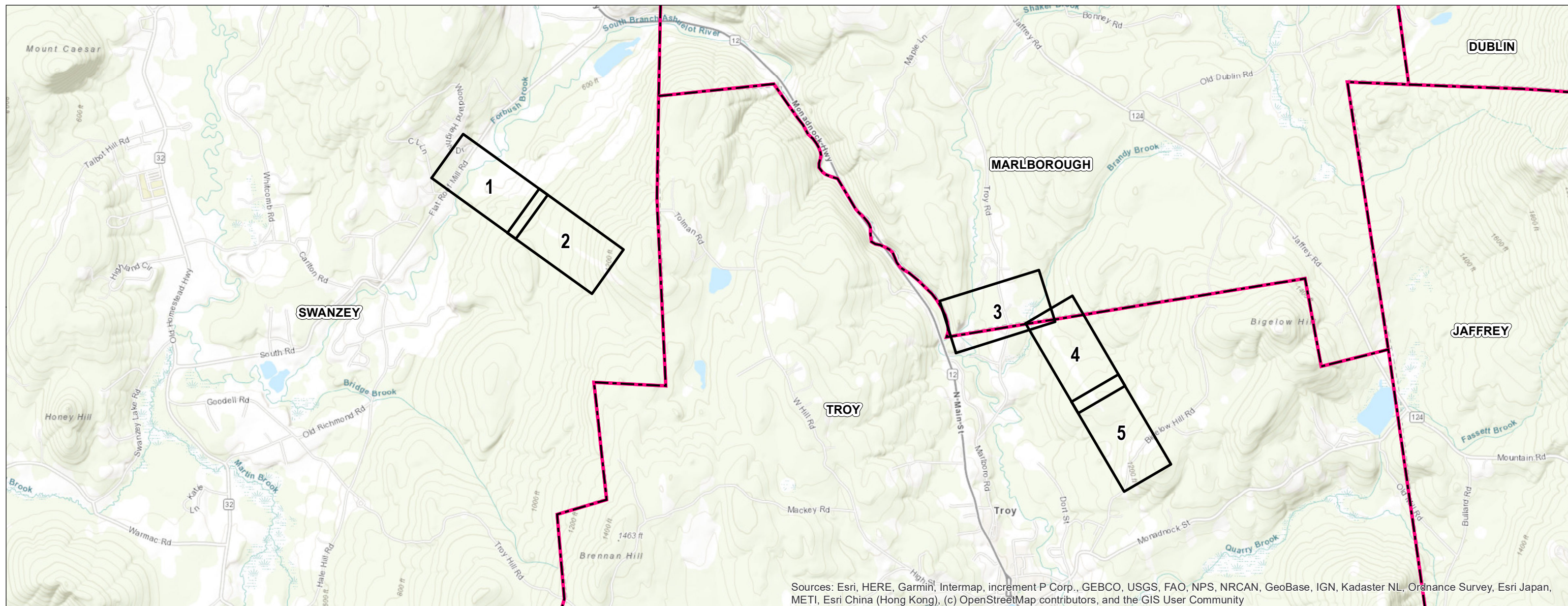


# T198 Line - Structure Replacement and OPGW Project

SWANZEY, MARLBOROUGH, AND TROY, NEW HAMPSHIRE



Alteration of Terrain Surface and Groundwater Overlay Planset

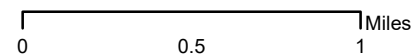
Date: January 21, 2022



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

### Legend

-  MAP PAGE
-  TOWN BOUNDARY



### INDEX OF FIGURES

Title Sheet / Index Map  
Map Sheets 1-5  
Note Sheets 1-3

NO.	DATE	REVISIONS

PREPARED FOR:

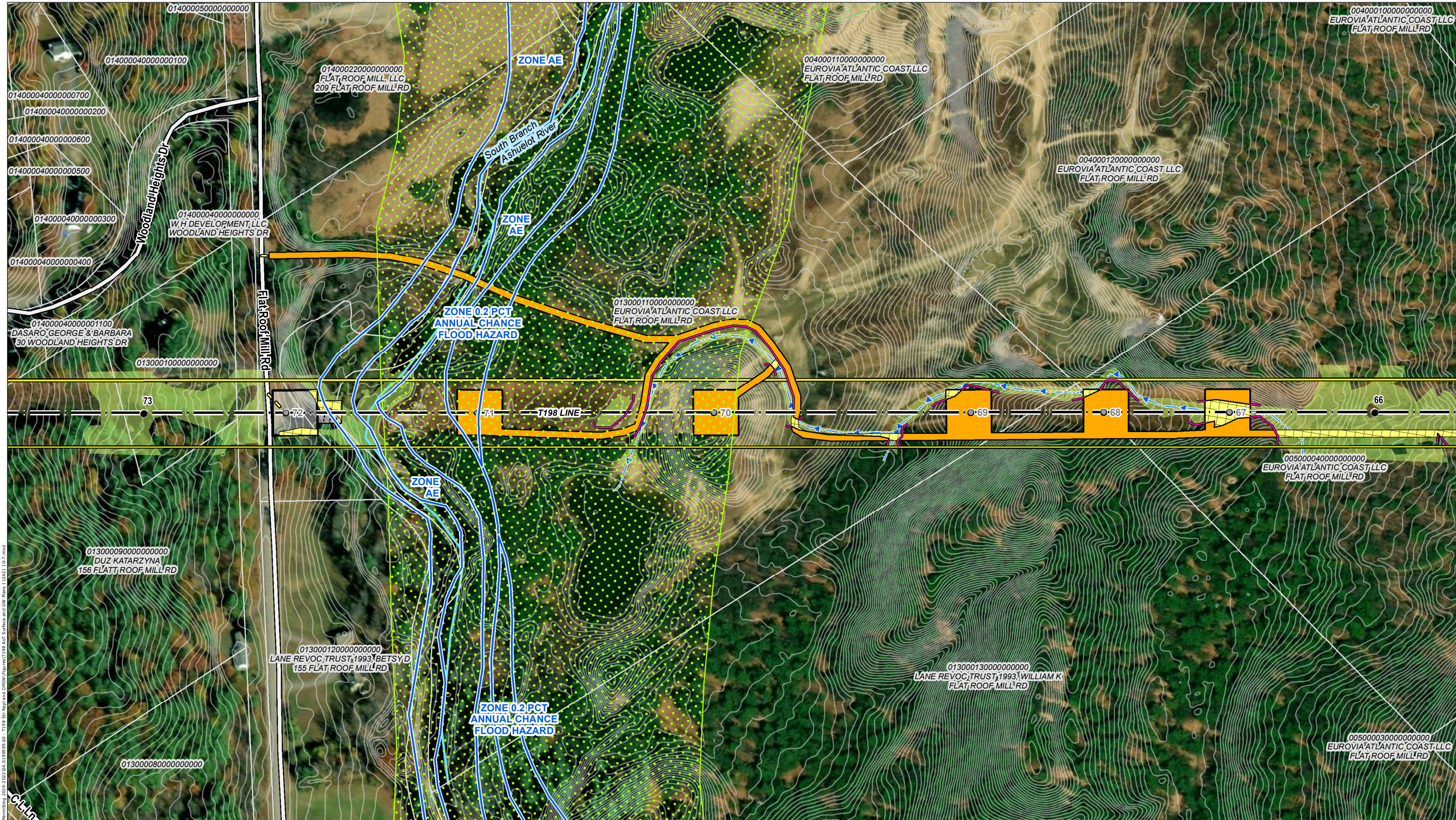


13 Legends Drive  
Hooksett, NH 03106

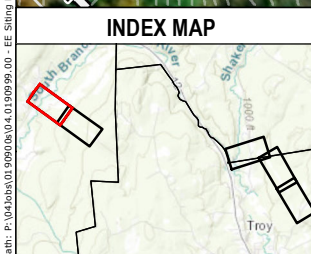
PREPARED BY:



GZA GeoEnvironmental, Inc.  
Engineers and Scientists  
www.gza.com



Path: P:\Jobs\01\_9909\04\_01\_9909\_00 - E1 Staging Permitting 2019-2022\04\_01\_9909\_00 - T198 Str. Repl and OPGW Figures\T198 Str. Surface and GW Plans 112421 - D17.mxd  
 Date: 1/11/2022 10:58:11 AM



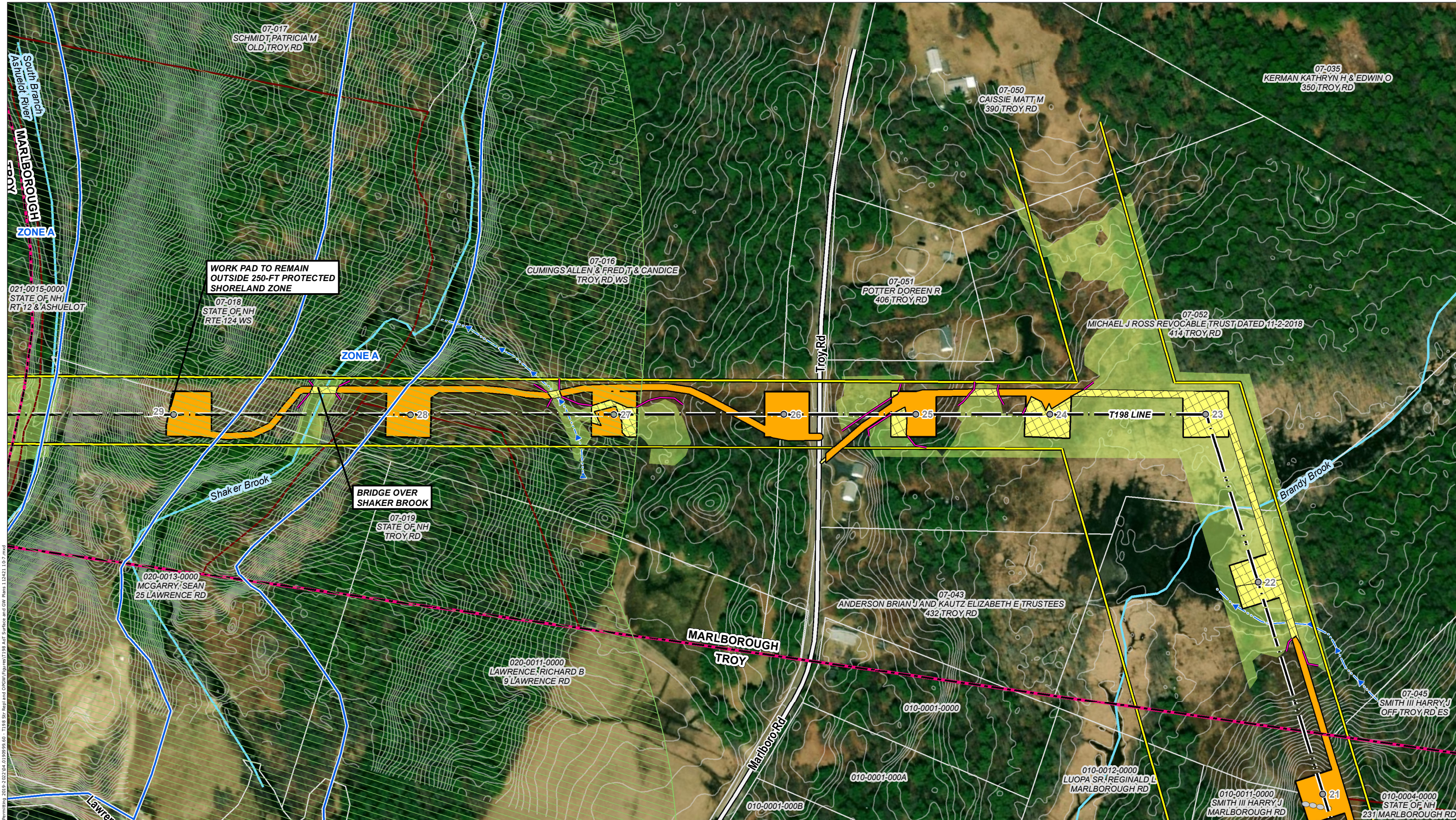
- ▲ LOCAL POTENTIAL CONTAMINATION SOURCES (NONE PRESENT)
- FEMA SPECIAL FLOOD HAZARD AREA
- WATERSHEDS WITH CHLORIDE IMPAIRMENTS 2016 (NONE PRESENT)
- DESIGNATED RIVER QUARTER MILE BUFFER (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GAA (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GA1 (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GA2
- OUTSTANDING RESOURCE WATER WATERSHED (NONE PRESENT)
- WATER SUPPLY INTAKE PROTECTION AREAS (NONE PRESENT)
- WELLHEAD PROTECTION AREAS (NONE PRESENT)
- SURFACE WATERS WITH IMPAIRMENTS 2016 WITH QUARTER MILE BUFFER
- ALL LAKES WITH A QUARTER MILE BUFFER (NONE PRESENT)
- CLASS A SURFACE WATERS RSA 48A9 (NONE PRESENT)
- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AOT DISTURBANCE AREA
- UPLAND MATTING
- TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- PULL PAD
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHD DOT ROADS
- GATE
- 2-FT CONTOURS
- STRAW WATTLE
- TOWN BOUNDARY
- STONE WALL
- PARCEL BOUNDARY
- EVERSOURCE OWNED PARCEL
- STATE OWNED PARCEL
- FIELD DELINEATED STREAM
- NHD FLOWLINE

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

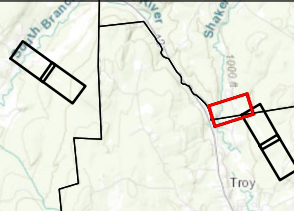
<b>EVSOURCE ENERGY</b>	
<b>T198 Line Structure Replacement &amp; OPGW Project Surface and Groundwater Overlay Plans</b>	
Swanzy, NH	MAP SHEET
Date: January, 2022	<b>1 OF 5</b>
NO.	DATE
REVISIONS	





Path: P:\Jobs\01\_9900\04\_01\_9909\99\_00 - E-String Permittals 2019-2022\04\_01\_9909\99\_00 - T198 Str. Repl and OPGW Figures\T198 Str. Surface and GW Plans 112421\_107.mxd  
 Date: 1/11/2022 10:45:00 AM

**INDEX MAP**



- ▲ LOCAL POTENTIAL CONTAMINATION SOURCES (NONE PRESENT)
- FEMA SPECIAL FLOOD HAZARD AREA
- WATERSHEDS WITH CHLORIDE IMPAIRMENTS 2016 (NONE PRESENT)
- DESIGNATED RIVER QUARTER MILE BUFFER (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GAA (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GA1 (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GA2
- GROUNDWATER CLASSIFICATION AREAS GA3
- OUTSTANDING RESOURCE WATER WATERSHED (NONE PRESENT)
- WATER SUPPLY INTAKE PROTECTION AREAS (NONE PRESENT)
- WELLHEAD PROTECTION AREAS (NONE PRESENT)
- SURFACE WATERS WITH IMPAIRMENTS 2016 WITH QUARTER MILE BUFFER
- ALL LAKES WITH A QUARTER MILE BUFFER (NONE PRESENT)
- CLASS A SURFACE WATERS RSA 489A (NONE PRESENT)
- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AOT DISTURBANCE AREA
- UPLAND MATTING
- TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHD DOT ROADS
- GATE
- 2-FT CONTOURS
- STRAW WATTLE
- TOWN BOUNDARY
- STONE WALL
- PARCEL BOUNDARY
- EVERSOURCE OWNED PARCEL
- STATE OWNED PARCEL

- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHD DOT ROADS
- GATE
- 2-FT CONTOURS
- STRAW WATTLE
- TOWN BOUNDARY
- STONE WALL
- PARCEL BOUNDARY
- EVERSOURCE OWNED PARCEL
- STATE OWNED PARCEL

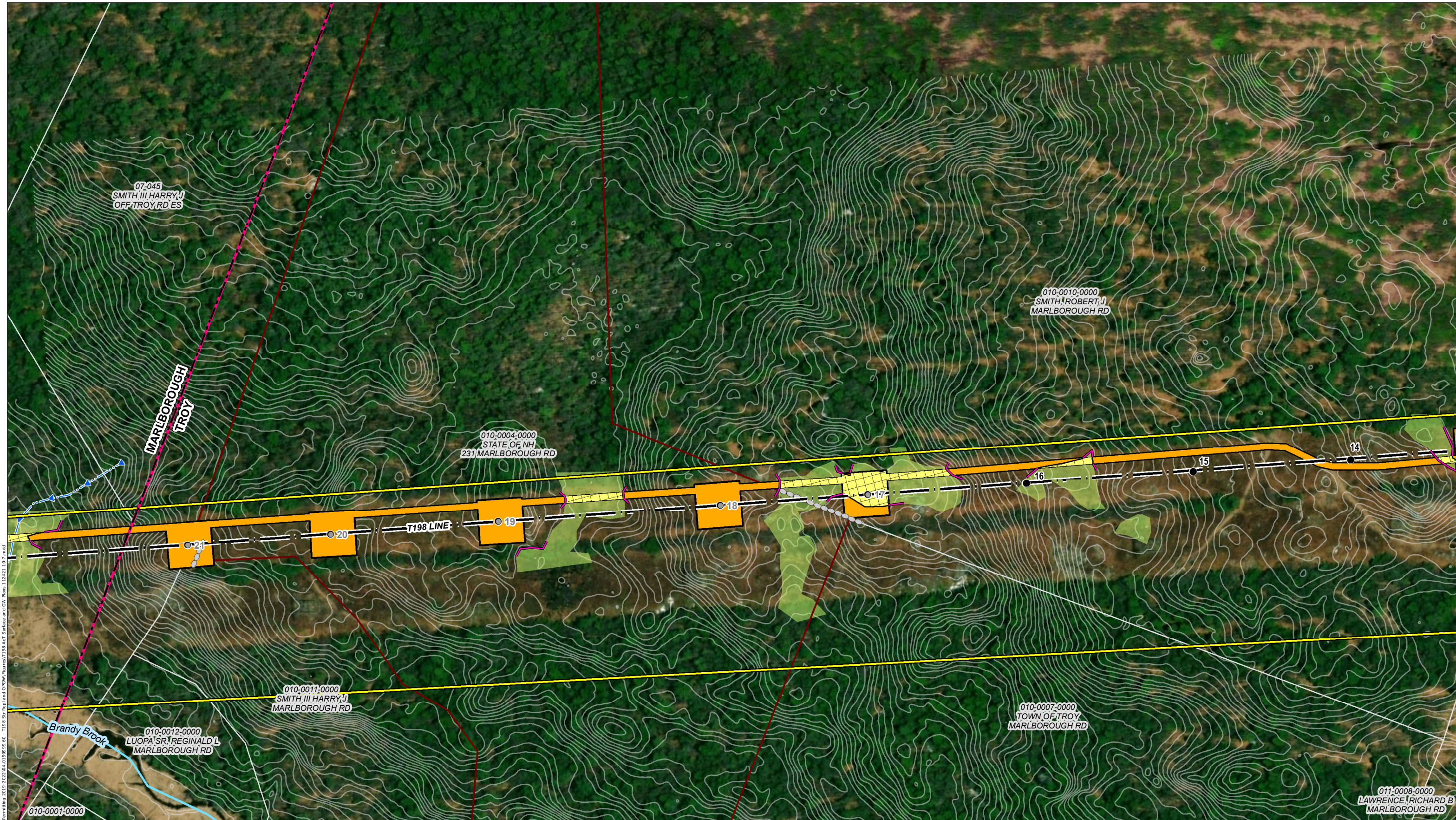
This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

NO.	DATE	REVISIONS

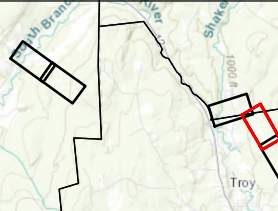
**T198 Line Structure Replacement & OPGW Project**  
Surface and Groundwater Overlay Plans

Troy, NH	MAP SHEET
Date: January, 2022	3 OF 5



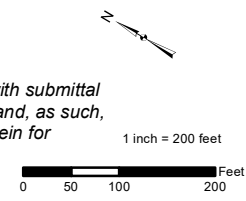
Path: P:\Jobs\01\_9900\01\_01\_9900\_01 - E1 Staging Permitting 2019-2022\01\_01\_9900\_01 - T198 Line Replacement and OPGW Figures\T198 Line Surface and GW Plans 112421.dwg  
 Date: 1/11/2022 10:00:00 AM

**INDEX MAP**



- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li><span style="color: red;">▲</span> LOCAL POTENTIAL CONTAMINATION SOURCES (NONE PRESENT)</li> <li><span style="color: blue;">■</span> FEMA SPECIAL FLOOD HAZARD AREA</li> <li><span style="color: pink;">■</span> WATERSHEDS WITH CHLORIDE IMPAIRMENTS 2016 (NONE PRESENT)</li> <li><span style="color: lightblue;">■</span> DESIGNATED RIVER QUARTER MILE BUFFER (NONE PRESENT)</li> <li><span style="color: yellow;">■</span> GROUNDWATER CLASSIFICATION AREAS GAA (NONE PRESENT)</li> <li><span style="color: lightgreen;">■</span> GROUNDWATER CLASSIFICATION AREAS GA1 (NONE PRESENT)</li> <li><span style="color: lightblue;">■</span> GROUNDWATER CLASSIFICATION AREAS GA2</li> <li><span style="color: lightblue;">■</span> OUTSTANDING RESOURCE WATER WATERSHED (NONE PRESENT)</li> <li><span style="color: lightblue;">■</span> WATER SUPPLY INTAKE PROTECTION AREAS (NONE PRESENT)</li> <li><span style="color: lightblue;">■</span> WELLHEAD PROTECTION AREAS (NONE PRESENT)</li> <li><span style="color: lightblue;">■</span> SURFACE WATERS WITH IMPAIRMENTS 2016 WITH QUARTER MILE BUFFER</li> <li><span style="color: lightblue;">■</span> ALL LAKES WITH A QUARTER MILE BUFFER (NONE PRESENT)</li> <li><span style="color: lightblue;">■</span> CLASS A SURFACE WATERS RSA 485A9 (NONE PRESENT)</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: black;">—</span> EXISTING T198 TRANSMISSION LINE</li> <li><span style="color: yellow;">—</span> APPROX. ROW</li> <li><span style="color: black;">●</span> EXISTING T198 STRUCTURE</li> <li><span style="color: white;">●</span> EXISTING T198 STRUCTURE TO BE REPLACED</li> <li><span style="color: orange;">■</span> AOT DISTURBANCE AREA</li> <li><span style="color: green;">■</span> UPLAND MATTING</li> <li><span style="color: yellow;">■</span> TEMPORARY WETLAND IMPACT</li> <li><span style="color: black;">○</span> PROPOSED ACCESS ROUTE</li> <li><span style="color: black;">■</span> WORK PAD</li> <li><span style="color: black;">■</span> PULL PAD</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> FIELD DELINEATED WETLANDS</li> <li><span style="color: blue;">■</span> POTENTIAL VERNAL POOL</li> <li><span style="color: black;">—</span> NH/DOT ROADS</li> <li><span style="color: blue;">■</span> GATE</li> <li><span style="color: black;">—</span> 2-FT CONTOURS</li> <li><span style="color: purple;">■</span> STRAW WATTLE</li> <li><span style="color: black;">—</span> TOWN BOUNDARY</li> <li><span style="color: black;">—</span> STONE WALL</li> <li><span style="color: black;">—</span> PARCEL BOUNDARY</li> <li><span style="color: red;">■</span> EVERSOURCE OWNED PARCEL</li> <li><span style="color: red;">■</span> STATE OWNED PARCEL</li> <li><span style="color: blue;">—</span> FIELD DELINEATED STREAM</li> <li><span style="color: blue;">—</span> NHD FLOWLINE</li> </ul> |
|---|---|--|

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*

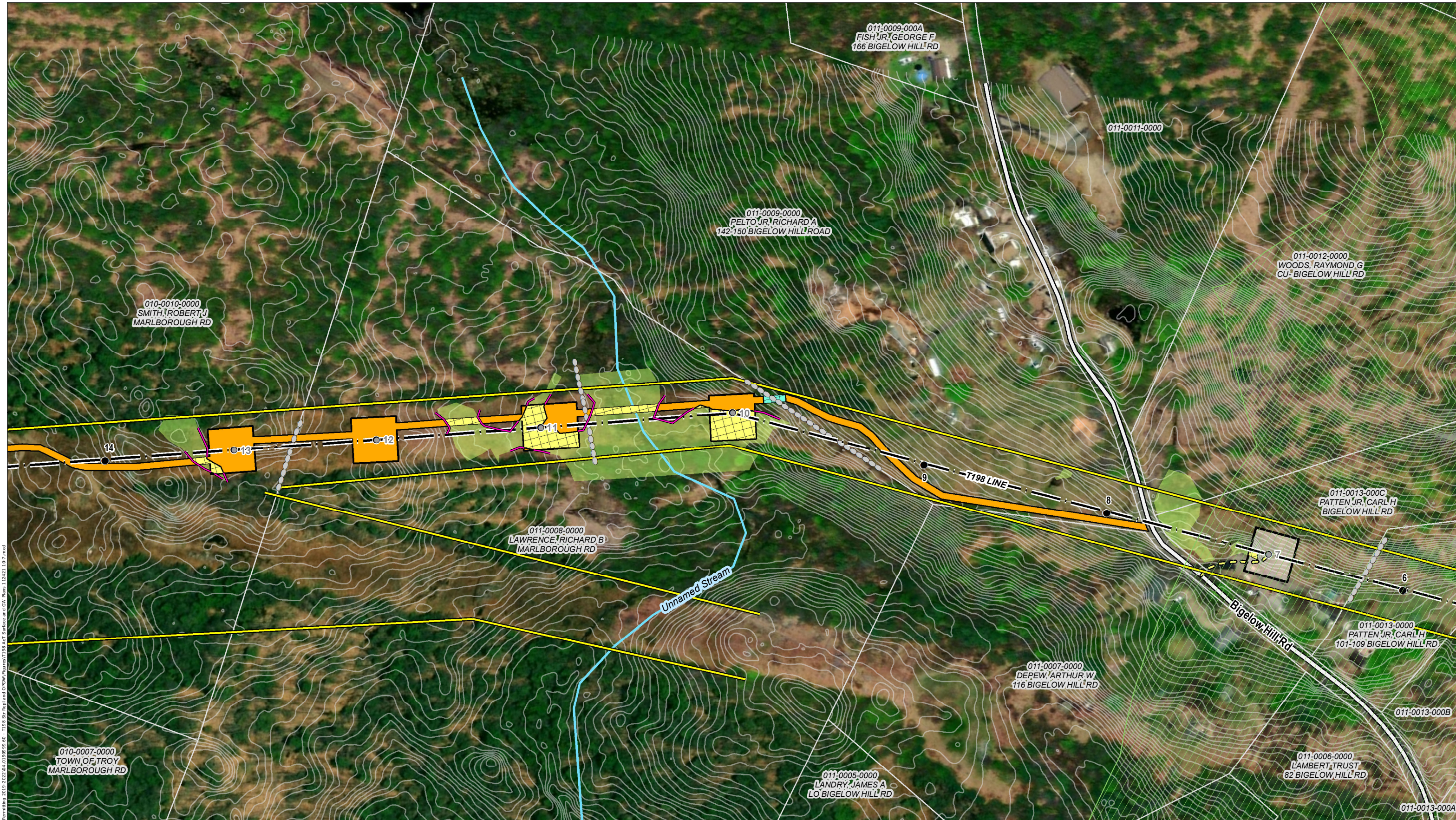


NO.	DATE	REVISIONS

**EVERSOURCE ENERGY**

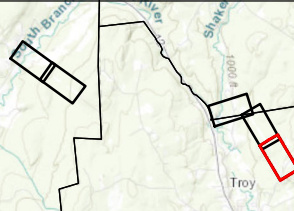
**T198 Line Structure Replacement & OPGW Project  
Surface and Groundwater Overlay Plans**

Troy, NH	MAP SHEET
Date: January, 2022	<b>4 OF 5</b>



Path: P:\Jobs\01\_9909\01\_04\_19\9909\_01 - E1 Staging Permitting 2019-2020\01\_04\_19\9909\_01 - T198 Str. Repl and OPGW Figures\T198 Str. Surface and GW Overlay.mxd  
 Date: 1/11/2022 10:41:11 AM

**INDEX MAP**



- ▲ LOCAL POTENTIAL CONTAMINATION SOURCES (NONE PRESENT)
- FEMA SPECIAL FLOOD HAZARD AREA
- WATERSHEDS WITH CHLORIDE IMPAIRMENTS 2016 (NONE PRESENT)
- DESIGNATED RIVER QUARTER MILE BUFFER (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GAA (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GA1 (NONE PRESENT)
- GROUNDWATER CLASSIFICATION AREAS GA2
- OUTSTANDING RESOURCE WATER WATERSHED (NONE PRESENT)
- WATER SUPPLY INTAKE PROTECTION AREAS (NONE PRESENT)
- WELLHEAD PROTECTION AREAS (NONE PRESENT)
- SURFACE WATERS WITH IMPAIRMENTS 2016 WITH QUARTER MILE BUFFER
- ALL LAKES WITH A QUARTER MILE BUFFER (NONE PRESENT)
- CLASS A SURFACE WATERS RSA 48A9 (NONE PRESENT)
- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AOT DISTURBANCE AREA
- UPLAND MATTING
- TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHD DOT ROADS
- GATE
- 2-FT CONTOURS
- STRAW WATTLE
- TOWN BOUNDARY
- STONE WALL
- PARCEL BOUNDARY
- EVERSOURCE OWNED PARCEL
- STATE OWNED PARCEL

- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AOT DISTURBANCE AREA
- UPLAND MATTING
- TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHD DOT ROADS
- GATE
- 2-FT CONTOURS
- STRAW WATTLE
- TOWN BOUNDARY
- STONE WALL
- PARCEL BOUNDARY
- EVERSOURCE OWNED PARCEL
- STATE OWNED PARCEL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*

1 inch = 200 feet

NO.	DATE	REVISIONS

**T198 Line Structure Replacement & OPGW Project  
Surface and Groundwater Overlay Plans**

Troy, NH	MAP SHEET
Date: January, 2022	<b>5 OF 5</b>

© 2022 - GZA GeoEnvironmental, Inc. P:\04\Jobs\1909099\04\_0190999\_00 - EE Sting Permitting 2019-2022\04\_0190999\_00 - T198 Str Repl and OPGW\Figures\T198 AOT Notesheet 1 10-7.mxd, 3/22/2022, 2:40:47 PM, lindsey.white

**CONSTRUCTION SEQUENCE:**

1. WETLAND BOUNDARIES TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION.
2. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL PROVIDED, AS NECESSARY.
3. WETLAND IMPACTS ASSOCIATED WITH WETLAND CROSSINGS ARE REQUIRED FOR ACCESS BETWEEN STRUCTURES WITHIN THE RIGHT OF WAY.
4. ADEQUATE PRECAUTION SHALL BE EXERCISED TO AVOID SPILLAGE OF FUEL OILS, CHEMICALS, OR SIMILAR SUBSTANCES: NO FUELS, LUBRICANTS, CHEMICALS OR SIMILAR SUBSTANCES SHALL BE STORED BENEATH TREES OR IN THE VICINITY OF ANY WETLANDS, RIVER, STREAM OR OTHER BODY OF WATER; OR IN THE VICINITY OF NATURAL OR MAN-MADE CHANNELS LEADING THERETO. NO POWER EQUIPMENT SHALL BE STORED, MAINTAINED, OR FUELED IN ANY AREA ADJACENT TO A WETLAND, RIVER, STREAM OR OTHER BODY OF WATER.
5. REMOVE COMPLETELY ALL CONTAMINATION FROM ANY SPILLAGE OF CHEMICALS OR PETROLEUM PRODUCT WITH COMPLETE REHABILITATION OF THE AFFECTED AREA.
6. ACCESS ROUTES HAVE BEEN SELECTED TO PREVENT DEGRADATION OF THE RIGHT-OF-WAY AND MINIMIZE ENVIRONMENTAL IMPACT. OPERATIONS SHALL BE CONFINED TO THE SPECIFIED ACCESS ROUTES WITHIN THE PROPOSED WETLAND IMPACT AREA. ACCESS ROUTES SHALL NOT EXCEED A 16 FOOT-WIDTH.
7. IMPACT TO VEGETATION WITHIN WETLANDS WILL BE LIMITED TO THE EXTENT NECESSARY TO PLACE THE TIMBER MATS WHERE REQUIRED.
8. LOW GROWING VARIETIES OF VEGETATION ADJACENT TO WETLANDS SHALL BE PRESERVED TO THE EXTENT POSSIBLE. STUMPS AND ROCKS SHALL NOT BE REMOVED, AND THERE SHALL BE NO EXCAVATIONS, FILLS OR GRADING DONE ADJACENT TO WETLANDS, UNLESS MINOR EXCAVATIONS IS NEEDED FOR ACCESS.
9. TIMBER MATS WILL BE USED ALONG ACCESS ROUTES WITHIN WETLAND AREAS. THESE MATS ARE CONSTRUCTED OF HEAVY TIMBERS OR COMPOSITE MATERIAL, BOLTED TOGETHER, AND ARE PLACED END-TO-END IN THE WETLAND TO SUPPORT HEAVY EQUIPMENT. ALL SWAMP MATS SHALL BE PLACED AND REMOVED SO AS NOT TO CAUSE ANY RUTS, CHANNELS OR DEPRESSIONS, OR OTHERWISE CAUSE ANY UNDUE DISTURBANCE TO WETLANDS.
10. IF TIMBER MAT BMP IS NOT SUFFICIENT DUE TO HIGH WATER, ADDITIONAL BMP'S MAY INCLUDE THE PLACEMENT OF GEOTEXTILE FABRIC, 3"-4" STONE, AND GRAVEL TO PROVIDE A SUITABLE ROAD BED. A TEMPORARY CULVERT MAY BE REQUIRED IN AREAS OF HIGH FLOW TO MAINTAIN HYDROLOGIC CONNECTIVITY. ALL MATERIAL WILL BE REMOVED FROM JURISDICTIONAL AREAS AFTER CONSTRUCTION COMPLETION.
11. NO MATERIAL SHALL BE PLACED IN ANY LOCATION OR IN ANY MANNER SO AS TO IMPAIR SURFACE WATER FLOW INTO, THROUGH OR OUT OF ANY WETLAND AREA. NO INSTALLATION SHALL CREATE AN IMPOUNDMENT THAT WILL IMPEDE THE FLOW OF WATER OR CAUSE FLOODING.
12. NO MATERIAL SHALL BE TAKEN FROM THE WETLANDS AREA EXCEPT THAT WHICH MUST NECESSARILY BE REMOVED FOR THE STRUCTURE OR FOUNDATION PLACEMENT OR STABILIZATION. ALL EXCESS MATERIAL TAKEN FROM THE WETLAND WILL BE REMOVED FROM THE SITE.
13. ANY PROPOSED SUPPORT FILLS SHALL BE CLEAN GRAVEL AND STONE, FREE OF WASTE METAL PRODUCTS, ORGANIC MATERIALS AND SIMILAR DEBRIS AND SHALL NOT EXCEED THE AMOUNT PERMITTED. THIS ALLOWABLE FILL IS THE ONLY FILL THAT MAY REMAIN IN THE WETLAND AFTER CONSTRUCTION. ALL CUT AND FILLS SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
14. INSTALL NEW POLES IN THE LOCATIONS DESIGNATED ON THE PERMITTING PLANS.
15. CABLE INSTALLATION WILL BE PERFORMED IN A MANNER SO AS TO AVOID, OR LIMIT TO THE MAXIMUM EXTENT POSSIBLE, TRAVERSING WETLANDS WITH HEAVY EQUIPMENT. IN SOME CASES, A HELICOPTER MAY BE USED DURING THE INSTALLATION TO MINIMIZE IMPACTS.
16. ALL SWAMP MATS, MATERIAL, AND DEBRIS WILL BE REMOVED FROM THE WORK AREA UPON THE COMPLETION OF CONSTRUCTION.
17. UPLAND DISTURBED AREAS SHALL BE RESTORED AND STABILIZED UPON COMPLETION OF CONSTRUCTION. WORK PAD RESTORATION SHOULD INCLUDE REDUCING THE WORK PAD TO A 30 BY 60 FOOT AREA, AND REDUCING SLOPES TO A MAXIMUM OF 25%. STOCKPILED MATERIAL SHOULD BE SPREAD TO REDUCE ANY UNNECESSARY SLOPES. GRAVEL WORK PADS AND SLOPES SHOULD BE SCARIFIED TO A MINIMUM OF 3" BEFORE SPREADING TOPSOIL/LOAM.
18. ALL TEMPORARY WETLAND IMPACTS WILL BE RE-GRADED TO ORIGINAL CONTOURS FOLLOWING CONSTRUCTION. NEW ENGLAND EROSION CONTROL/RESTORATION MIX, AVAILABLE THROUGH NEW ENGLAND WETLAND PLANTS, INC., 820 WEST STREET, AMHERST, MA 01002, 413-548-8000, OR EQUIVALENT SEED MIX SHALL BE APPLIED IN WETLAND AREAS THAT ARE NOT INUNDATED, AS NECESSARY.
19. SEDIMENT AND EROSION CONTROL MEASURES WILL BE EVALUATED AND REMOVED IF NECESSARY UPON THE COMPLETION OF CONSTRUCTION.
20. COMMERCIAL LOAM WILL NOT BE USED AS PART OF RESTORATION. ONLY IN-SITU TOPSOIL WILL BE USED TO RESTORE DISTURBED AREAS.
21. WHERE OPTIMAL TURTLE BREEDING AREAS OVERLAP WITH DISTURBANCE (AS DETERMINED BY AN ENVIRONMENTAL MONITOR), MINERAL SOILS WILL BE SCARIFIED TO ALLEVIATE COMPACTION AND BECOME MORE SUITED FOR TURTLE BREEDING.

**WINTER CONSTRUCTION NOTES**

1. PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED. STABILIZATION METHODS SHALL INCLUDE SEEDING AND MULCH, AND INSTALLATION OF EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE TEMPORARILY STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL (NHDOT 304.3).

**GENERAL NOTES:**

OWNER: EVERSOURCE ENERGY  
13 LEGENDS DRIVE  
HOOKSETT, NH 03106

1. BASE PLAN PROVIDED BY EVERSOURCE ENERGY. EVERSOURCE ENERGY PROVIDED THE WETLAND DATA. EVERSOURCE ENERGY PROVIDED THE UTILITY DESIGN.
2. JURISDICTIONAL WETLANDS WERE DELINEATED BY TIGHE AND BOND IN 2018, IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPS OF ENGINEERS' "WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1," AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION," JANUARY 2012. WETLANDS WERE REVIEWED BY GZA GEOENVIRONMENTAL, INC. IN JANUARY AND FEBRUARY 2019.
3. GZA PERFORMED A WETLANDS FUNCTION AND VALUES ASSESSMENT IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999, IN THE TOWN OF STRAFFORD.
4. SITE PLAN IS FOR PERMITTING PURPOSES ONLY AND DOES NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
5. THE PROJECT WILL BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
6. IN ACCORANCE WITH ENV-WQ 1505.02, THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
  - A MINIMUM 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED
  - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL HAS BEEN INSTALLED
  - OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

**EROSION CONTROL NOTES:**

1. INSTALLATION OF EROSION CONTROL GRINDINGS AND/OR SILT FENCES SHALL BE COMPLETE PRIOR TO THE START OF WORK IN ANY GIVEN AREA. EROSION CONTROLS SHALL BE USED DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A HEALTHY STAND OF VEGETATION COVER. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER .25" OR GREATER RAINFALL EVENTS.
2. AS REQUIRED, CONSTRUCT TEMPORARY BERMS, SILTATION FENCES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION & SEDIMENTATION OF WETLANDS.
3. THE WORK AREA SHALL BE GRADED AND OTHERWISE SHAPED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE LIMITS OF THE WORK AREA. EROSION CONTROL GRINDINGS WILL BE NECESSARY TO ACCOMPLISH THIS END.
4. ANY STRIPPED TOPSOIL SHALL BE STOCKPILED, WITHOUT COMPACTION, AND STABILIZED AGAINST EROSION, AS NECESSARY.
5. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS, PLANT ANNUAL RYEGRASS PRIOR TO OCTOBER 15TH.
6. EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.

**NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS RELATED TO THREATENED AND ENDAGERED SPECIES**

1. PRIOR TO DAILY CONSTRUCTION ACTIVITIES, TIMBER MATTING WILL BE REVIEWED FOR SNAKES AND TURTLES. GZA WILL PROVIDE AN ENVIRONMENTAL ADDENDUM TO THE DAILY TAILBOARDS BY THE CONTRACTS TO INLCUDE GUIDANCE ON PROTOCOLS FOR SNAKES AND PROVIDE IDENTIFICATION FOR SPOTTED TURTLE, WOOD TURTLE, BLANDING'S TURTLE, AND NORTHERN BLACK RACER SNAKE.
2. OBSERVED SNAKES AND TURTLES WILL BE MOVED OFF OF CONSTRUCTION ACCESS ROADS TO LIMIT AND PREVENT MORTALITY TO SNAKES AND TURTLES DURING CONSTRUCTION.
3. EROSION CONTROL MATTING, IF UTILIZED, WILL CONSIST OF JUTE MATTING. MATTING WITH PLASTIC MESH WILL BE AVOIDED TO LIMIT UNINTENTIONAL MORTALITY TO SNAKES.
4. AT THE CONCLUSION OF THE PROJECT, A SUMMARY REPORT OF ANY RARE SPECIES OBSERVATIONS WILL BE PROVIDED TO THE NHFG NONGAME PROGRAM.
5. IMPACTS TO VERNAL POOLS AND POTENTIAL VERNAL POOLS WILL BE AVOIDED.
6. IF SPOTTED, WOOD OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN A WORK AREA, PLEASE CONTACT MELISSA DOPERALSKI (603-479-1129) OR JOSH MEGYESY (978-578-0802) FOR FURTHER INSTRUCTIONS.
7. IN THE EVENT THAT A RARE OR THREATENED SPECIES IS OBSERVED, THE NEW HAMPSHIRE FISH AND GAME AND NEW HAMPSHIRE NATURAL HERITAGE BUREAU WILL BE NOTIFIED. TURTLE NESTING SEASON EXTENDS FROM LATE MAY THROUGH THE BEGINNING OF JULY. IF WOOD, BLANDING'S OR SPOTTED TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, CONTACT MELISSA DOPERALSKI AT 603-271-1738 OR JOSH MEGYESY AT 603-271-1125 FOR FURTHER INSTRUCTIONS. OBSERVATIONS OF NORTHERN BLACK RACER SNAKES SEEN IN ANY AREA FROM THE END OF SEPTEMBER THROUGH THE MONTH OF APRIL OR OBSERVATIONS OF EASTERN HOGNOSE SNAKE MUST BE IMMEDIATELY REPORTED TO THE NHFG DEPARTMENT (BRENDAN CLIFFORD AT 603-271-0463 OR MELISSA DOPERALSKI AT 603-271-1738). IF NORTHERN BLACK RACER IS FOUND IN A WORK AREA FROM NOVEMBER THROUGH THE MONTH OF APRIL, WORK SHALL IMMEDIATELY CEASE AND THE OBSERVATION MUST BE REPORTED TO THE NHFG (BRENDAN CLIFFORD OR MELISSA DOPERALSKI).
8. BEGINNING MAY 15 UNTIL THE PROJECT END IN LATE AUGUST, PLEASE BE AWARE OF THE POTENTIAL PRESENCE OF [COMMON NIGHTHAWK] ESPECIALLY IN THE KEENE SECTION OF THE LINE (NHB21-302). IF COMMON NIGHTHAWKS ARE DETERMINED TO BE EXHIBITING NESTING BEHAVIOR OR RAISING YOUNG, WORK WILL BE POSTPONED UNTIL THE CHICKS HAVE FLEDGED AND ARE NO LONGER PRESENT AT THE SITE. PLEASE CONTACT US FOR FURTHER INFORMATION IF THIS OCCURS. PLEASE MAKE SURE THE BIOLOGISTS OVERSEEING THIS PROJECT ARE FAMILIAR WITH THE FLYER AND MAKE IT AVAILABLE TO THE CONSTRUCTION CREW.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

**T198 TRANSMISSION LINE  
OPGW AND STRUCTURE REPLACEMENT PROJECT**  
SWANZEY, TROY, AND MARLBOROUGH  
NEW HAMPSHIRE

**NOTES**

<b>GZA</b> GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		<b>EVERSOURCE</b> ENERGY	
PREPARED BY:	LEW	REVIEWED BY:	TLT
DESIGNED BY:	MJD	CHECKED BY:	DMZ
DATE:	03/22/2022	DRAWN BY:	MJD
		SCALE:	
		PROJECT NO.	04.0190999.60
		REVISION NO.	

**SHEET**  
**S1**

## Best Management Practices (BMP's) for Straw wattles

### Definition and purpose:

Straw wattles are burlap rolls filled with straw that trap sediment and interrupt water flow by reducing slope lengths.

### Applications:

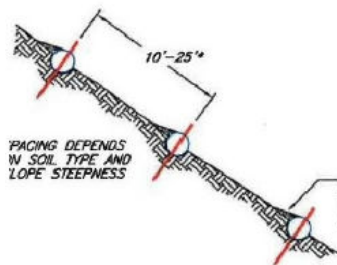
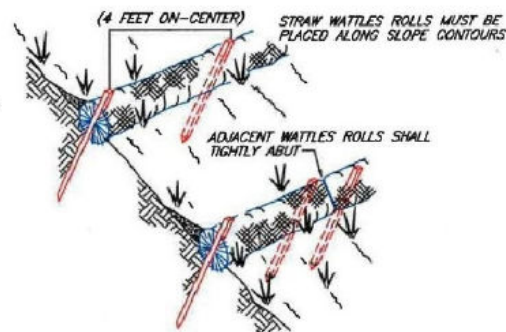
- \* Along erodible or unstabilized slopes
- \* Spread overland waterflow
- \* Trap sediment
- \* Around storm drain inlets to slow water and settle out sediment
- \* Overlap ends approximately 6 inches

### Installation:

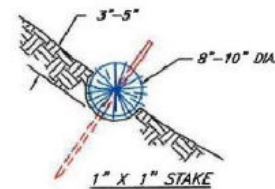
Straw wattles are installed parallel to slope contours and perpendicular to sheet flow.

Spacing\* - Dependent on slope length, soil steepness and soil type (general range 10 - 25').

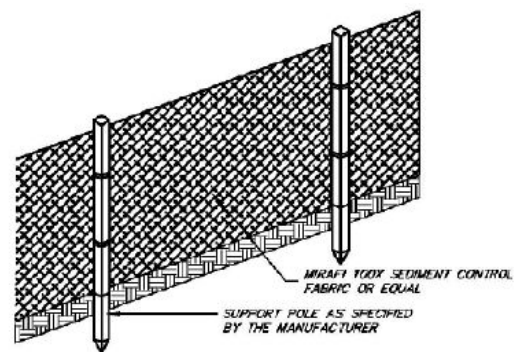
Trenching - 2"-5" inch trench  
Stacking - at each end and four foot on center (i.e. 25 foot wattle uses 6 stacks)



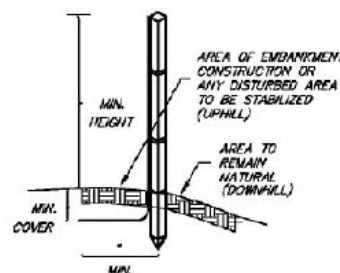
SEDIMENT, ORGANIC MATTER, AND NATIVE SEEDS ARE CAPTURED BEHIND THE WATTLE ROWS.



NOT TO SCALE



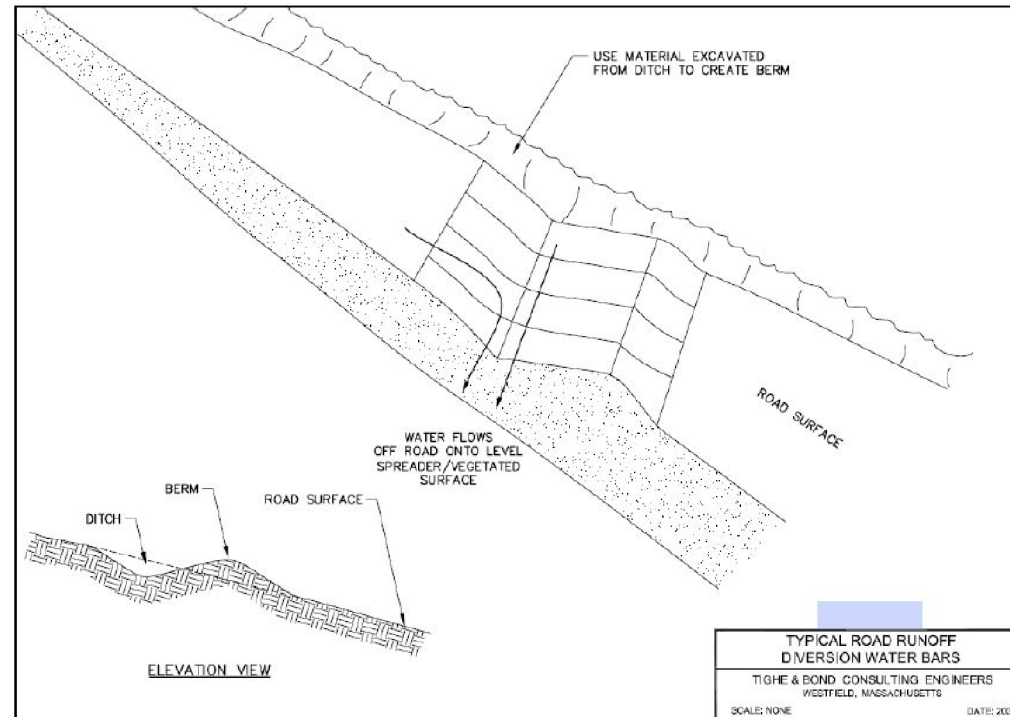
FRONT VIEW



SIDE VIEW

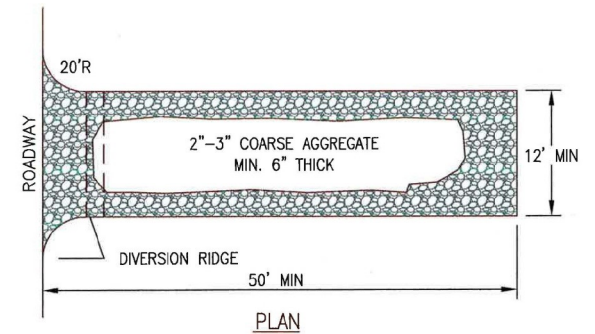
### NOTES (SILT FENCE)

1. THE HEIGHT OF THE BARRIER SHALL NOT EXCEED 36 INCHES.
2. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPliced TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED. SEE MANUFACTURER'S RECOMMENDATIONS.
3. POSTS SHALL BE PLACED AT A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS MANUFACTURER RECOMMENDS.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE OF THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS
5. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND A MINIMUM OF 8 INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
7. FABRIC BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
8. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST ONCE DAILY DURING PROLONGED RAINFALL AND ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
10. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.



ELEVATION VIEW

TYPICAL ROAD RUNOFF DIVERSION WATER BARS  
TIGHE & BOND CONSULTING ENGINEERS  
WESTFIELD, MASSACHUSETTS  
SCALE: NONE DATE: 2007



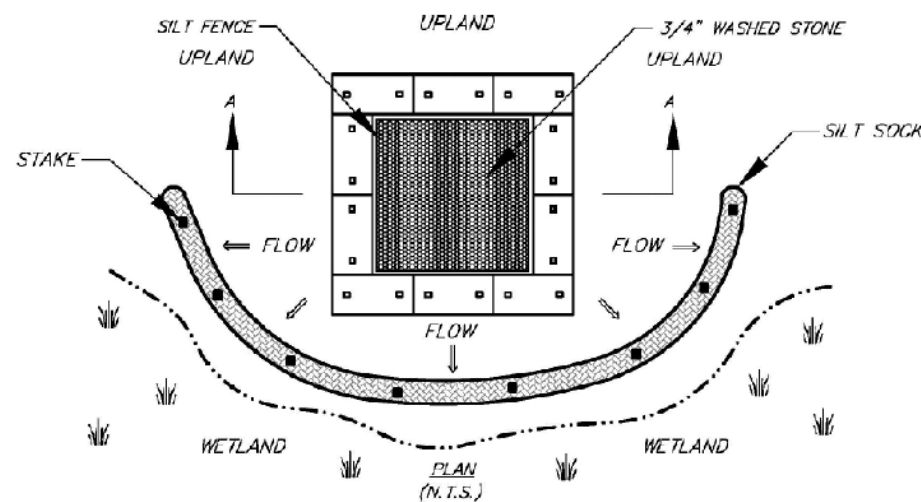
PLAN

### NOTES:

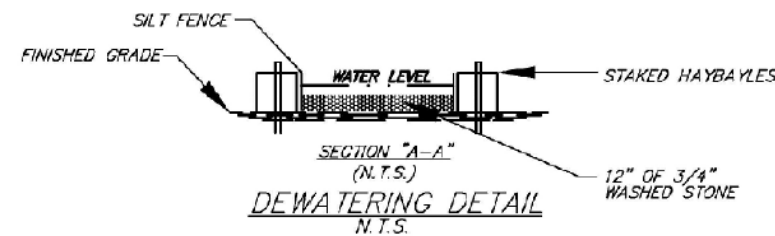
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

## CONSTRUCTION ENTRANCE

NOT TO SCALE



PLAN (N.T.S.)



SECTION "A-A" (N.T.S.)  
DEWATERING DETAIL  
N.T.S.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

T198 TRANSMISSION LINE  
OPGW AND STRUCTURE REPLACEMENT PROJECT  
SWANZEY, TROY, AND MARLBOROUGH  
NEW HAMPSHIRE

## BMP DETAILS

PREPARED BY:  
**GZA** GeoEnvironmental, Inc.  
Engineers and Scientists  
www.gza.com

PREPARED FOR:  
**EVERSOURCE**  
ENERGY

PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET <b>S2</b>
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 11/18/2021	PROJECT NO: 04.0190999.60	REVISION NO:	



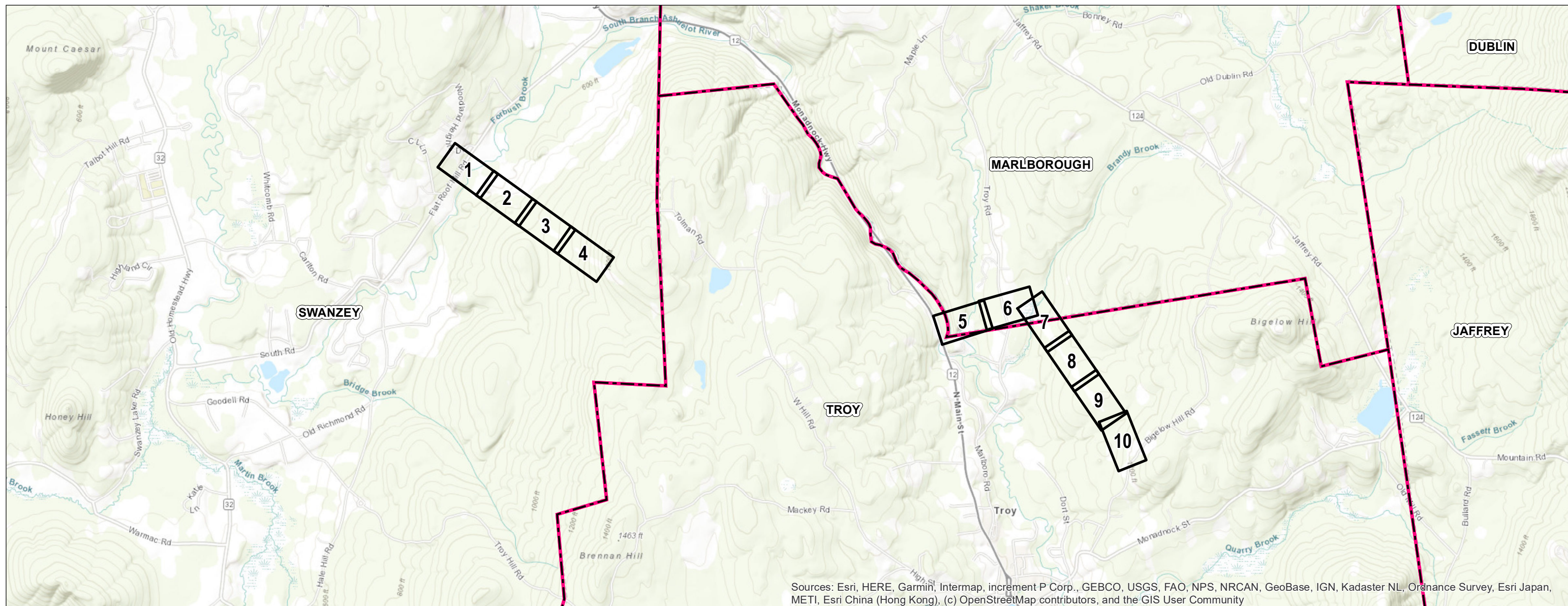


# T198 Line - Structure Replacement and OPGW Project

SWANZEY, MARLBOROUGH, AND TROY, NEW HAMPSHIRE



Alteration of Terrain Permitting Planset

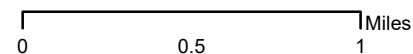
Date: January 21, 2022



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

### Legend

-  MAP PAGE
-  TOWN BOUNDARY



**INDEX OF FIGURES**  
 Title Sheet / Index Map  
 Map Sheets 1-10  
 Note Sheets 1-3

NO.	DATE	REVISIONS

PREPARED FOR:

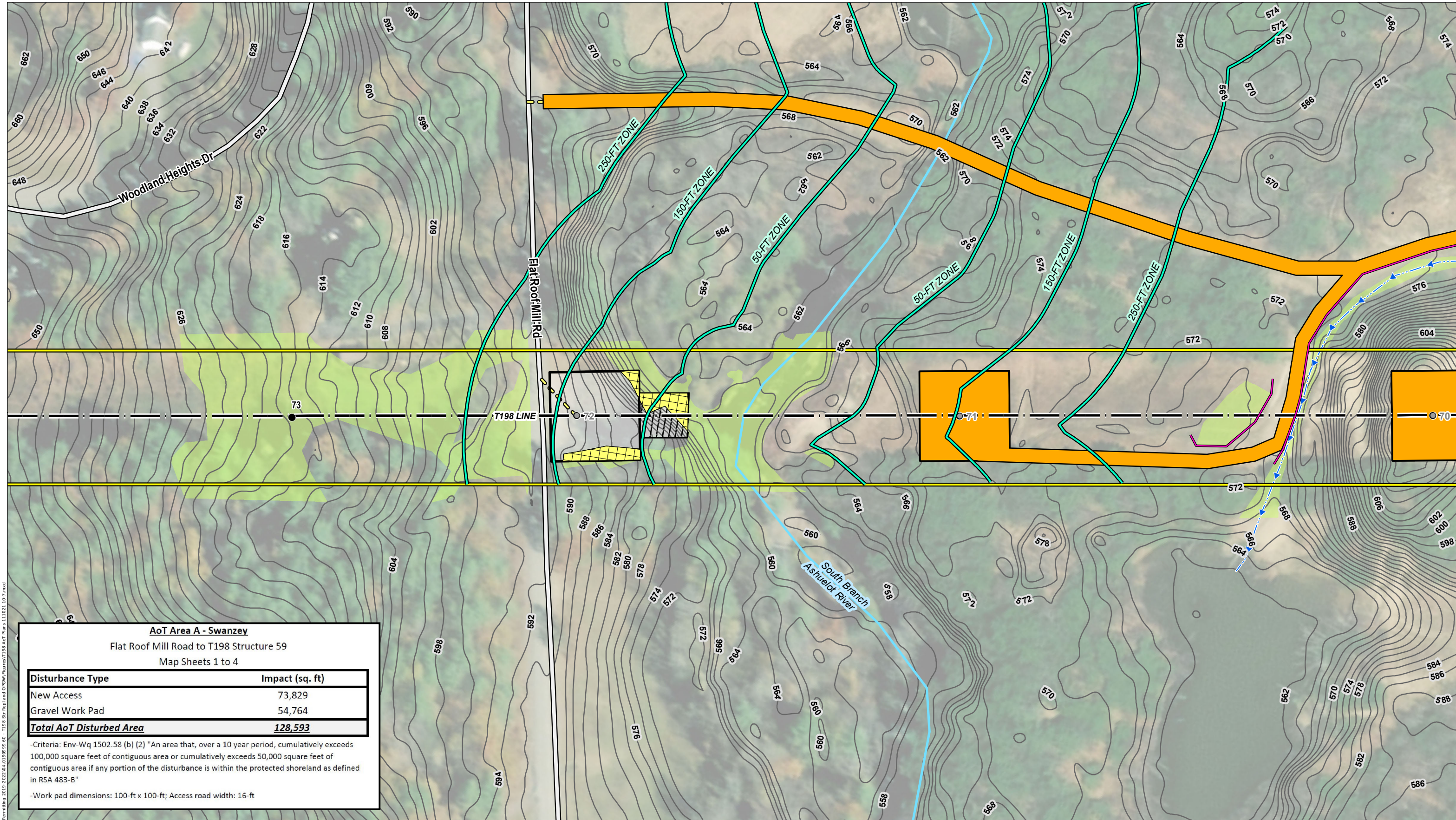


13 Legends Drive  
 Hooksett, NH 03106

PREPARED BY:



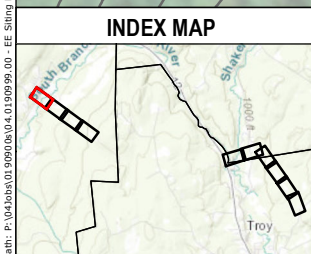
**GZA GeoEnvironmental, Inc.**  
 Engineers and Scientists  
[www.gza.com](http://www.gza.com)



**AoT Area A - Swanzev**  
 Flat Roof Mill Road to T198 Structure 59  
 Map Sheets 1 to 4

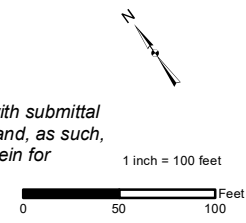
Disturbance Type	Impact (sq. ft)
New Access	73,829
Gravel Work Pad	54,764
<b>Total AoT Disturbed Area</b>	<b>128,593</b>

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area or cumulatively exceeds 50,000 square feet of contiguous area if any portion of the disturbance is within the protected shoreland as defined in RSA 483-B"  
 -Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- ▨ UPLAND MATTING
- ▨ TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- ▨ PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- ▨ POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*



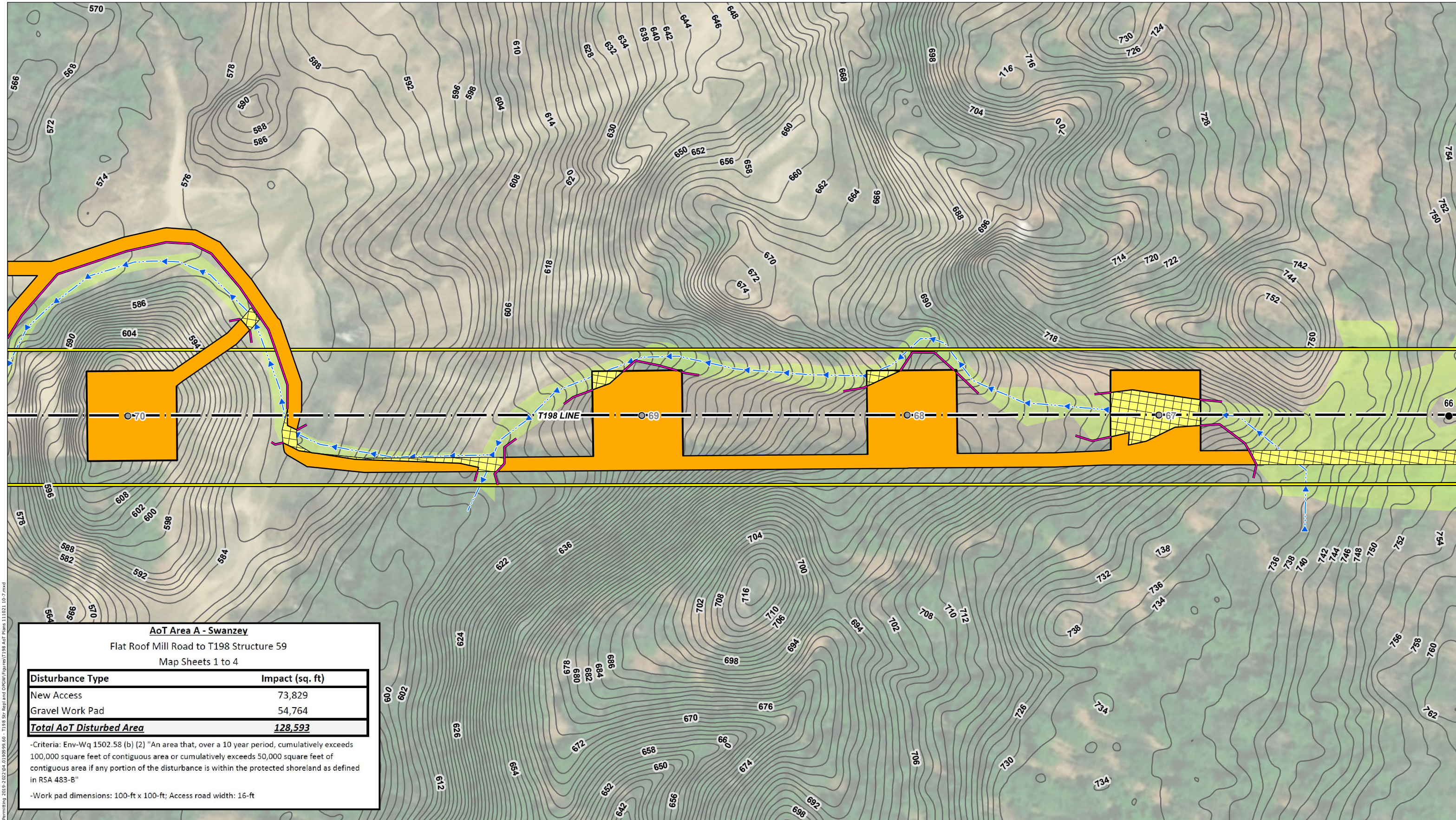
NO.	DATE	REVISIONS

**EVERSOURCE ENERGY**

**T198 Line Structure Replacement & OPGW Project Alteration of Terrain Permitting Plans**

Swanzev, NH	MAP SHEET
Date: January, 2022	<b>1 OF 10</b>

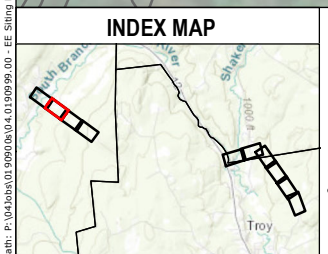
Path: P:\Jobs\01\_9900\01\_04\_01\_9900\_01 - E1 Staging Permitting 2019-2022\04\_01\_9900\9900\_01 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd



**AoT Area A - Swanzev**  
 Flat Roof Mill Road to T198 Structure 59  
 Map Sheets 1 to 4

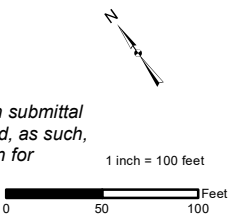
Disturbance Type	Impact (sq. ft)
New Access	73,829
Gravel Work Pad	54,764
<b>Total AoT Disturbed Area</b>	<b>128,593</b>

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area or cumulatively exceeds 50,000 square feet of contiguous area if any portion of the disturbance is within the protected shoreland as defined in RSA 483-B"  
 -Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- UPLAND MATTING
- TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*



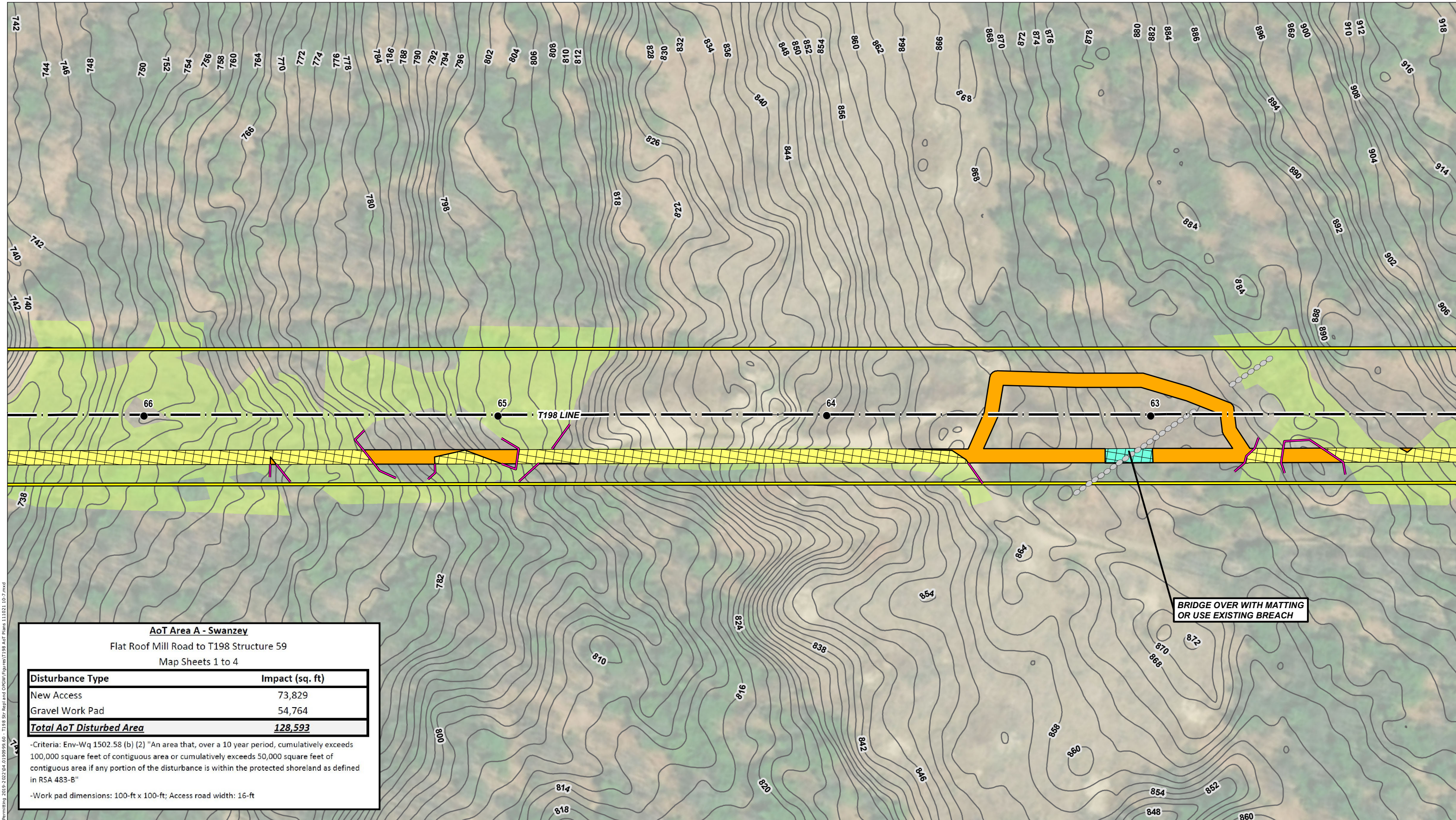
NO.	DATE	REVISIONS

**EVERSOURCE ENERGY**

**T198 Line Structure Replacement & OPGW Project Alteration of Terrain Permitting Plans**

Swanzev, NH	MAP SHEET
Date: January, 2022	<b>2 OF 10</b>

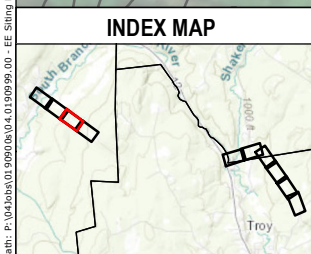
Path: P:\Jobs\019900\04\019909\_00 - EE Siting Permitting 2019-2022\04\_019909\_00 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd



**AoT Area A - Swanzev**  
 Flat Roof Mill Road to T198 Structure 59  
 Map Sheets 1 to 4

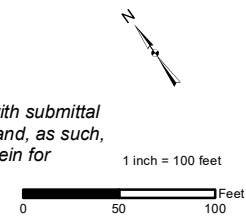
Disturbance Type	Impact (sq. ft)
New Access	73,829
Gravel Work Pad	54,764
<b>Total AoT Disturbed Area</b>	<b>128,593</b>

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area or cumulatively exceeds 50,000 square feet of contiguous area if any portion of the disturbance is within the protected shoreland as defined in RSA 483-B"  
 -Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- ▨ UPLAND MATTING
- ▨ TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- ▨ PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- ▨ FIELD DELINEATED WETLANDS
- ▨ POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- ▨ REGULATED SHORELAND ZONE
- ▨ TOWN BOUNDARY
- STONE WALL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*



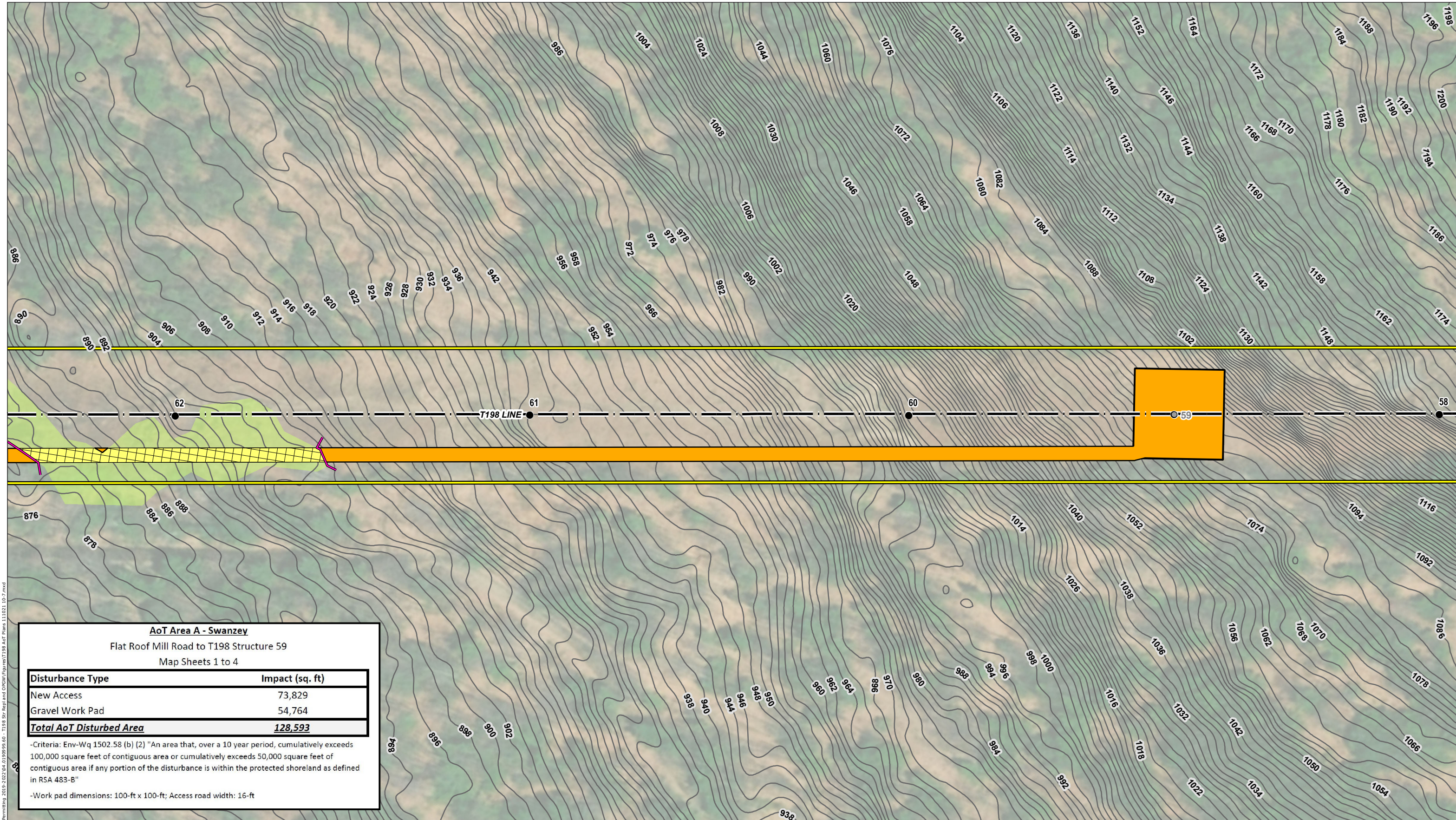
NO.	DATE	REVISIONS

**EVERSOURCE ENERGY**

**T198 Line Structure Replacement & OPGW Project**  
 Alteration of Terrain Permitting Plans

Swanzev, NH	MAP SHEET
Date: January, 2022	<b>3 OF 10</b>

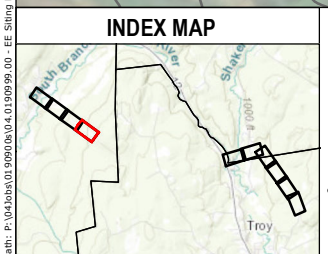
Path: P:\Jobs\01\_9900\04\_01\_99\99\_00 - EE Siting Permitting 2019-2022\04\_01\_99\99\_00 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd



**AoT Area A - Swanzev**  
 Flat Roof Mill Road to T198 Structure 59  
 Map Sheets 1 to 4

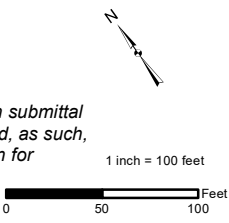
Disturbance Type	Impact (sq. ft)
New Access	73,829
Gravel Work Pad	54,764
<b>Total AoT Disturbed Area</b>	<b>128,593</b>

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area or cumulatively exceeds 50,000 square feet of contiguous area if any portion of the disturbance is within the protected shoreland as defined in RSA 483-B"  
 -Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- ▨ UPLAND MATTING
- ▨ TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- ▨ PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- ▨ POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*



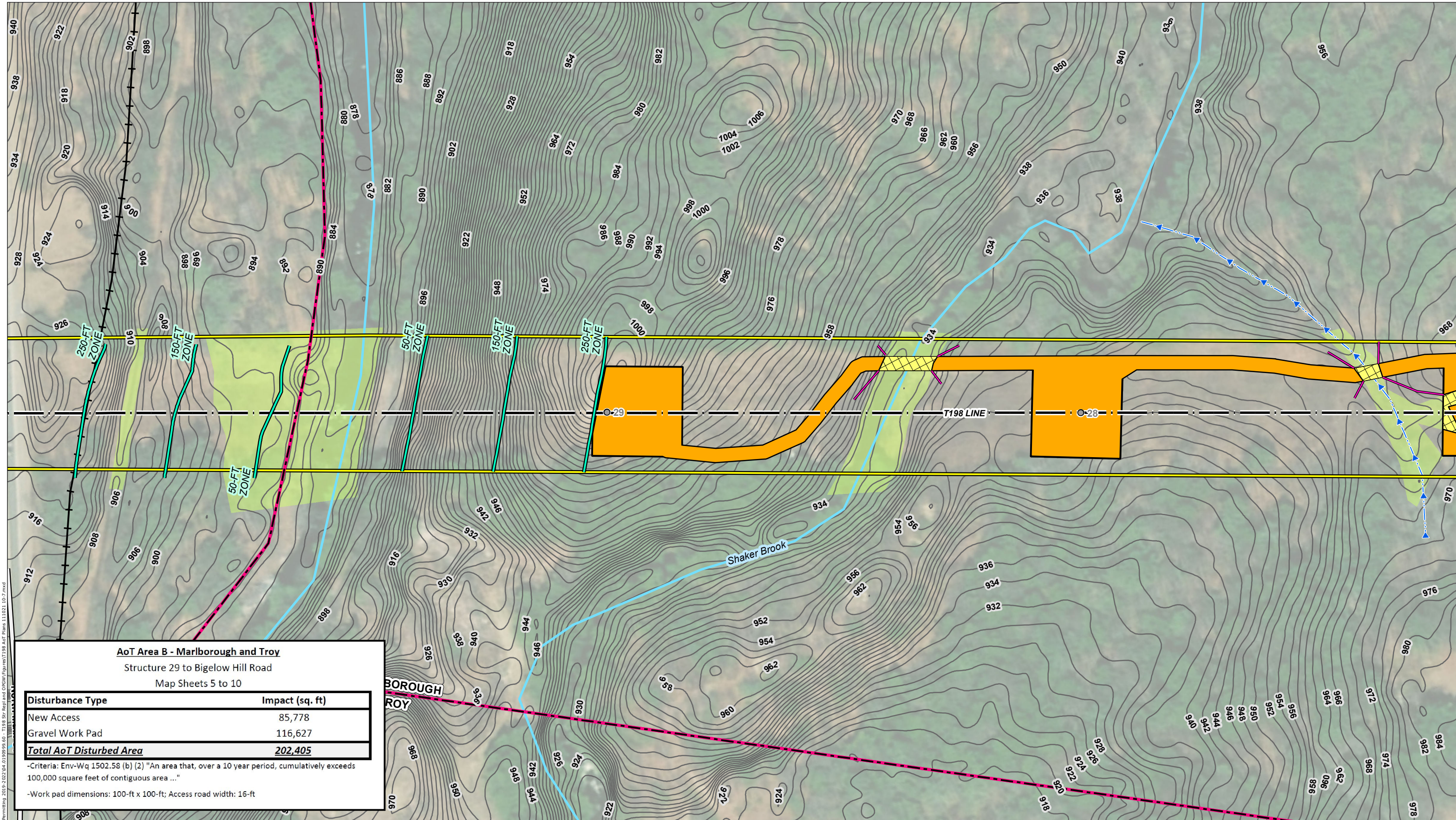
NO.	DATE	REVISIONS

**EVERSOURCE ENERGY**

**T198 Line Structure Replacement & OPGW Project Alteration of Terrain Permitting Plans**

Swanzev, NH	MAP SHEET
Date: January, 2022	<b>4 OF 10</b>

Path: P:\Jobs\01\_990905\04\_019909\_00 - EE Siting Permitting 2019-2022\04\_019909\_00 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd

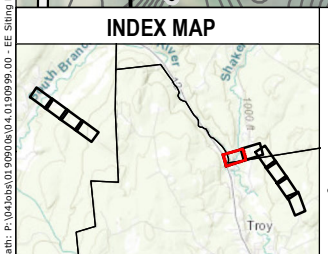


**AoT Area B - Marlborough and Troy**  
Structure 29 to Bigelow Hill Road  
Map Sheets 5 to 10

Disturbance Type	Impact (sq. ft)
New Access	85,778
Gravel Work Pad	116,627
<b>Total AoT Disturbed Area</b>	<b>202,405</b>

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area ..."

-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- UPLAND MATTING
- TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

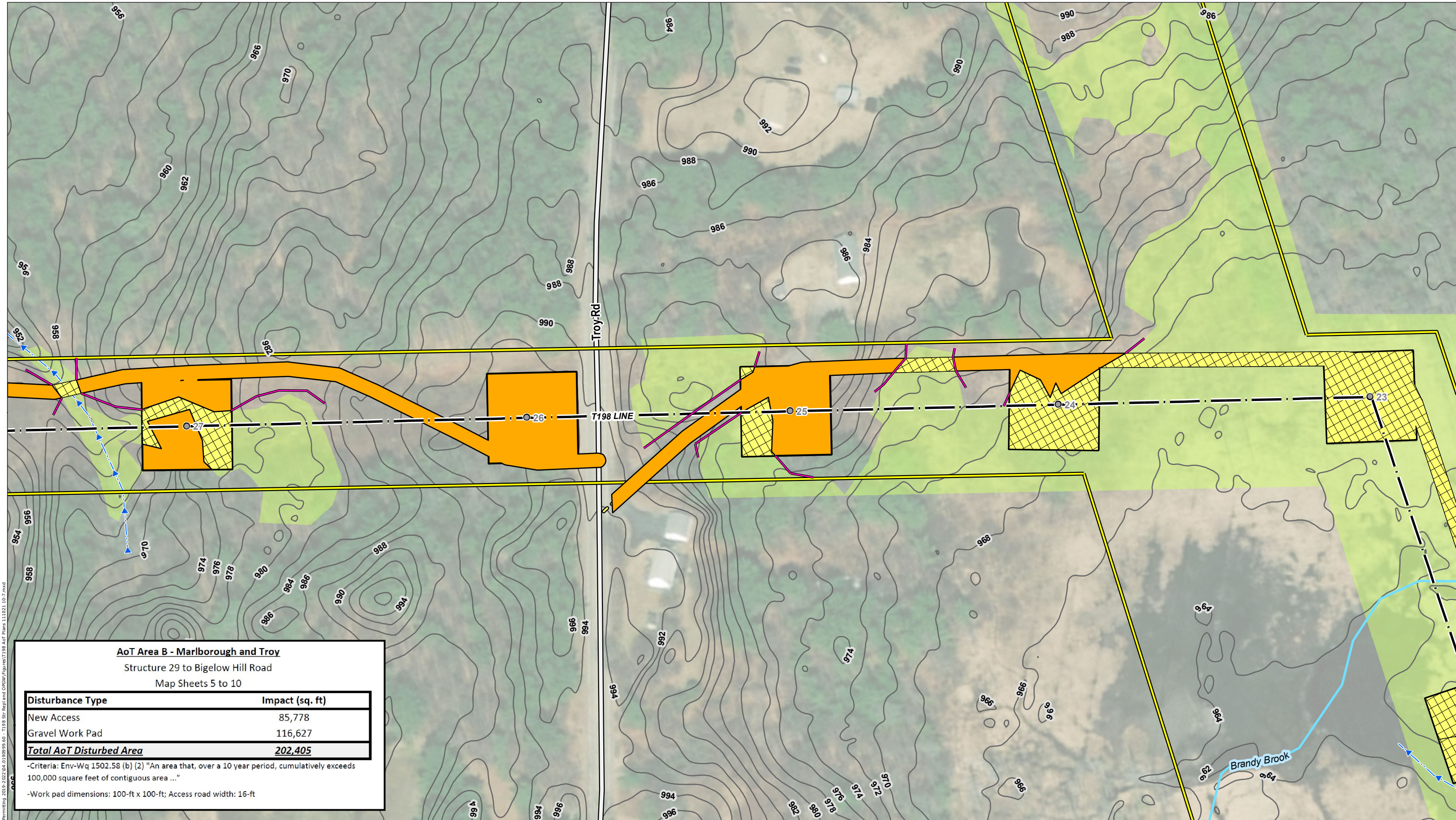
N

1 inch = 100 feet

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*

<b>EVERSOURCE ENERGY</b>		
<b>T198 Line Structure Replacement &amp; OPGW Project Alteration of Terrain Permitting Plans</b>		
	Marlborough, NH	MAP SHEET
	Date: January, 2022	<b>5 OF 10</b>
NO.	DATE	REVISIONS

Path: P:\Jobs\01\_9900\01\_4\_19\_99\_01 - EE Siting Permitting 2019-2022\04\_01\_99\_99\_01 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd

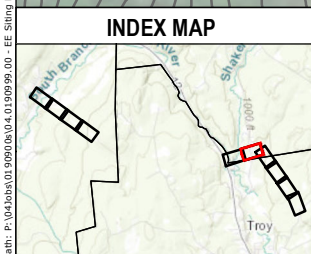


**AoT Area B - Marlborough and Troy**  
 Structure 29 to Bigelow Hill Road  
 Map Sheets 5 to 10

Disturbance Type	Impact (sq. ft)
New Access	85,778
Gravel Work Pad	116,627
<b>Total AoT Disturbed Area</b>	<b>202,405</b>

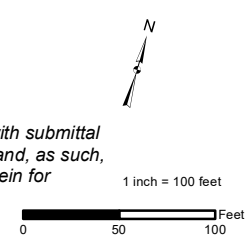
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area ..."

-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- ▨ UPLAND MATTING
- ▨ TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- ▨ PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.



NO.	DATE	REVISIONS

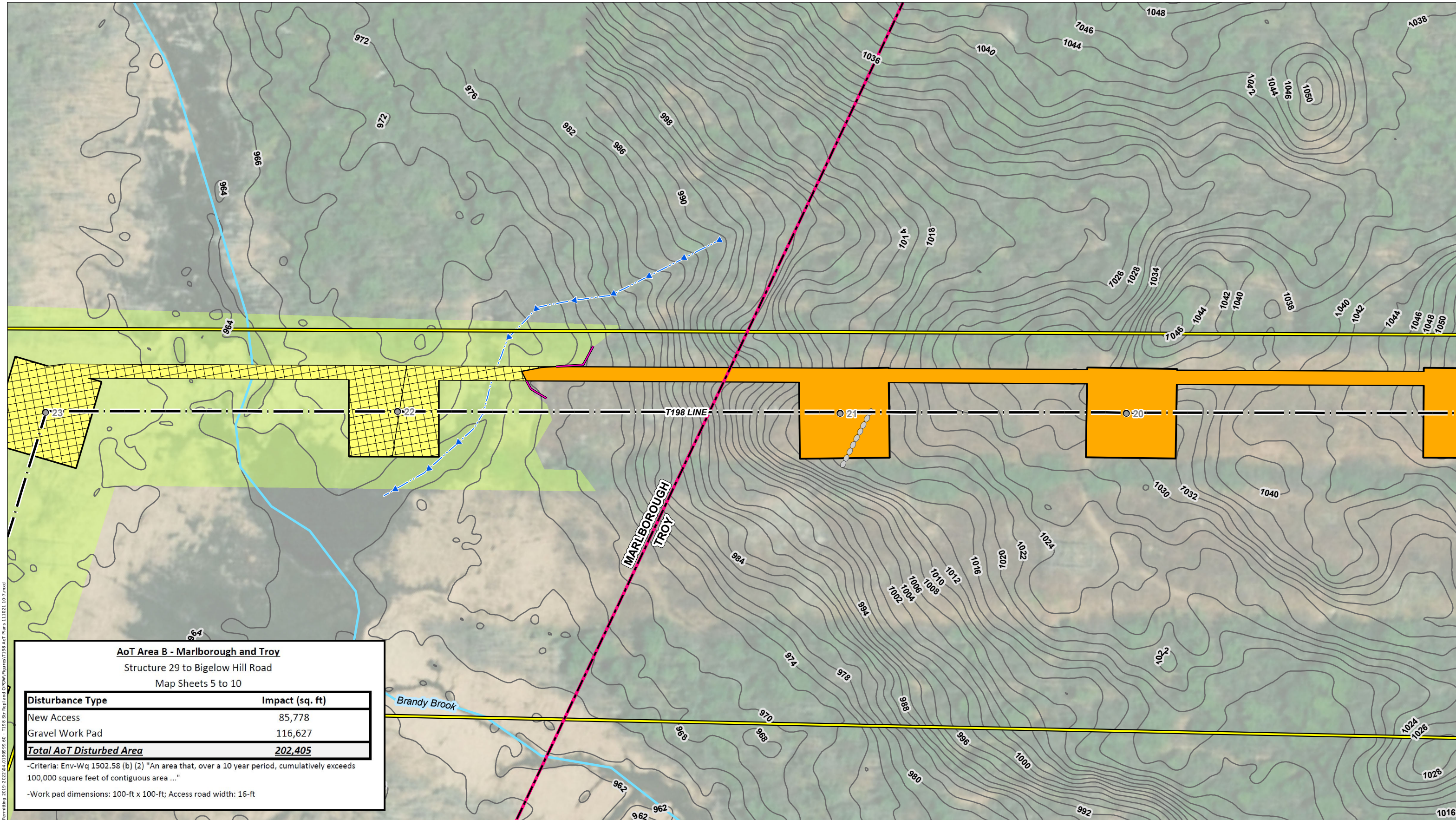
**EVERSOURCE ENERGY**

**T198 Line Structure Replacement & OPGW Project Alteration of Terrain Permitting Plans**

Marlborough, NH	MAP SHEET
Date: January, 2022	<b>6 OF 10</b>

Path: P:\Jobs\01\_99090\04\_01\_9909\_00 - EE Siting Permitting 2019-2022\04\_01\_9909\_00 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd



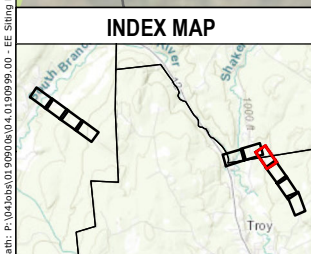


**AoT Area B - Marlborough and Troy**  
 Structure 29 to Bigelow Hill Road  
 Map Sheets 5 to 10

Disturbance Type	Impact (sq. ft)
New Access	85,778
Gravel Work Pad	116,627
<b>Total AoT Disturbed Area</b>	<b>202,405</b>

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area ..."

-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



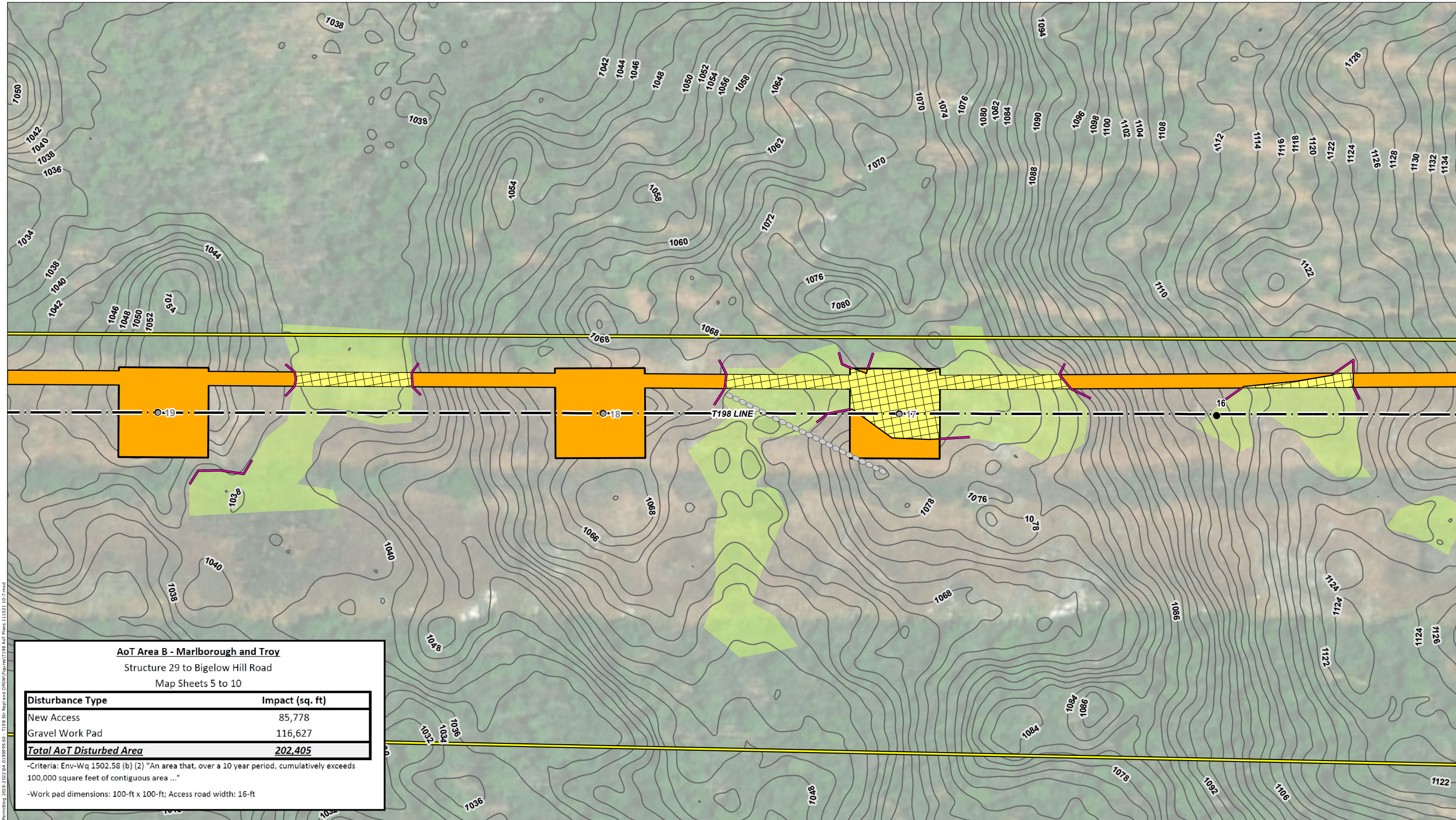
- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- ▨ UPLAND MATTING
- ▨ TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- ▨ PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- ▨ POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

		<b>EVERSOURCE ENERGY</b>	
<b>T198 Line Structure Replacement &amp; OPGW Project Alteration of Terrain Permitting Plans</b>			
		Marlborough/Troy, NH	MAP SHEET
		Date: January, 2022	<b>7 OF 10</b>
NO.	DATE	REVISIONS	

Path: P:\Jobs\01\_9900\01\_4\_019999\_00 - E\Siting Permitting\2019-2022\01\_4\_019999\_00 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans\111021\_10-7.mxd

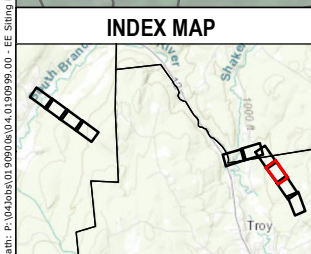


**AoT Area B - Marlborough and Troy**  
 Structure 29 to Bigelow Hill Road  
 Map Sheets 5 to 10

Disturbance Type	Impact (sq. ft)
New Access	85,778
Gravel Work Pad	116,627
<b>Total AoT Disturbed Area</b>	<b>202,405</b>

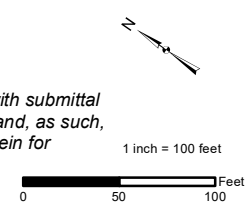
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area ..."

-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- ▨ UPLAND MATTING
- ▨ TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- ▨ PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- ▨ POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*



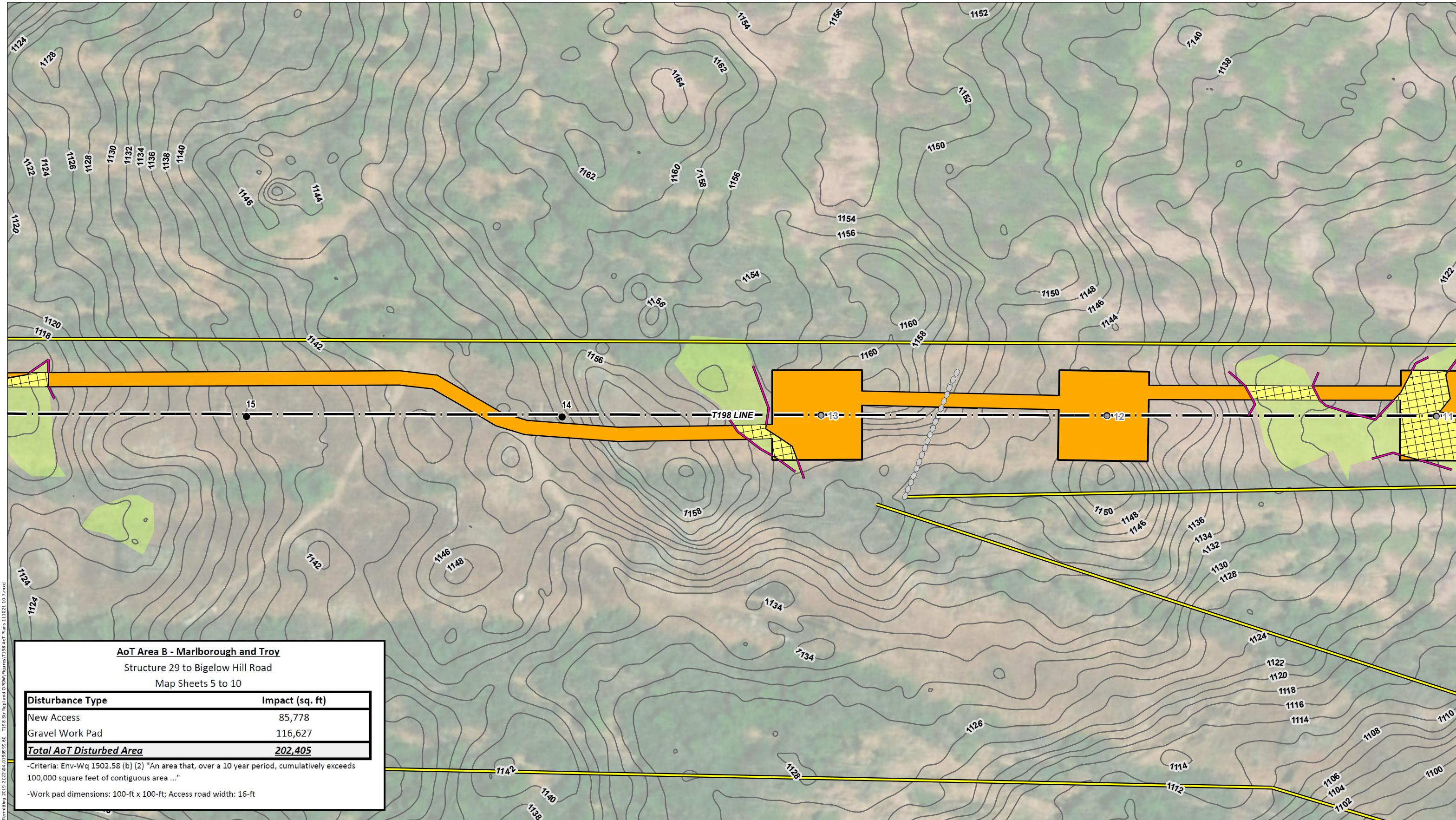
NO.	DATE	REVISIONS

**EVERSOURCE**  
ENERGY

**T198 Line Structure Replacement & OPGW Project**  
**Alteration of Terrain Permitting Plans**

Troy, NH	MAP SHEET
Date: January, 2022	<b>8 OF 10</b>

Path: P:\Jobs\01\_9900\04\_01\_99\99\_00 - EE Siting Permitting 2019-2022\04\_01\_99\99\_00 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd

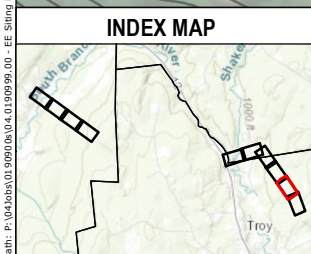


**AoT Area B - Marlborough and Troy**  
Structure 29 to Bigelow Hill Road  
Map Sheets 5 to 10

Disturbance Type	Impact (sq. ft)
New Access	85,778
Gravel Work Pad	116,627
<b>Total AoT Disturbed Area</b>	<b>202,405</b>

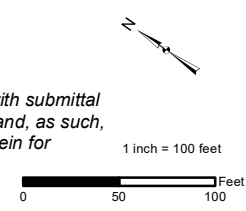
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area ..."

-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



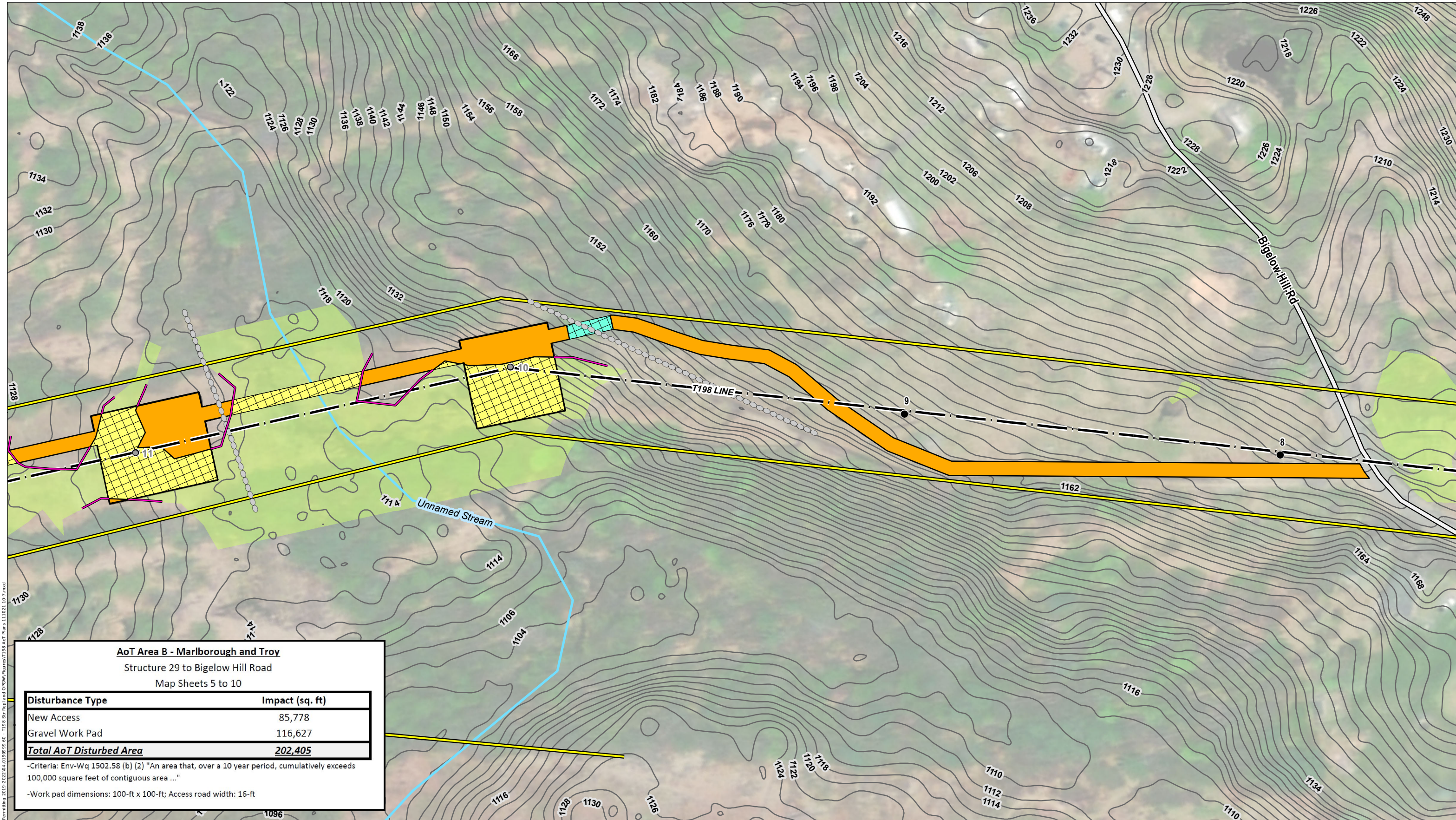
- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- UPLAND MATTING
- TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*



<b>EVERSOURCE ENERGY</b>	
<b>T198 Line Structure Replacement &amp; OPGW Project Alteration of Terrain Permitting Plans</b>	
Troy, NH	MAP SHEET
Date: January, 2022	<b>9 OF 10</b>
NO.	DATE
REVISIONS	

Path: P:\Jobs\01\_9900\01\_4\_19\99\_01 - EE Siting Permitting 2019-2022\01\_4\_19\99\_01 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd

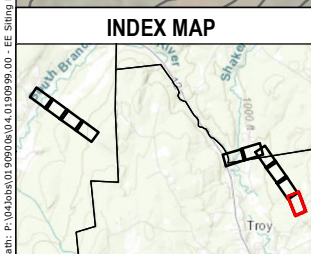


**AoT Area B - Marlborough and Troy**  
 Structure 29 to Bigelow Hill Road  
 Map Sheets 5 to 10

Disturbance Type	Impact (sq. ft)
New Access	85,778
Gravel Work Pad	116,627
<b>Total AoT Disturbed Area</b>	<b>202,405</b>

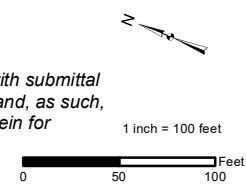
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area ..."

-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft



- EXISTING T198 TRANSMISSION LINE
- APPROX. ROW
- EXISTING T198 STRUCTURE
- EXISTING T198 STRUCTURE TO BE REPLACED
- AoT DISTURBANCE AREA
- ▨ UPLAND MATTING
- ▨ TEMPORARY WETLAND IMPACT
- PROPOSED ACCESS ROUTE
- WORK PAD
- ▨ PULL PAD
- FIELD DELINEATED STREAM
- NHD FLOWLINE
- FIELD DELINEATED WETLANDS
- POTENTIAL VERNAL POOL
- NHDOT ROADS
- GATE
- RAILROAD
- 2-FT CONTOURS
- STRAW WATTLE
- REGULATED SHORELAND ZONE
- TOWN BOUNDARY
- STONE WALL

*This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.*



NO.	DATE	REVISIONS

**EVERSOURCE**  
ENERGY

**T198 Line Structure Replacement & OPGW Project**  
**Alteration of Terrain Permitting Plans**

Troy, NH	MAP SHEET
Date: January, 2022	<b>10 OF 10</b>

Path: P:\Jobs\01\_990908\04\_01\_990909\_00 - E- Stilling Permitting 2019-2022\04\_01\_990909\_00 - T198 Str. Repl and OPGW\Figures\T198 AoT Plans 111021\_10-7.mxd

© 2022 - GZA GeoEnvironmental, Inc. P:\04\Jobs\1909099\04\_0190999\_00 - EE Sting Permitting 2019-2022\04\_0190999\_00 - T198 Str Repl and OPGW\Figures\T198 AOT Notesheet 1 10-7.mxd, 3/22/2022, 2:40:47 PM, lindsey.white

CONSTRUCTION SEQUENCE:

1. WETLAND BOUNDARIES TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION.
2. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL PROVIDED, AS NECESSARY.
3. WETLAND IMPACTS ASSOCIATED WITH WETLAND CROSSINGS ARE REQUIRED FOR ACCESS BETWEEN STRUCTURES WITHIN THE RIGHT OF WAY.
4. ADEQUATE PRECAUTION SHALL BE EXERCISED TO AVOID SPILLAGE OF FUEL OILS, CHEMICALS, OR SIMILAR SUBSTANCES: NO FUELS, LUBRICANTS, CHEMICALS OR SIMILAR SUBSTANCES SHALL BE STORED BENEATH TREES OR IN THE VICINITY OF ANY WETLANDS, RIVER, STREAM OR OTHER BODY OF WATER; OR IN THE VICINITY OF NATURAL OR MAN-MADE CHANNELS LEADING THERETO. NO POWER EQUIPMENT SHALL BE STORED, MAINTAINED, OR FUELED IN ANY AREA ADJACENT TO A WETLAND, RIVER, STREAM OR OTHER BODY OF WATER.
5. REMOVE COMPLETELY ALL CONTAMINATION FROM ANY SPILLAGE OF CHEMICALS OR PETROLEUM PRODUCT WITH COMPLETE REHABILITATION OF THE AFFECTED AREA.
6. ACCESS ROUTES HAVE BEEN SELECTED TO PREVENT DEGRADATION OF THE RIGHT-OF-WAY AND MINIMIZE ENVIRONMENTAL IMPACT. OPERATIONS SHALL BE CONFINED TO THE SPECIFIED ACCESS ROUTES WITHIN THE PROPOSED WETLAND IMPACT AREA. ACCESS ROUTES SHALL NOT EXCEED A 16 FOOT-WIDTH.
7. IMPACT TO VEGETATION WITHIN WETLANDS WILL BE LIMITED TO THE EXTENT NECESSARY TO PLACE THE TIMBER MATS WHERE REQUIRED.
8. LOW GROWING VARIETIES OF VEGETATION ADJACENT TO WETLANDS SHALL BE PRESERVED TO THE EXTENT POSSIBLE. STUMPS AND ROCKS SHALL NOT BE REMOVED, AND THERE SHALL BE NO EXCAVATIONS, FILLS OR GRADING DONE ADJACENT TO WETLANDS, UNLESS MINOR EXCAVATIONS IS NEEDED FOR ACCESS.
9. TIMBER MATS WILL BE USED ALONG ACCESS ROUTES WITHIN WETLAND AREAS. THESE MATS ARE CONSTRUCTED OF HEAVY TIMBERS OR COMPOSITE MATERIAL, BOLTED TOGETHER, AND ARE PLACED END-TO-END IN THE WETLAND TO SUPPORT HEAVY EQUIPMENT. ALL SWAMP MATS SHALL BE PLACED AND REMOVED SO AS NOT TO CAUSE ANY RUTS, CHANNELS OR DEPRESSIONS, OR OTHERWISE CAUSE ANY UNDUE DISTURBANCE TO WETLANDS.
10. IF TIMBER MAT BMP IS NOT SUFFICIENT DUE TO HIGH WATER, ADDITIONAL BMP'S MAY INCLUDE THE PLACEMENT OF GEOTEXTILE FABRIC, 3"-4" STONE, AND GRAVEL TO PROVIDE A SUITABLE ROAD BED. A TEMPORARY CULVERT MAY BE REQUIRED IN AREAS OF HIGH FLOW TO MAINTAIN HYDROLOGIC CONNECTIVITY. ALL MATERIAL WILL BE REMOVED FROM JURISDICTIONAL AREAS AFTER CONSTRUCTION COMPLETION.
11. NO MATERIAL SHALL BE PLACED IN ANY LOCATION OR IN ANY MANNER SO AS TO IMPAIR SURFACE WATER FLOW INTO, THROUGH OR OUT OF ANY WETLAND AREA. NO INSTALLATION SHALL CREATE AN IMPOUNDMENT THAT WILL IMPEDE THE FLOW OF WATER OR CAUSE FLOODING.
12. NO MATERIAL SHALL BE TAKEN FROM THE WETLANDS AREA EXCEPT THAT WHICH MUST NECESSARILY BE REMOVED FOR THE STRUCTURE OR FOUNDATION PLACEMENT OR STABILIZATION. ALL EXCESS MATERIAL TAKEN FROM THE WETLAND WILL BE REMOVED FROM THE SITE.
13. ANY PROPOSED SUPPORT FILLS SHALL BE CLEAN GRAVEL AND STONE, FREE OF WASTE METAL PRODUCTS, ORGANIC MATERIALS AND SIMILAR DEBRIS AND SHALL NOT EXCEED THE AMOUNT PERMITTED. THIS ALLOWABLE FILL IS THE ONLY FILL THAT MAY REMAIN IN THE WETLAND AFTER CONSTRUCTION. ALL CUT AND FILLS SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
14. INSTALL NEW POLES IN THE LOCATIONS DESIGNATED ON THE PERMITTING PLANS.
15. CABLE INSTALLATION WILL BE PERFORMED IN A MANNER SO AS TO AVOID, OR LIMIT TO THE MAXIMUM EXTENT POSSIBLE, TRAVERSING WETLANDS WITH HEAVY EQUIPMENT. IN SOME CASES, A HELICOPTER MAY BE USED DURING THE INSTALLATION TO MINIMIZE IMPACTS.
16. ALL SWAMP MATS, MATERIAL, AND DEBRIS WILL BE REMOVED FROM THE WORK AREA UPON THE COMPLETION OF CONSTRUCTION.
17. UPLAND DISTURBED AREAS SHALL BE RESTORED AND STABILIZED UPON COMPLETION OF CONSTRUCTION. WORK PAD RESTORATION SHOULD INCLUDE REDUCING THE WORK PAD TO A 30 BY 60 FOOT AREA, AND REDUCING SLOPES TO A MAXIMUM OF 25%. STOCKPILED MATERIAL SHOULD BE SPREAD TO REDUCE ANY UNNECESSARY SLOPES. GRAVEL WORK PADS AND SLOPES SHOULD BE SCARIFIED TO A MINIMUM OF 3" BEFORE SPREADING TOPSOIL/LOAM.
18. ALL TEMPORARY WETLAND IMPACTS WILL BE RE-GRADED TO ORIGINAL CONTOURS FOLLOWING CONSTRUCTION. NEW ENGLAND EROSION CONTROL/RESTORATION MIX, AVAILABLE THROUGH NEW ENGLAND WETLAND PLANTS, INC., 820 WEST STREET, AMHERST, MA 01002, 413-548-8000, OR EQUIVALENT SEED MIX SHALL BE APPLIED IN WETLAND AREAS THAT ARE NOT INUNDATED, AS NECESSARY.
19. SEDIMENT AND EROSION CONTROL MEASURES WILL BE EVALUATED AND REMOVED IF NECESSARY UPON THE COMPLETION OF CONSTRUCTION.
20. COMMERCIAL LOAM WILL NOT BE USED AS PART OF RESTORATION. ONLY IN-SITU TOPSOIL WILL BE USED TO RESTORE DISTURBED AREAS.
21. WHERE OPTIMAL TURTLE BREEDING AREAS OVERLAP WITH DISTURBANCE (AS DETERMINED BY AN ENVIRONMENTAL MONITOR), MINERAL SOILS WILL BE SCARIFIED TO ALLEVIATE COMPACTION AND BECOME MORE SUITED FOR TURTLE BREEDING.

WINTER CONSTRUCTION NOTES

1. PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED. STABILIZATION METHODS SHALL INCLUDE SEEDING AND MULCH, AND INSTALLATION OF EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE TEMPORARILY STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL (NHDOT 304.3).

GENERAL NOTES:

OWNER: EVERSOURCE ENERGY  
13 LEGENDS DRIVE  
HOOKSETT, NH 03106

1. BASE PLAN PROVIDED BY EVERSOURCE ENERGY. EVERSOURCE ENERGY PROVIDED THE WETLAND DATA. EVERSOURCE ENERGY PROVIDED THE UTILITY DESIGN.
2. JURISDICTIONAL WETLANDS WERE DELINEATED BY TIGHE AND BOND IN 2018, IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPS OF ENGINEERS' "WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1," AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION," JANUARY 2012. WETLANDS WERE REVIEWED BY GZA GEOENVIRONMENTAL, INC. IN JANUARY AND FEBRUARY 2019.
3. GZA PERFORMED A WETLANDS FUNCTION AND VALUES ASSESSMENT IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999, IN THE TOWN OF STRAFFORD.
4. SITE PLAN IS FOR PERMITTING PURPOSES ONLY AND DOES NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
5. THE PROJECT WILL BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
6. IN ACCORANCE WITH ENV-WQ 1505.02, THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
  - A MINIMUM 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED
  - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL HAS BEEN INSTALLED
  - OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

EROSION CONTROL NOTES:

1. INSTALLATION OF EROSION CONTROL GRINDINGS AND/OR SILT FENCES SHALL BE COMPLETE PRIOR TO THE START OF WORK IN ANY GIVEN AREA. EROSION CONTROLS SHALL BE USED DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A HEALTHY STAND OF VEGETATION COVER. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER .25" OR GREATER RAINFALL EVENTS.
2. AS REQUIRED, CONSTRUCT TEMPORARY BERMS, SILTATION FENCES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION & SEDIMENTATION OF WETLANDS.
3. THE WORK AREA SHALL BE GRADED AND OTHERWISE SHAPED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE LIMITS OF THE WORK AREA. EROSION CONTROL GRINDINGS WILL BE NECESSARY TO ACCOMPLISH THIS END.
4. ANY STRIPPED TOPSOIL SHALL BE STOCKPILED, WITHOUT COMPACTION, AND STABILIZED AGAINST EROSION, AS NECESSARY.
5. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS, PLANT ANNUAL RYEGRASS PRIOR TO OCTOBER 15TH.
6. EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.


NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS RELATED TO THREATENED AND ENDAGERED SPECIES

1. PRIOR TO DAILY CONSTRUCTION ACTIVITIES, TIMBER MATTING WILL BE REVIEWED FOR SNAKES AND TURTLES. GZA WILL PROVIDE AN ENVIRONMENTAL ADDENDUM TO THE DAILY TAILBOARDS BY THE CONTRACTS TO INLCUDE GUIDANCE ON PROTOCOLS FOR SNAKES AND PROVIDE IDENTIFICATION FOR SPOTTED TURTLE, WOOD TURTLE, BLANDING'S TURTLE, AND NORTHERN BLACK RACER SNAKE.
2. OBSERVED SNAKES AND TURTLES WILL BE MOVED OFF OF CONSTRUCTION ACCESS ROADS TO LIMIT AND PREVENT MORTALITY TO SNAKES AND TURTLES DURING CONSTRUCTION.
3. EROSION CONTROL MATTING, IF UTILIZED, WILL CONSIST OF JUTE MATTING. MATTING WITH PLASTIC MESH WILL BE AVOIDED TO LIMIT UNINTENTIONAL MORTALITY TO SNAKES.
4. AT THE CONCLUSION OF THE PROJECT, A SUMMARY REPORT OF ANY RARE SPECIES OBSERVATIONS WILL BE PROVIDED TO THE NHFG NONGAME PROGRAM.
5. IMPACTS TO VERNAL POOLS AND POTENTIAL VERNAL POOLS WILL BE AVOIDED.
6. IF SPOTTED, WOOD OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN A WORK AREA, PLEASE CONTACT MELISSA DOPERALSKI (603-479-1129) OR JOSH MEGYESY (978-578-0802) FOR FURTHER INSTRUCTIONS.
7. IN THE EVENT THAT A RARE OR THREATENED SPECIES IS OBSERVED, THE NEW HAMPSHIRE FISH AND GAME AND NEW HAMPSHIRE NATURAL HERITAGE BUREAU WILL BE NOTIFIED. TURTLE NESTING SEASON EXTENDS FROM LATE MAY THROUGH THE BEGINNING OF JULY. IF WOOD, BLANDING'S OR SPOTTED TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, CONTACT MELISSA DOPERALSKI AT 603-271-1738 OR JOSH MEGYESY AT 603-271-1125 FOR FURTHER INSTRUCTIONS. OBSERVATIONS OF NORTHERN BLACK RACER SNAKES SEEN IN ANY AREA FROM THE END OF SEPTEMBER THROUGH THE MONTH OF APRIL OR OBSERVATIONS OF EASTERN HOGNOSE SNAKE MUST BE IMMEDIATELY REPORTED TO THE NHFG DEPARTMENT (BRENDAN CLIFFORD AT 603-271-0463 OR MELISSA DOPERALSKI AT 603-271-1738). IF NORTHERN BLACK RACER IS FOUND IN A WORK AREA FROM NOVEMBER THROUGH THE MONTH OF APRIL, WORK SHALL IMMEDIATELY CEASE AND THE OBSERVATION MUST BE REPORTED TO THE NHFG (BRENDAN CLIFFORD OR MELISSA DOPERALSKI).
8. BEGINNING MAY 15 UNTIL THE PROJECT END IN LATE AUGUST, PLEASE BE AWARE OF THE POTENTIAL PRESENCE OF [COMMON NIGHTHAWK] ESPECIALLY IN THE KEENE SECTION OF THE LINE (NHB21-302). IF COMMON NIGHTHAWKS ARE DETERMINED TO BE EXHIBITING NESTING BEHAVIOR OR RAISING YOUNG, WORK WILL BE POSTPONED UNTIL THE CHICKS HAVE FLEDGED AND ARE NO LONGER PRESENT AT THE SITE. PLEASE CONTACT US FOR FURTHER INFORMATION IF THIS OCCURS. PLEASE MAKE SURE THE BIOLOGISTS OVERSEEING THIS PROJECT ARE FAMILIAR WITH THE FLYER AND MAKE IT AVAILABLE TO THE CONSTRUCTION CREW.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

T198 TRANSMISSION LINE  
OPGW AND STRUCTURE REPLACEMENT PROJECT  
SWANZEY, TROY, AND MARLBOROUGH  
NEW HAMPSHIRE

NOTES

PREPARED BY:  <b>GZA</b> GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: <b>EVSOURCE</b> ENERGY	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET <b>S1</b>
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 03/22/2022	PROJECT NO: 04.0190999.60	REVISION NO.	

## Best Management Practices (BMP's) for Straw wattles

### Definition and purpose:

Straw wattles are burlap rolls filled with straw that trap sediment and interrupt water flow by reducing slope lengths.

### Applications:

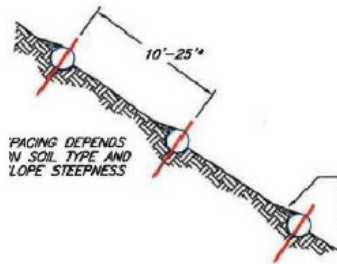
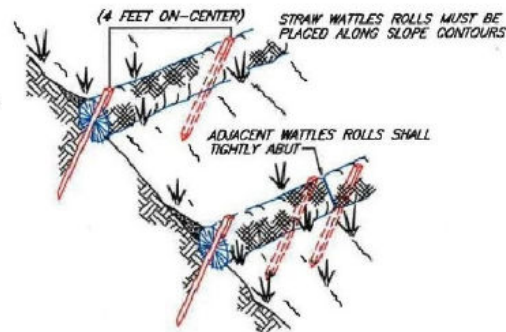
- \* Along erodible or unstabilized slopes
- \* Spread overland waterflow
- \* Trap sediment
- \* Around storm drain inlets to slow water and settle out sediment
- \* Overlap ends approximately 6 inches

### Installation:

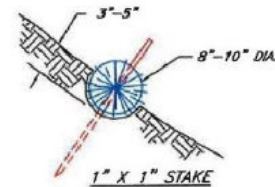
Straw wattles are installed parallel to slope contours and perpendicular to sheet flow.

Spacing\* - Dependent on slope length, soil steepness and soil type (general range 10 - 25').

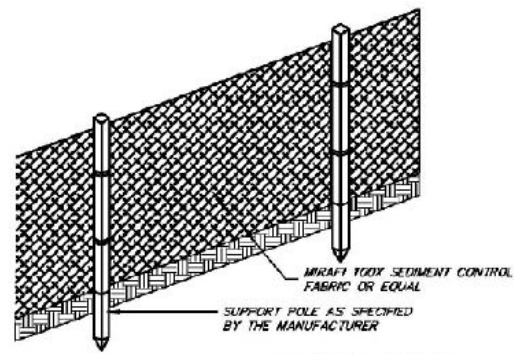
Trenching - 2"-5" inch trench  
Stacking - at each end and four foot on center (i.e. 25 foot wattle uses 6 stacks)



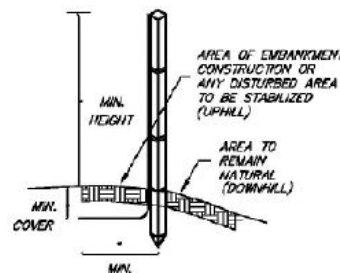
SEDIMENT, ORGANIC MATTER, AND NATIVE SEEDS ARE CAPTURED BEHIND THE WATTLE ROWS.



NOT TO SCALE



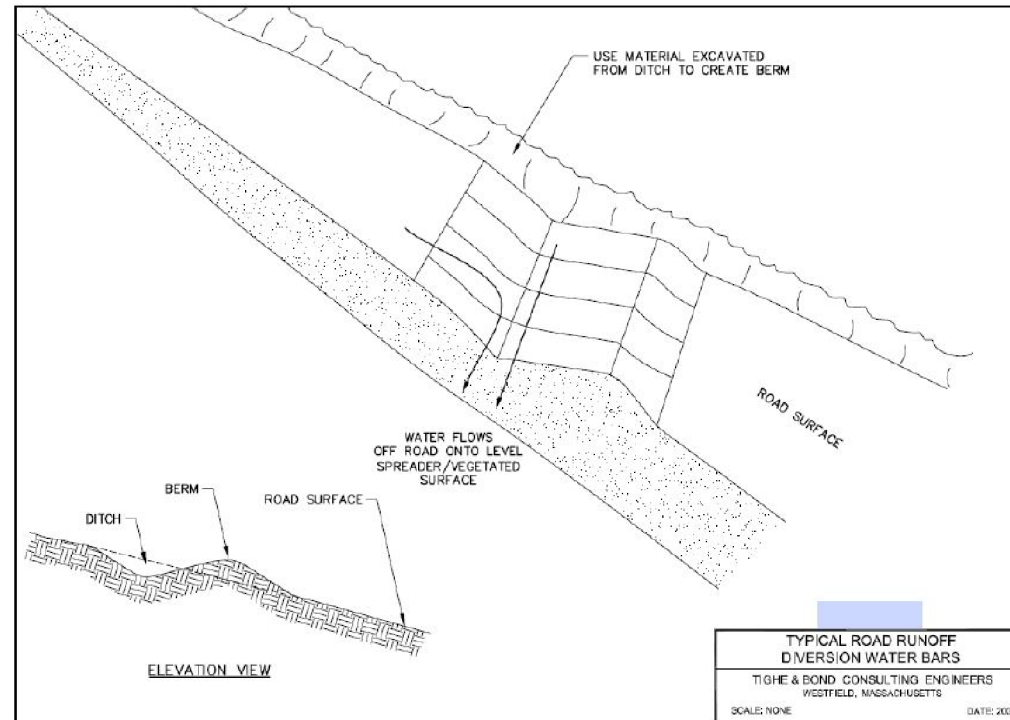
FRONT VIEW



SIDE VIEW

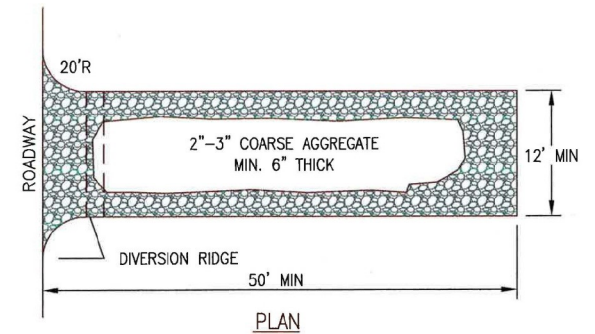
### NOTES (SILT FENCE)

1. THE HEIGHT OF THE BARRIER SHALL NOT EXCEED 36 INCHES.
2. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPliced TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED. SEE MANUFACTURER'S RECOMMENDATIONS.
3. POSTS SHALL BE PLACED AT A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS MANUFACTURER RECOMMENDS.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE OF THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS
5. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND A MINIMUM OF 8 INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
7. FABRIC BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
8. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST ONCE DAILY DURING PROLONGED RAINFALL AND ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
10. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.



ELEVATION VIEW

TYPICAL ROAD RUNOFF DIVERSION WATER BARS  
TIGHE & BOND CONSULTING ENGINEERS  
WESTFIELD, MASSACHUSETTS  
SCALE: NONE DATE: 2007



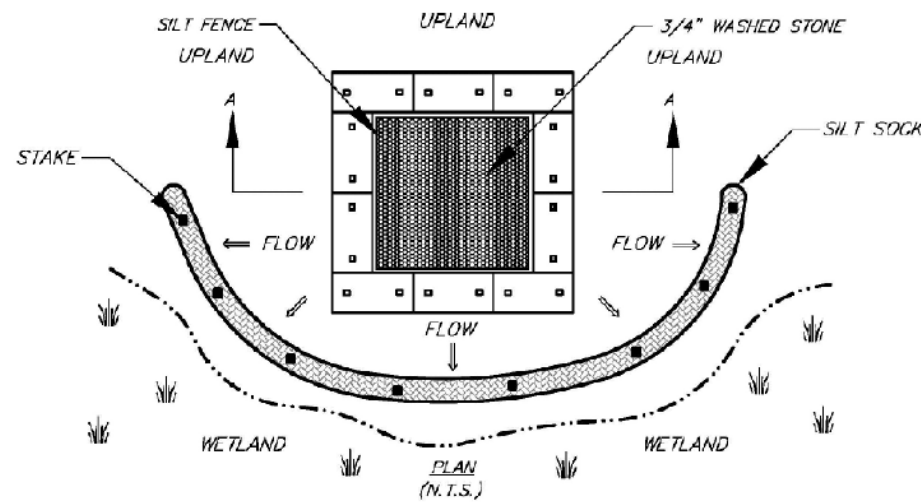
PLAN

### NOTES:

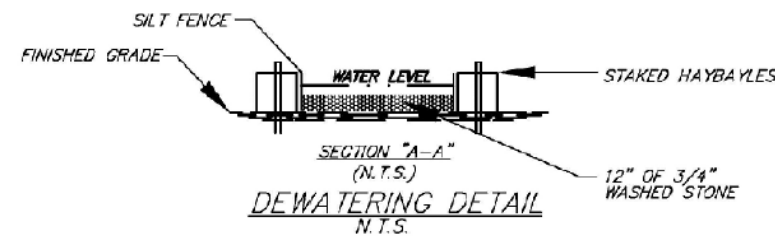
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

## CONSTRUCTION ENTRANCE

NOT TO SCALE



PLAN (N.T.S.)



SECTION "A-A" (N.T.S.)  
DEWATERING DETAIL  
N.T.S.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

T198 TRANSMISSION LINE  
OPGW AND STRUCTURE REPLACEMENT PROJECT  
SWANZEY, TROY, AND MARLBOROUGH  
NEW HAMPSHIRE

### BMP DETAILS

PREPARED BY:  
**GZA** GeoEnvironmental, Inc.  
Engineers and Scientists  
www.gza.com

PREPARED FOR:  
**EVERSOURCE**  
ENERGY

PROJ MGR: LEW  
DESIGNED BY: MJD  
DATE: 11/18/2021

REVIEWED BY: TLT  
DRAWN BY: MJD  
PROJECT NO: 04.0190999.60

CHECKED BY: DMZ  
SCALE:  
REVISION NO.

SHEET  
**S2**

