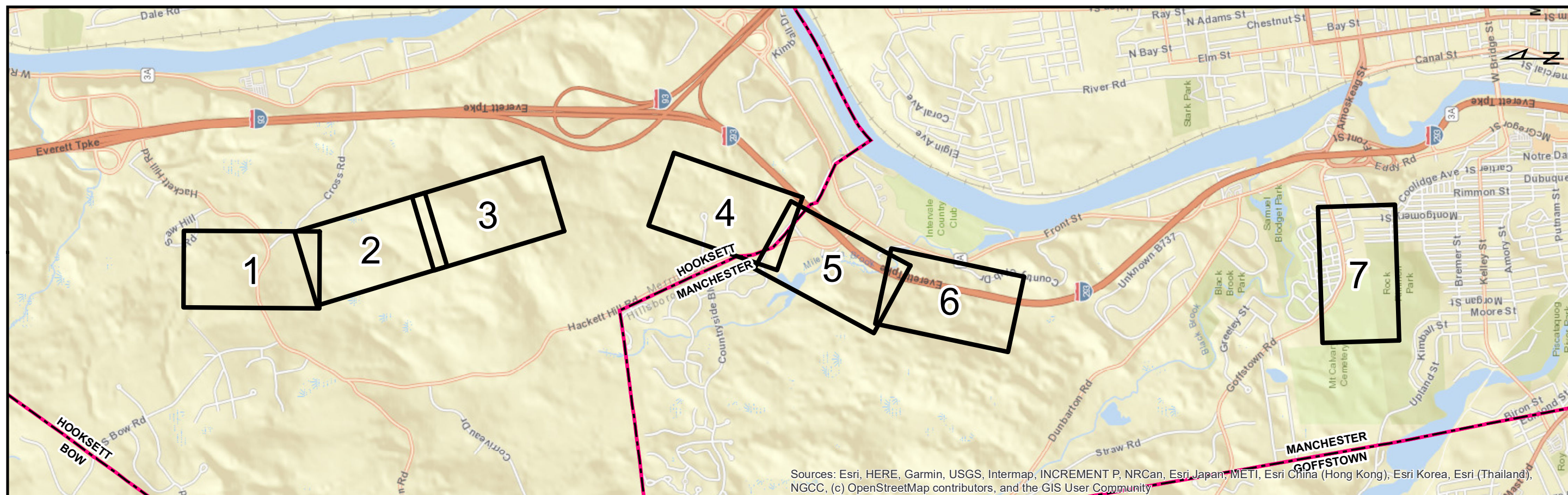


D121 TRANSMISSION LINE REBUILD PROJECT

**HOOKSETT AND MANCHESTER, NEW HAMPSHIRE
ALTERATION OF TERRAIN WATER RESOURCES PLAN SET
3/23/2023**



PREPARED FOR



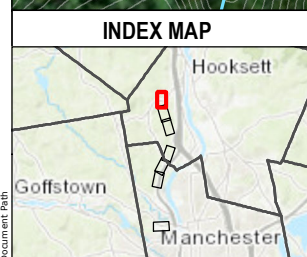
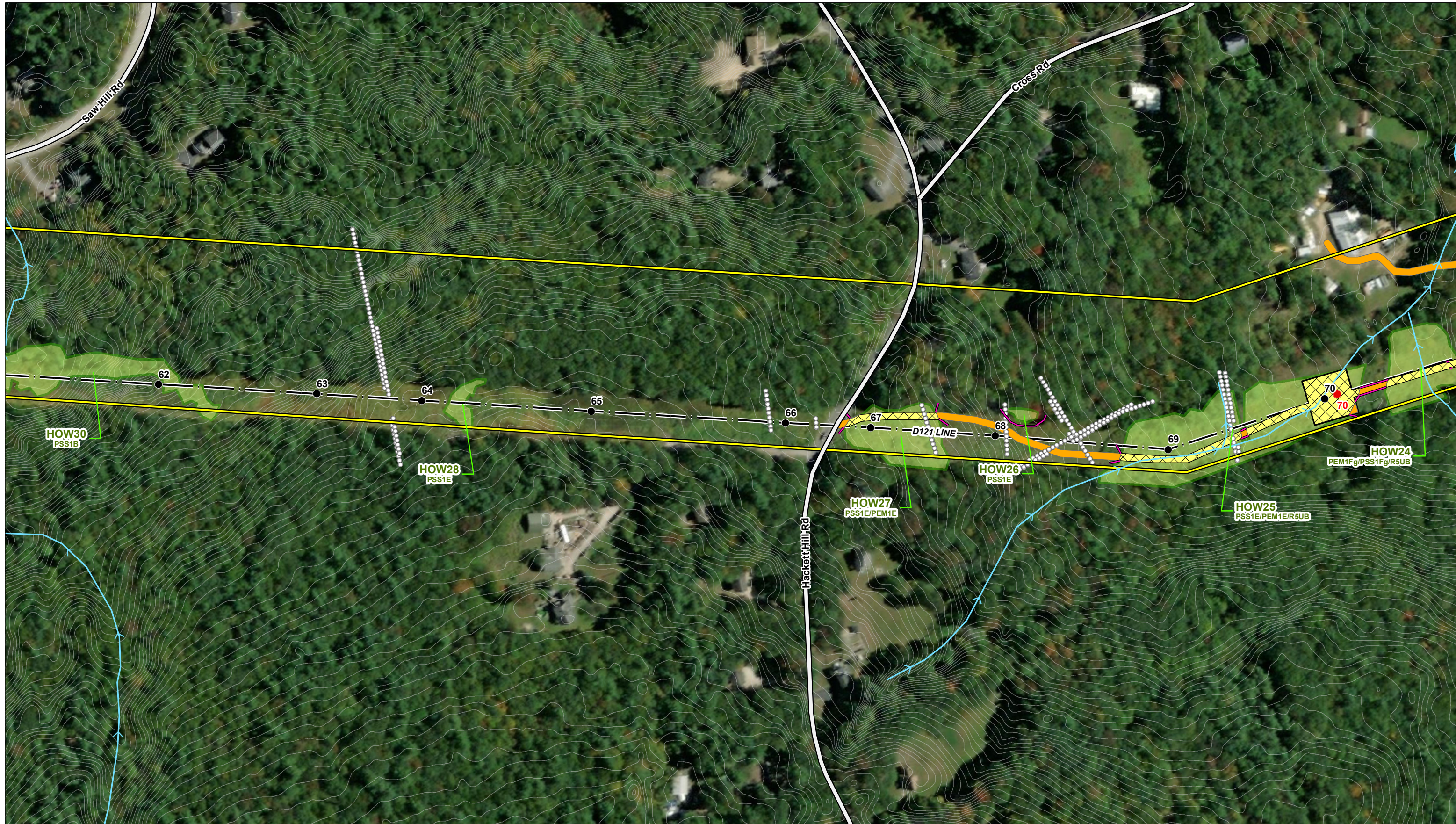
INDEX OF FIGURES

1 inch = 2,500 feet

- T1: TITLE SHEET
- 1-7: MAP SHEETS
- S1-S6: NOTESHEETS

PREPARED BY





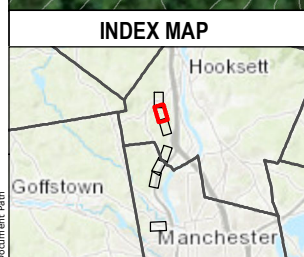
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1 inch = 200 feet

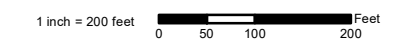
0 50 100 200 Feet

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EVERSOURCE ENERGY		
D121 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans		
Hooksett, NH		MAP SHEET
Date: March, 2023		1 OF 7
NO.	DATE	REVISIONS
		04.0191410.61

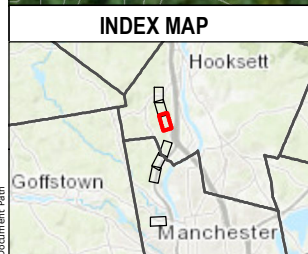


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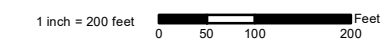


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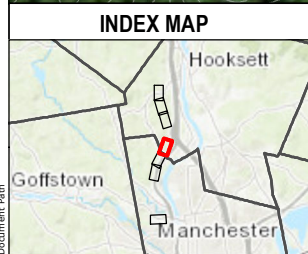
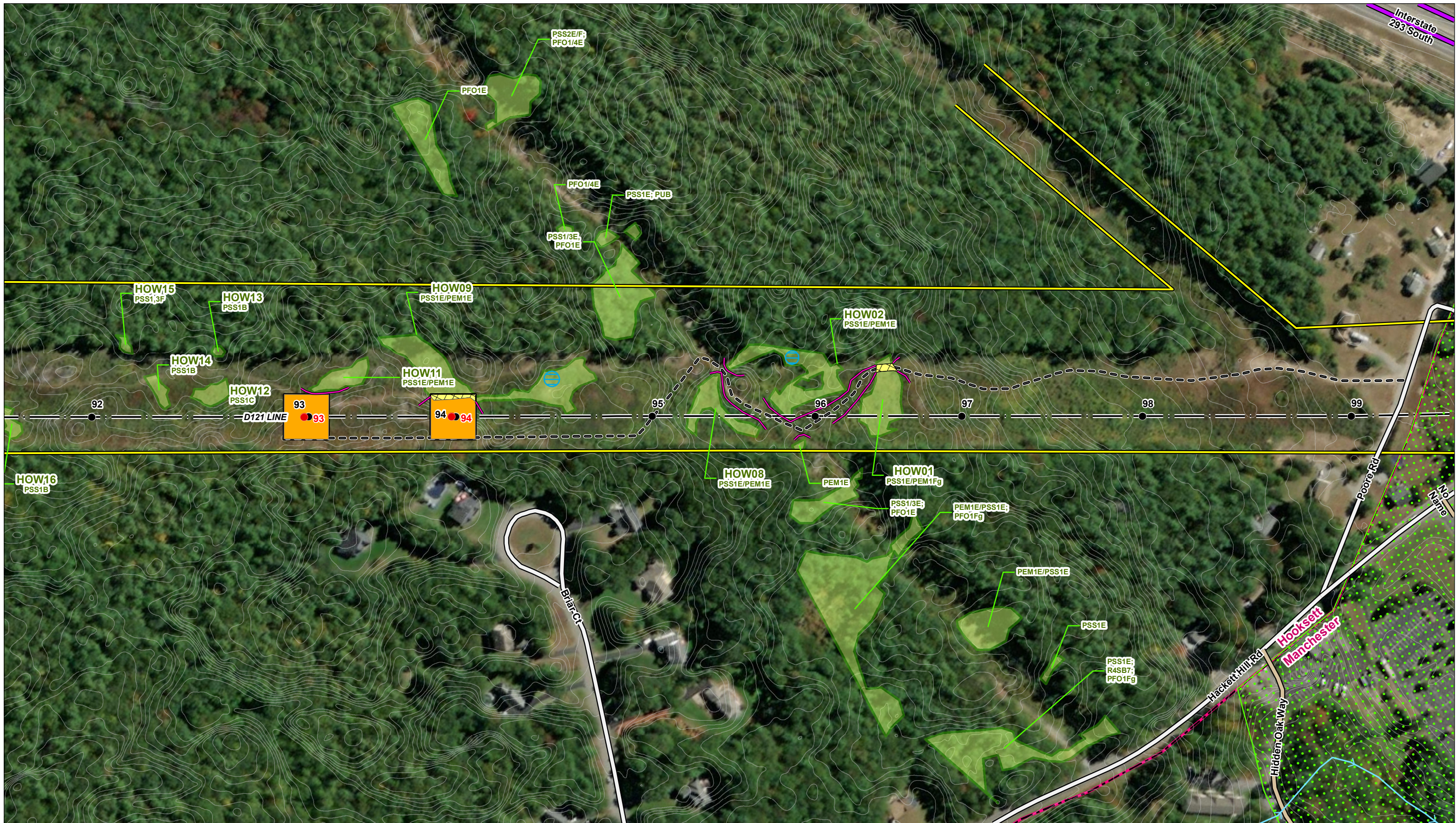


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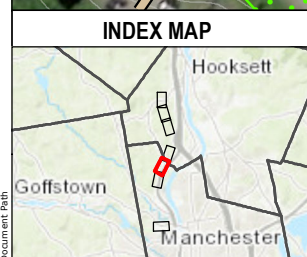
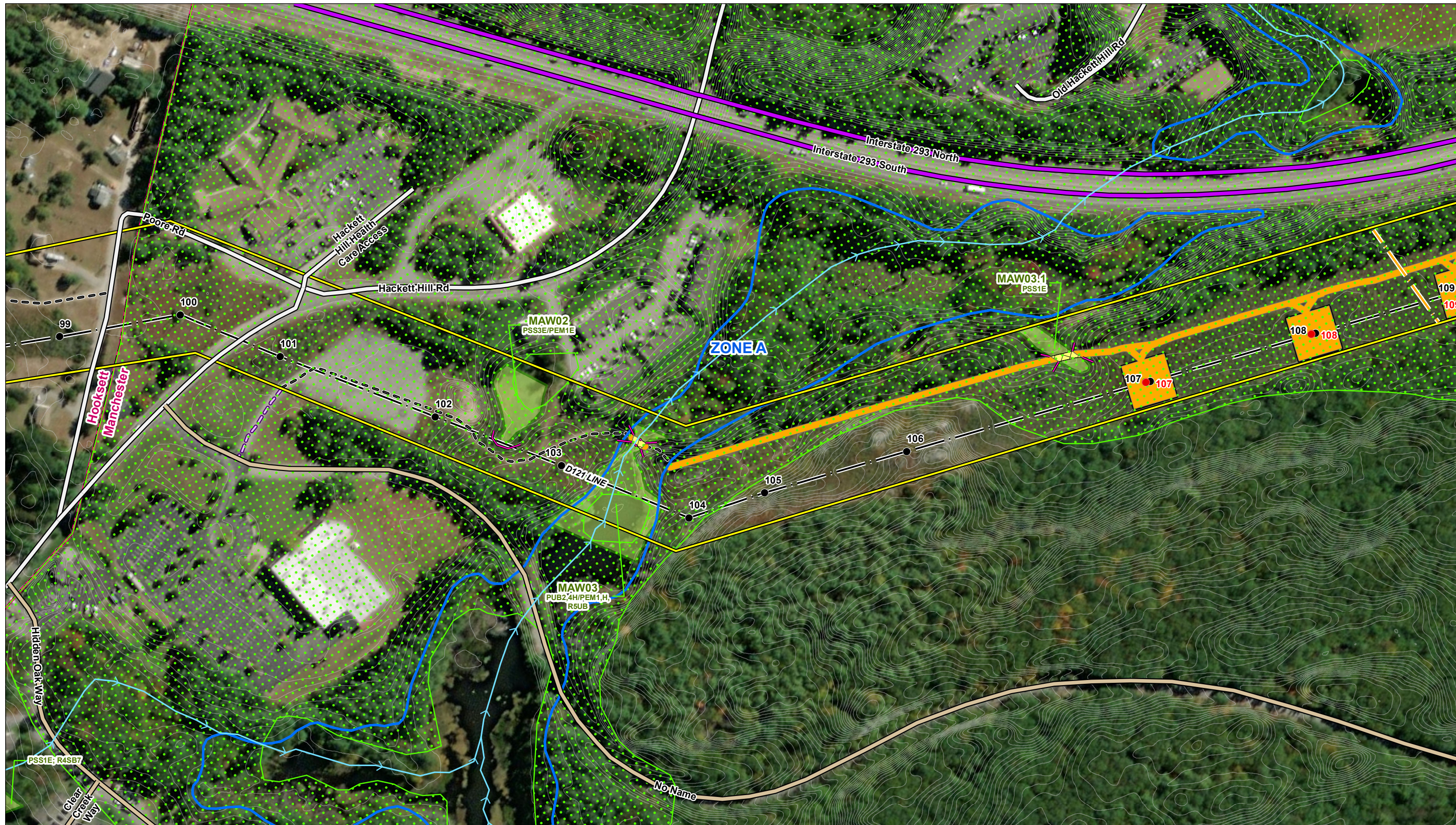
**D121 Transmission Line
Structure Replacement Project
Surface and Groundwater Overlay Plans**

Hooksett, NH MAP SHEET

Date: March, 2023

04.0191410.61

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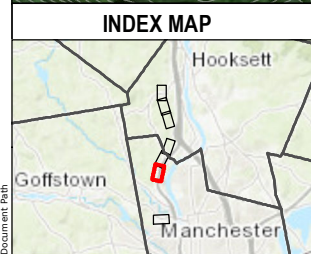
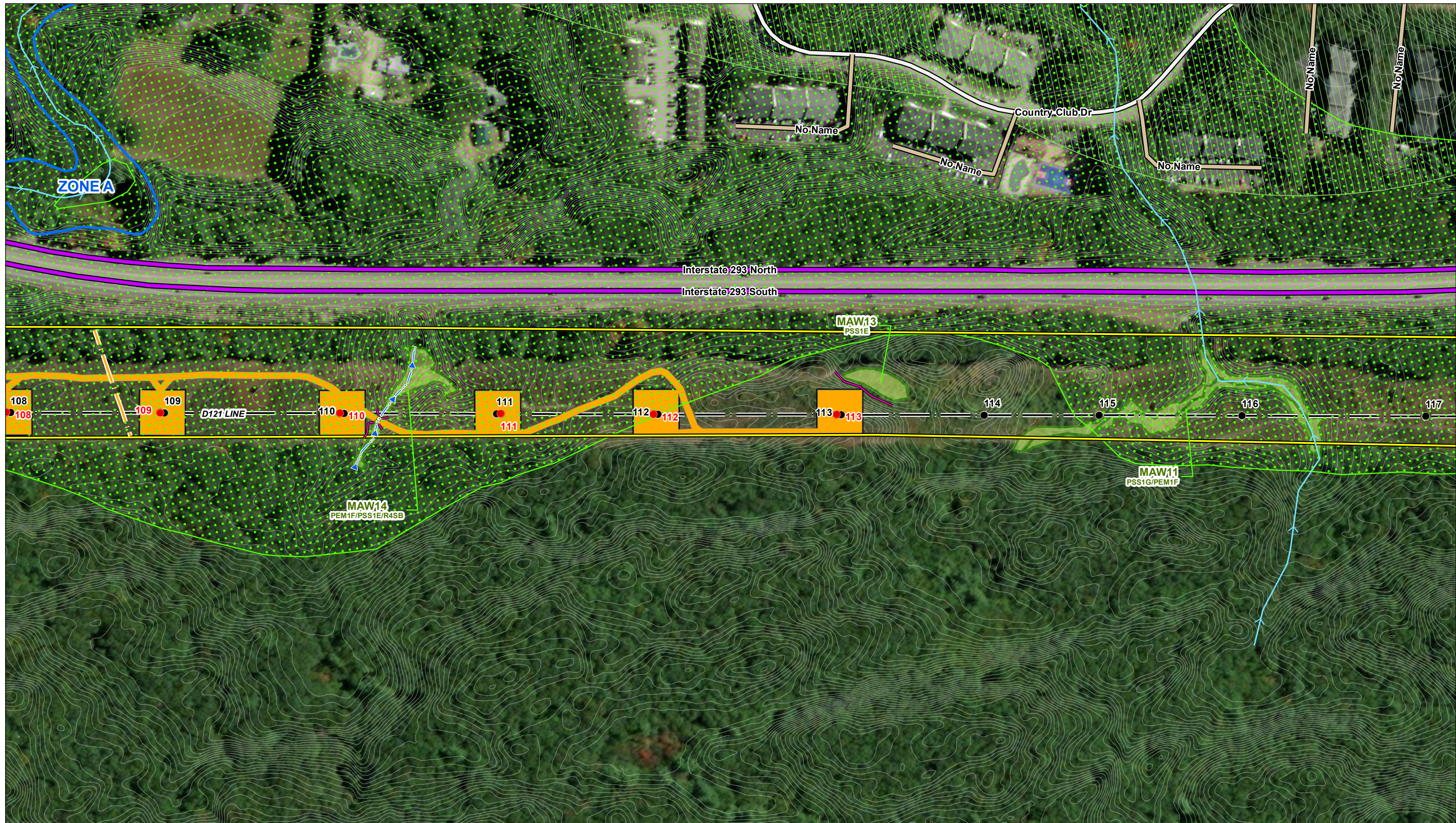
**D121 Transmission Line
Structure Replacement Project
Surface and Groundwater Overlay Plans**

Hooksett/Manchester, NH MAP SHEET

Date: March, 2023

04.0191410.61

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ENERGY

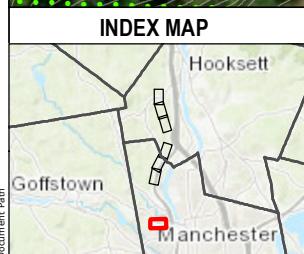
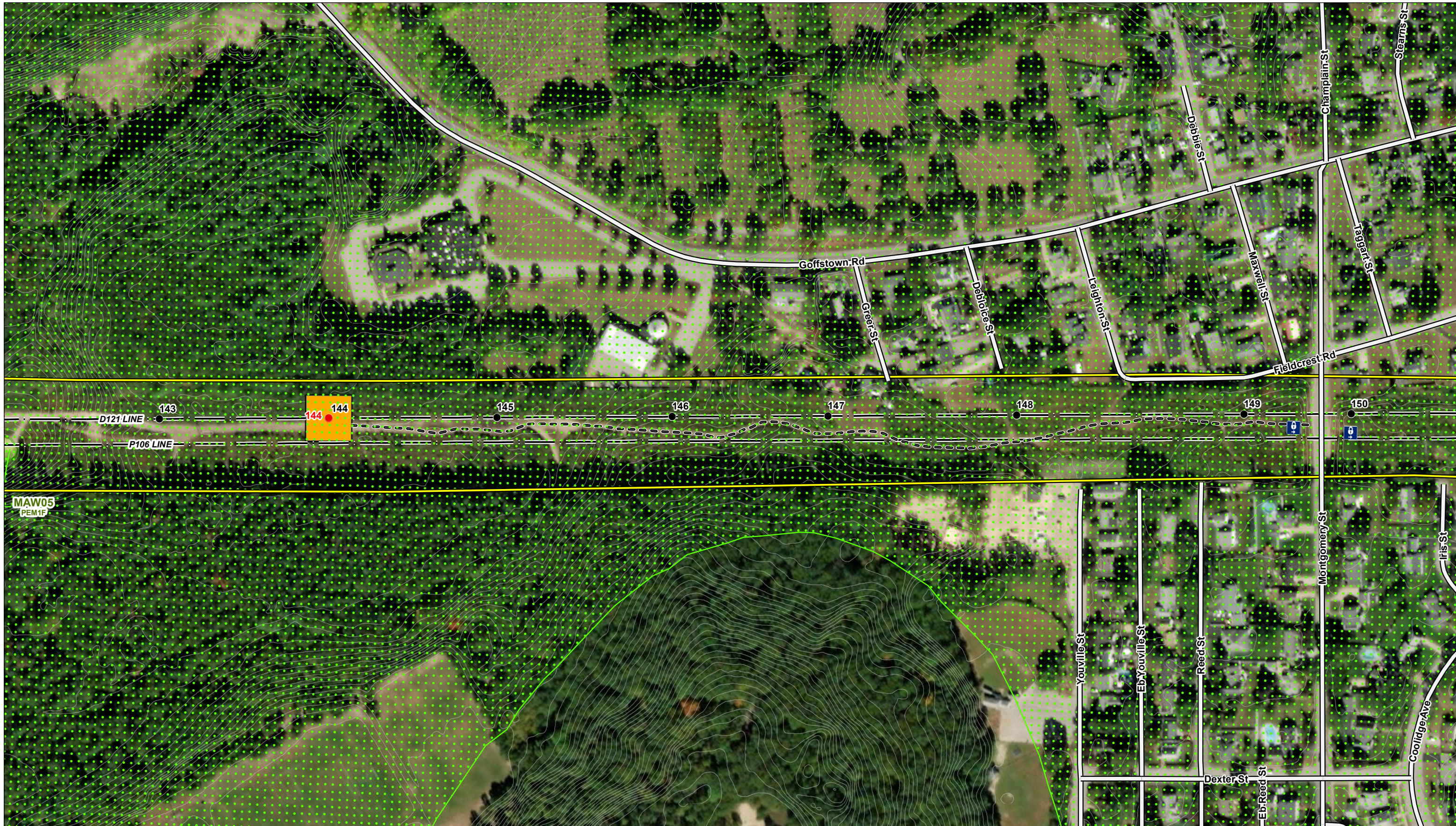
**D121 Transmission Line
Structure Replacement Project
Surface and Groundwater Overlay Plans**

Manchester, NH MAP SHEET

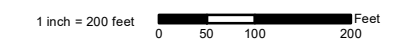
Date: March, 2023

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EVERSOURCE ENERGY

**D121 Transmission Line
Structure Replacement Project
Surface and Groundwater Overlay Plans**

Manchester, NH MAP SHEET

Date: March, 2023

04.0191410.61

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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, AND CONSISTENT WITH THE NHDES MARCH 2019 BMP MANUAL FOR UTILITY MAINTENANCE.
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 SWAMP 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 AND PERIMETER CONTROLS WILL BE USED ALONG ACCESS ROUTES AND WORK PADS 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. REMOVAL OF THE OLD POLE WILL OCCUR ONCE THE CABLE HAS BEEN INSTALLED ON THE NEW STRUCTURE. THE OLD STRUCTURES WILL BE REMOVED FROM THE SITE. POLES WILL BE CUT AT THE GROUND SURFACE. FOOTINGS WILL BE ABANDONED IN PLACE TO MINIMIZE IMPACTS.
17. ALL TIMBER MATS, MATERIAL, AND DEBRIS WILL BE REMOVED FROM THE WORK AREA UPON THE COMPLETION OF CONSTRUCTION.
18. 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.
19. 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.
20. MULCH USED FOR STABILIZATION SHALL CONSIST OF SEEDLESS STRAW.
21. SEDIMENT AND EROSION CONTROL MEASURES WILL BE EVALUATED AND REMOVED IF NECESSARY UPON THE COMPLETION OF CONSTRUCTION.
22. COMMERCIAL LOAM WILL NOT BE USED AS PART OF RESTORATION. ONLY IN-SITU TOPSOIL WILL BE USED TO RESTORE DISTURBED AREAS.
23. 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.
24. NATURALLY VEGETATED LOCAL WETLAND BUFFER AREAS OUTSIDE OF EXISTING TRAILS MUST BE RESTORED UPON COMPLETION OF WORK.

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 CONFIRMED BY GZA GEOENVIRONMENTAL, INC. IN 2023, 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 WILL BE REVIEWED BY GZA GEOENVIRONMENTAL, INC. PRIOR TO START OF WORK.
3. GZA EVALUATED WETLANDS AS POTENTIAL VERNAL POOLS IN 2023 IN ACCORDANCE WITH "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE," 2016, NEW HAMPSHIRE FISH AND GAME DEPARTMENT, NONGAME AND ANDANGERED WILDLIFE PROGRAM.
4. AS APPLICABLE, GZA WILL COMPLETE WETLANDS FUNCTION AND VALUES ASSESSMENT IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999.
5. SITE PLAN IS FOR PERMITTING PURPOSES ONLY AND DOES NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
6. 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.
7. IN ACCORDANCE 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 WITH BMPS.
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.
7. EROSION CONTROL MATTING, IF REQUIRED, WILL CONSIST OF JUTE MATTING. MATTING WITH WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD WILL BE AVOIDED TO LIMIT UNINTENTIONAL MORTALITY TO SNAKES.

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D121 TRANSMISSION LINE STRUCTURE
REPLACEMENT PROJECT
BOW, HOOKSETT, AND MANCHESTER, NEW HAMPSHIRE

NOTES

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVSOURCE ENERGY	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S1
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 03/23/2023	PROJECT NO: 04.0191410.61	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:

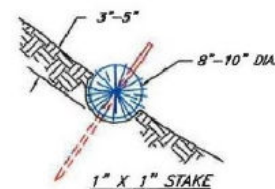
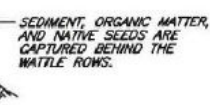
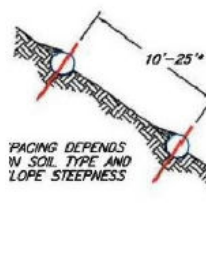
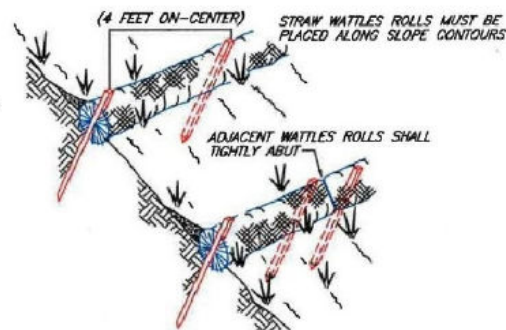
- * Along erodible or unstabilized slopes
- * Spread overland waterflow
- * Trap sediment
- * Around storm drain inlets to slow water and settle out sediment
- * Overlap ends approximately 6 inches

Installation:

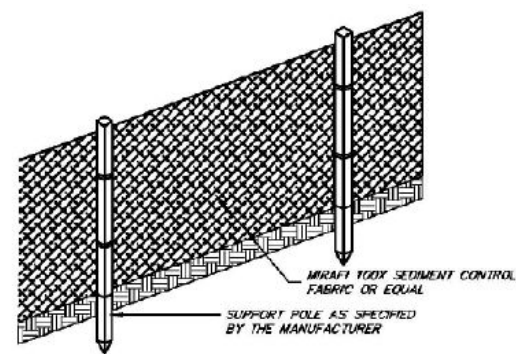
Straw wattles are installed parallel to slope contours and perpendicular to sheet flow.

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

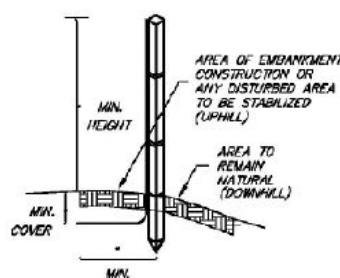
Trenching - 2"-5" inch trench
Stacking - at each end and four foot on center (i.e. 25 foot wattle uses 6 stacks)



NOT TO SCALE



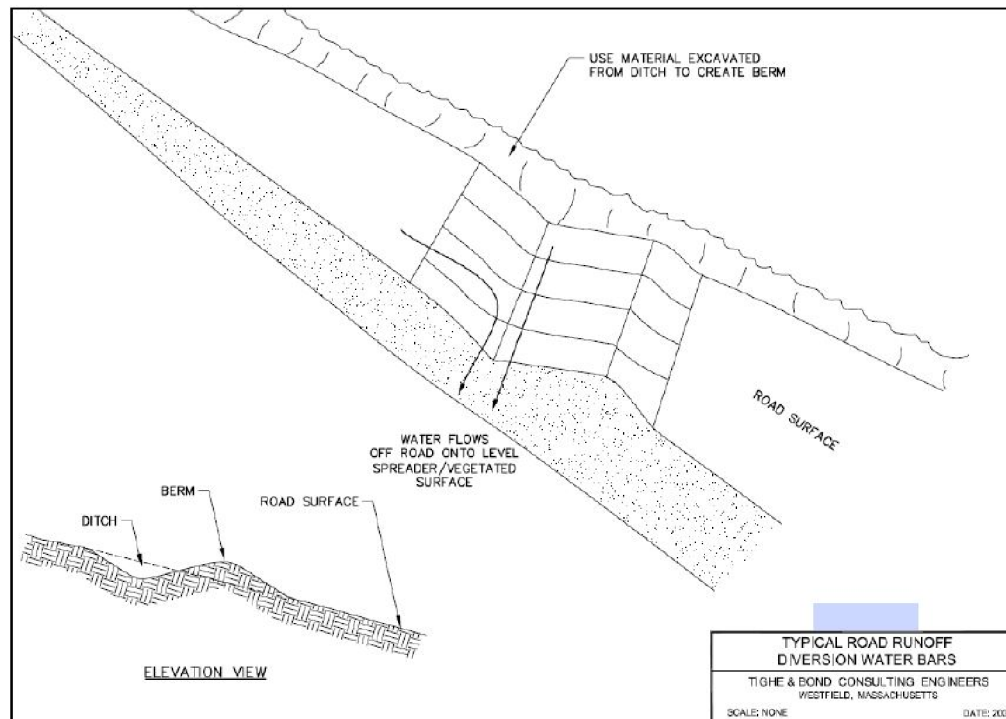
FRONT VIEW



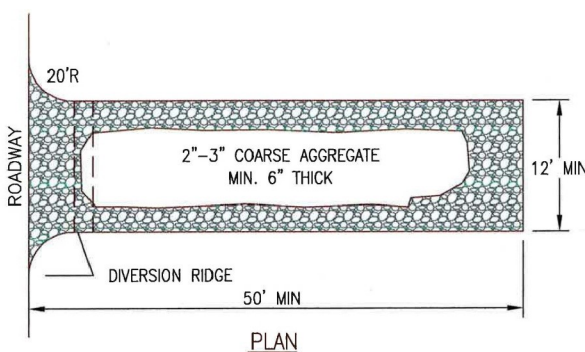
SIDE VIEW

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 SEEDDED.



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

Figure 5

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D121 TRANSMISSION LINE
STRUCTURE REPLACEMENT PROJECT
BOW, HOOKSETT, AND MANCHESTER, NEW HAMPSHIRE

BMP DETAILS

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Engineers and Scientists
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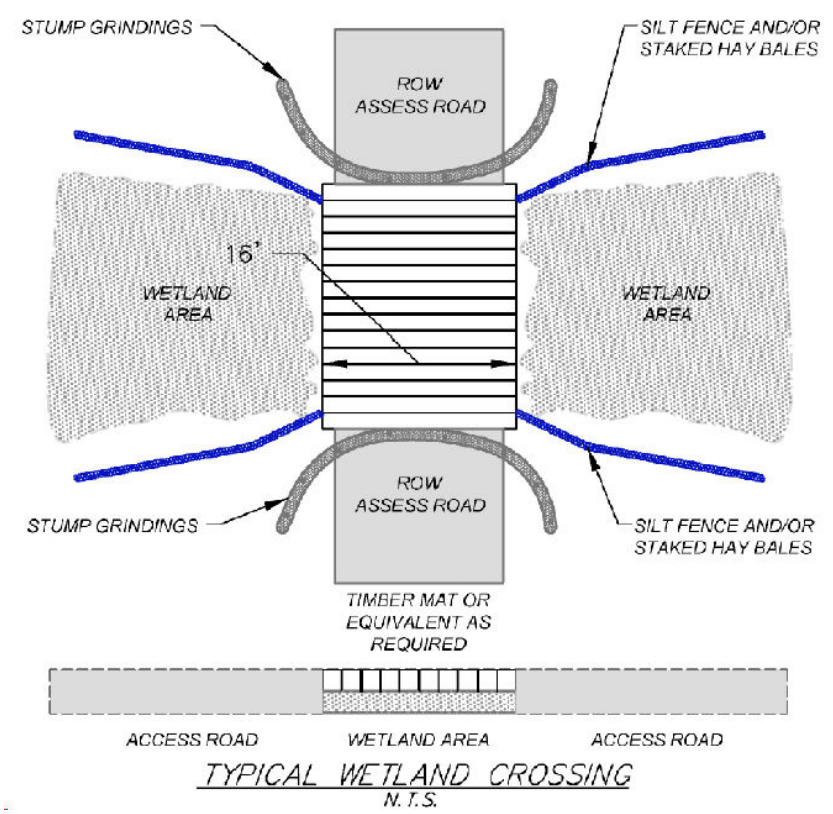
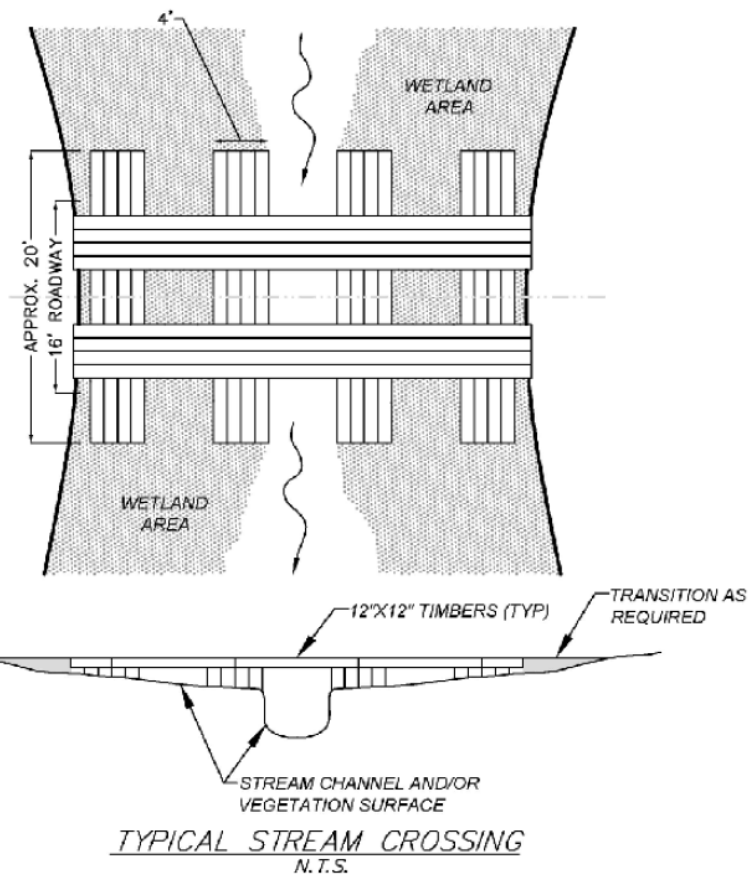
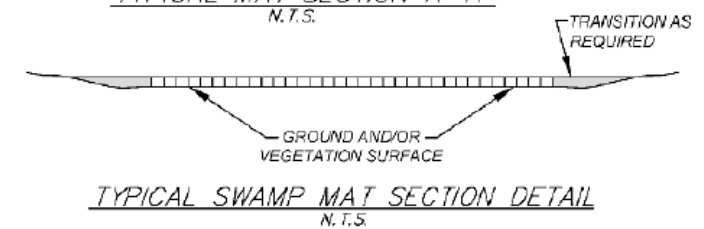
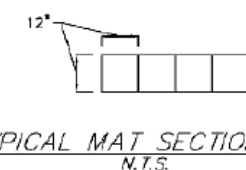
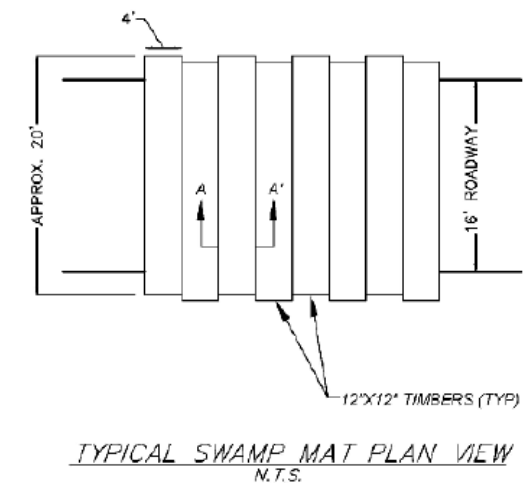
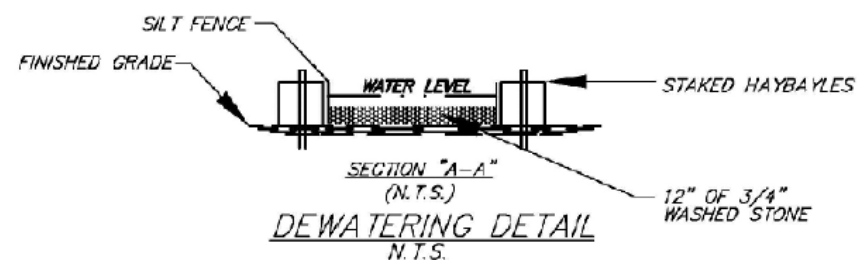
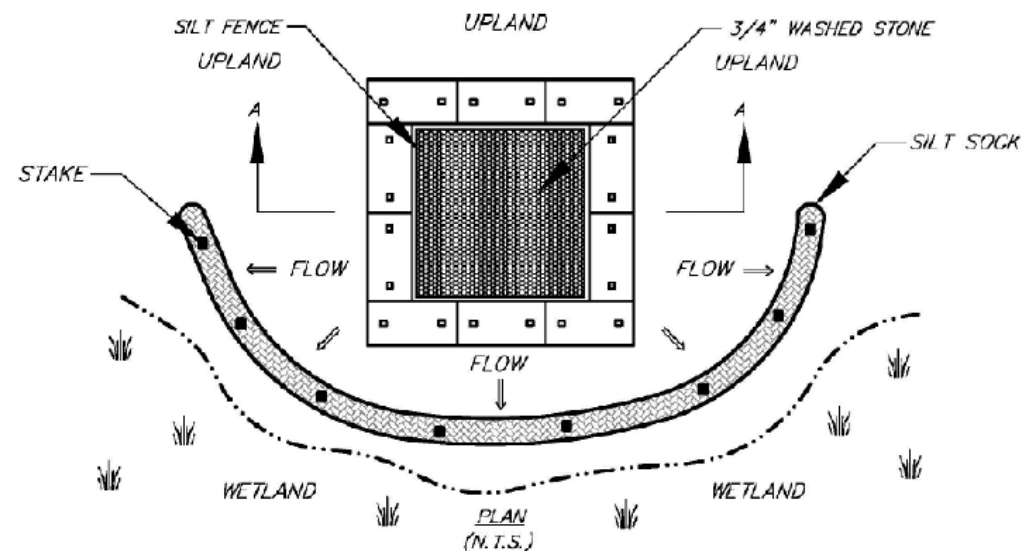
PROJ MGR: CEM
DESIGNED BY: MJD
DATE: 03/23/2023

REVIEWED BY: TLT
DRAWN BY: MJD
PROJECT NO: 04.0191410.61

CHECKED BY: DMZ
SCALE:
REVISION NO.

SHEET
S2

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**D121 TRANSMISSION LINE
STRUCTURE REPLACEMENT PROJECT**
BOW, HOOKSETT, AND MANCHESTER, NEW HAMPSHIRE

BMP DETAILS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: 	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S3
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 03/23/2023	PROJECT NO: 04.0191410.61	REVISION NO.	

NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS IN ACCORDANCE WITH ENV-WQ 1504.18 – WILDLIFE PROTECTION NOTES:

NHB23-0020 (BOW), NHB23-0021 (HOOKSETT), AND NHB23-0022 (MANCHESTER)

NEW HAMPSHIRE FISH AND GAME PERMIT CONDITIONS:

1. BLANDING'S TURTLE (STATE ENDANGERED), SPOTTED TURTLE (STATE THREATENED), WOOD TURTLE (STATE SPECIES OF SPECIAL CONCERN), AND NORTHERN BLACK RACER (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE POSTED ON SITE AT ALL TIMES AND COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT. SEE PLAN SHEET 5-6.
2. TURTLES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON. TURTLE NESTING SEASON OCCURS APPROXIMATELY MAY 15TH – JUNE 30TH. NESTING AREAS MAY INCLUDE WORK PADS AND ACCESS ROADS THAT ARE NOT HARD PACK GRAVEL AND OTHER SANDY/GRAVEL WORK AREAS. ALL TURTLE SPECIES NESTS ARE PROTECTED BY NH LAWS. BE AWARE OF THE POTENTIAL TO ENCOUNTER NESTING WILDLIFE IN THESE AREAS.
3. IF A NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. THE NEST OR SUSPECTED NEST SHALL BE MARKED (SURROUNDING ROPED OFF OR CONE BUFFER) AND AVOIDED; THIS SHALL BE COMMUNICATED TO ALL PERSONNEL ONSITE. SITE ACTIVITIES SHALL NOT OCCUR IN THE AREA SURROUNDING THE NEST OR SUSPECTED NEST UNTIL FURTHER GUIDANCE IS PROVIDED BY NHFG.
4. OBSERVATIONS OF NORTHERN BLACK RACERS IN THE MONTHS OF APRIL-MAY AND SEPTEMBER-OCTOBER MAY INDICATE THE POTENTIAL FOR A DEN SITE ON OR NEAR THE PROJECT SITE. OBSERVATIONS OF THIS SPECIES DURING THIS TIMEFRAME SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM, AND WORK SHOULD CEASE UNTIL FURTHER COORDINATION WITH NHFG. PLEASE CONTACT MELISSA WINTERS (603-479-1129) OR BRENDAN CLIFFORD (603-944-0885). OBSERVATIONS OF THIS SPECIES OUTSIDE OF THIS TIMEFRAME CAN FOLLOW GENERAL REPORTING GUIDANCE. PLEASE INCLUDE PHOTOGRAPH WITH TEXT IF FEASIBLE.
5. VERNAL POOLS AND POTENTIAL VERNAL POOLS SHALL BE FLAGGED PRIOR TO WORK, AND IMPACTS SHALL BE AVOIDED. NO DISTURB VEGETATIVE BUFFERS OF 50' SHALL BE MAINTAINED. PROVIDE LOCATION OF VERNAL POOLS ON PLAN SHEETS TO NHFG.
6. ALL MATTING WHICH WILL BE PLACED IN WATERBODIES DEEMED SUITABLE FOR HIBERNATING RARE TURTLES WILL BE PLACED PRIOR TO THE START OF THE INACTIVE SEASON (OCTOBER 16-MARCH 31) SO AS TO PREVENT ACCIDENTAL PLACEMENT ATOP HIBERNATING TURTLES. IMMEDIATELY PRIOR TO MATTING PLACEMENT IN THESE WETLANDS, THE AREA SHALL BE SWEEP BY A QUALIFIED BIOLOGIST OR HERPETOLOGIST. THEY SHALL WATCH FOR SIGNS THAT TURTLES ARE BEING DISTURBED IN THE AREA (EX. HEADS COMING ABOVE WATER, ANIMALS MOVING IN WATER). CONTACT NHFG IF BIOLOGIST/HERPETOLOGIST SEES OR SUSPECTS TURTLES IN MATTING AREAS. AREAS IDENTIFIED AS SUITABLE HIBERNATION HABITAT SHALL BE IDENTIFIED ON PLAN SHEETS AND PROVIDED TO NHFG AT LEAST TWO WEEKS PRIOR TO BEGINNING WORK. BIOLOGIST QUALIFICATIONS SHALL BE PROVIDED TO NHFG.
7. IMMEDIATELY PRIOR TO THE PLACEMENT OF MATTING IN WETLANDS NOT DEEMED SUITABLE FOR HIBERNATING RARE TURTLES DURING THE ACTIVE SEASON (APRIL 1-OCTOBER 15), THE AREAS SHALL BE CLEARED BY A TRAINED INDIVIDUAL. A TRAINED INDIVIDUAL SHALL BE DEFINED AS ANY CONTRACTOR WHO HAS GONE THROUGH PROJECT-SPECIES PROTECTION EDUCATION CONDUCTED BY THE QUALIFIED BIOLOGIST ON RARE WILDLIFE SPECIES AT THE SITE.
8. SEARCHES AND SWEEPS SHALL BE CONDUCTED BY TRAINED INDIVIDUALS IMMEDIATELY BEFORE THE START OF WORK AND MOVEMENT OF EQUIPMENT IN ORDER TO MINIMIZE THE CHANCE OF ANIMALS ENTERING AN AREA BETWEEN THE SWEEP AND WORK. A TRAINED INDIVIDUAL SHALL BE DEFINED AS ANY CONTRACTOR WHO HAS GONE THROUGH PROJECT-SPECIES PROTECTION EDUCATION CONDUCTED BY THE QUALIFIED BIOLOGIST ON RARE WILDLIFE SPECIES AT THE SITE.
9. ALL WORK ACTIVITIES SHALL BE RESTRICTED TO THE DEFINED ROADS, CONSTRUCTION AREAS, AND STAGING AREAS, WITH NO EQUIPMENT OR MATERIALS STAGED OR STORED OUTSIDE OF THE DEFINED AREAS AS SHOWN ON PLAN SHEETS.
10. WORK, PULL PADS, AND ACCESS SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE.
11. WORKS PADS SHALL BE REDUCED POST-CONSTRUCTION TO 30' X 60' AND RESTORED WITH A NATIVE VEGETATION SEED MIX.
12. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES;
13. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION;
14. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE;
15. IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.
-SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE AND IF IN DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.
16. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.



ADDITIONAL RECOMMENDATIONS:

1. THERE ARE KNOWN RECORDS OF EASTERN MEADOWLARK (STATE THREATENED), GRASSHOPPER SPARROW (STATE THREATENED), AND VESPER SPARROW (STATE SPECIES OF SPECIAL CONCERN) IN THE VICINITY OF STRUCTURES 119 TO 124. IF BIRDS ARE OBSERVED TO DISPLAY NESTING BEHAVIOR (FOR EXAMPLE: CALLING, SWOOPING, AGITATED/TERRITORIAL BEHAVIOR), CONTACT THE WILDLIFE DIVISION AT 603-271-2461 OR NHFGREVIEW@WILDLIFE.NH.GOV. PROVIDE NHB NUMBER AND PROJECT NAME. MIGRATORY BIRD NESTS ARE PROTECTED UNDER NH AND FEDERAL LAWS.

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**D121 TRANSMISSION LINE STRUCTURE
REPLACEMENT PROJECT**
BOW, HOOKSETT, AND MANCHESTER, NEW HAMPSHIRE

NOTES

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DATE: 04/11/2023	PROJECT NO: 04.0191410.61	REVISION NO:	

WOOD TURTLE (GLYPTEMYS INSCULPTA)

STATE SPECIES OF SPECIAL CONCERN



WOOD TURTLE IDENTIFICATION

1. NECK AND FORELIMBS ARE ORANGE.
2. CHARACTERIZED BY ITS HIGHLY SCULPTED SHELL WITH EACH LARGE SCUTE TAKING ON AN IRREGULAR PYRAMIDAL SHAPE.
3. ADULTS CAN BE 5-8 INCHES LONG.

SPOTTED TURTLE (CLEMMYS GUTTATA)

STATE THREATENED



SPOTTED TURTLE IDENTIFICATION



1. SMALL, MOSTLY AQUATIC WITH BLACK OR DARK BROWN WITH YELLOW SPOTS.
2. FAIRLY FLAT SHELL COMPARED TO BLANDING'S TURTLE.
3. SPOTS VARY IN COLOR AND NUMBER.

*ALL PHOTOS AND IDENTIFICATION INFORMATION COURTESY OF NEW HAMPSHIRE FISH AND GAME DEPARTMENT.

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D121 TRANSMISSION LINE
STRUCTURE REPLACEMENT PROJECT
BOW, HOOKSETT, AND MANCHESTER,
NEW HAMPSHIRE

WILDLIFE NOTES

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DATE: 04/06/2023	PROJECT NO: 04.0191410.61	REVISION NO:	

BLANDING'S TURTLE (EMYDOIDEA BLANDINGII)

STATE ENDANGERED



BLANDING'S TURTLE IDENTIFICATION

1. LARGE, DARK/BLACK DOMED SHELL WITH LIGHTER SPECKLES.
2. DISTINCT YELLOW THROAT/CHIN.
3. AQUATIC BUT OFTEN MOVES ON LAND.

NORTHERN BLACK RACER (COLUBER CONSTRICTOR)

STATE THREATENED





NORTHERN BALCK RACER IDENTIFICATION

1. SOLID BLACK WITH A WHITE THROAT
2. SLENDER WITH GLOSSY SCALES, 3-6 FT. LONG
3. HATCHLINGS ARE VERY SMALL AND PATTERNED

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WILDLIFE NOTES

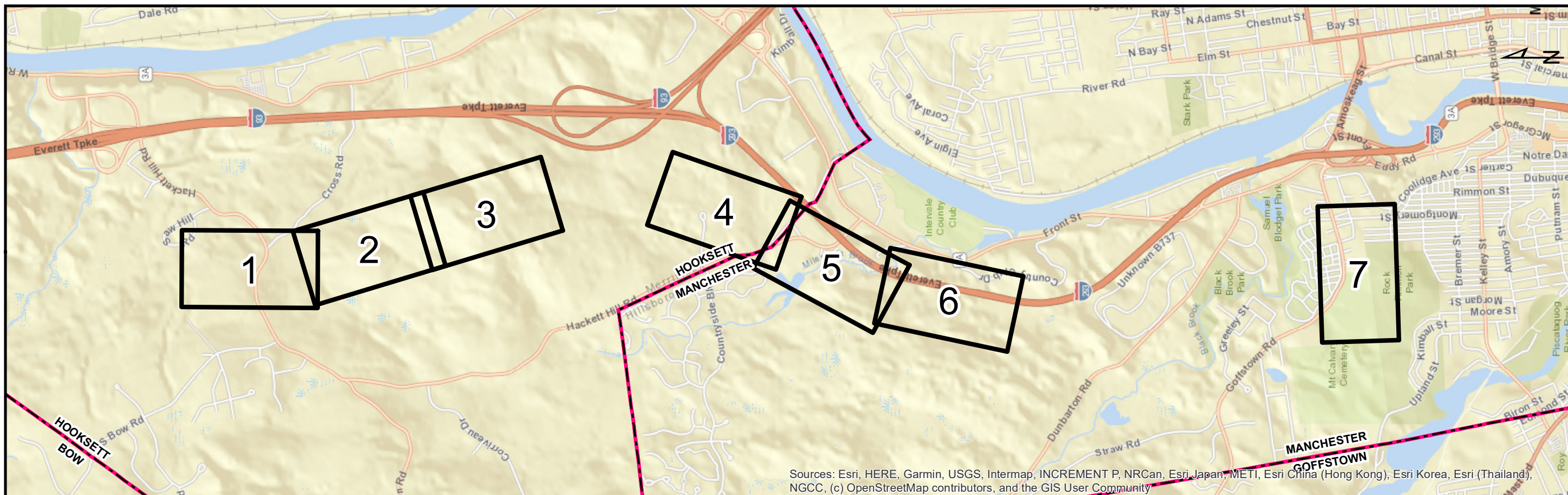
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DATE: 04/06/2023	PROJECT NO: 04.0191410.61	REVISION NO:	

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D121 TRANSMISSION LINE REBUILD PROJECT

**HOOKSETT AND MANCHESTER, NEW HAMPSHIRE
ALTERATION OF TERRAIN PERMITTING PLAN SET**

3/23/2023



PREPARED FOR

EVERSOURCE
ENERGY

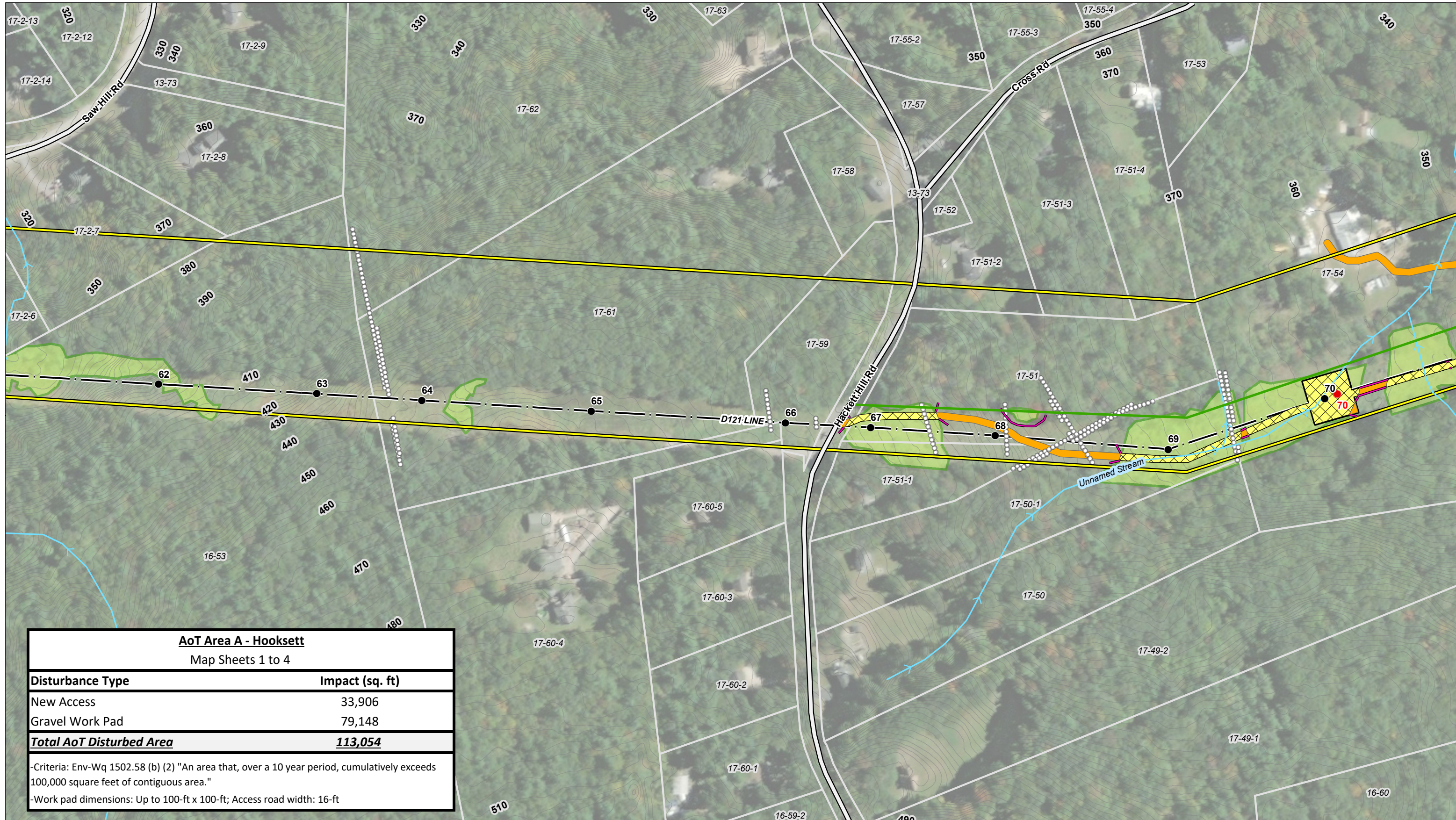
INDEX OF FIGURES

1 inch = 2,500 feet

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S1-S6: NOTESHEETS

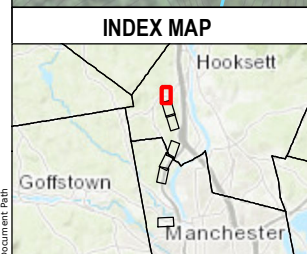
PREPARED BY

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



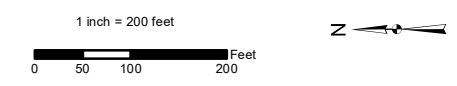
AoT Area A - Hooksett	
Map Sheets 1 to 4	
Disturbance Type	Impact (sq. ft)
New Access	33,906
Gravel Work Pad	79,148
Total AoT Disturbed Area	113,054

-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: Up to 100-ft x 100-ft; Access road width: 16-ft

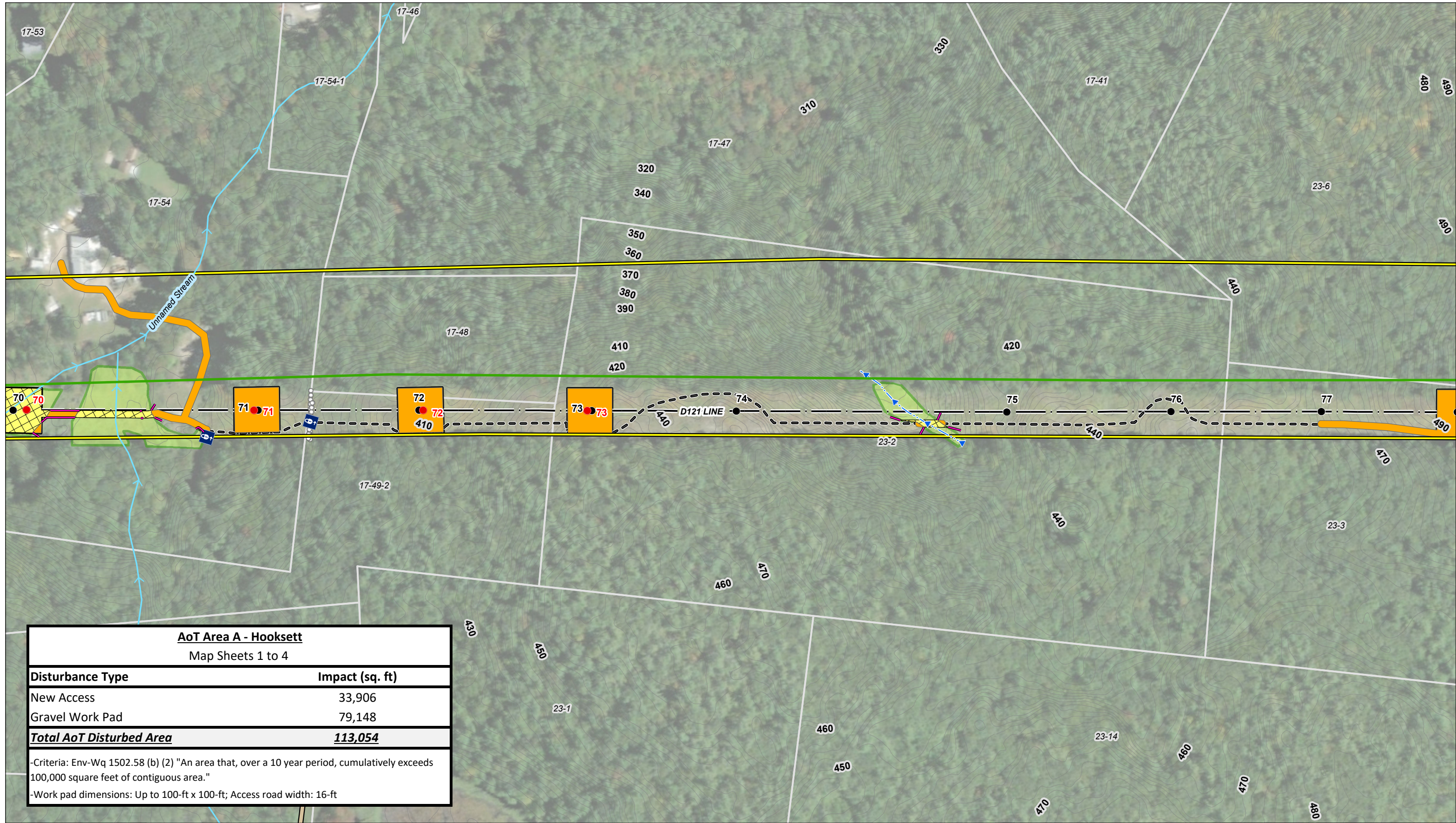


- EXISTING STRUCTURE
- STRUCTURE TO BE REPLACED
- EXTENT OF WETLAND DELINEATION
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- INTERMITTENT STREAM
- FLOWLINES
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- TOWN BOUNDARY
- WETLANDS ADJACENT TO T3+ STREAM
- FIELD DELINEATED WETLAND

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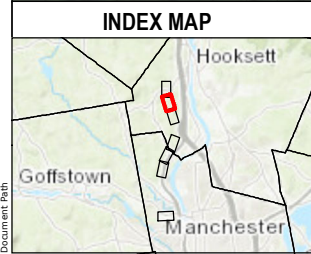
EVERSOURCE ENERGY		
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Hooksett, NH		MAP SHEET
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AoT Area A - Hooksett
Map Sheets 1 to 4

Disturbance Type	Impact (sq. ft)
New Access	33,906
Gravel Work Pad	79,148
Total AoT Disturbed Area	113,054

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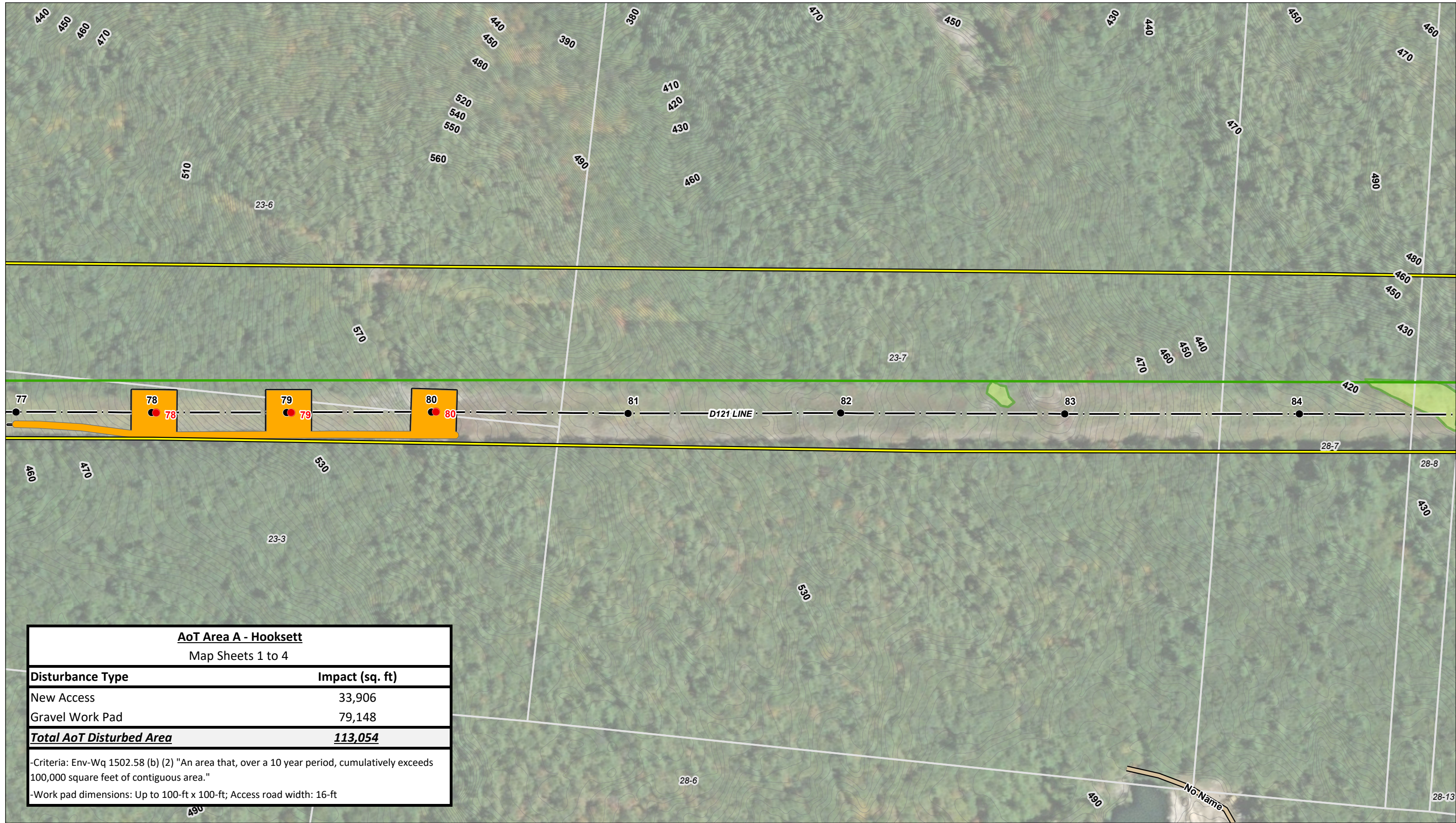


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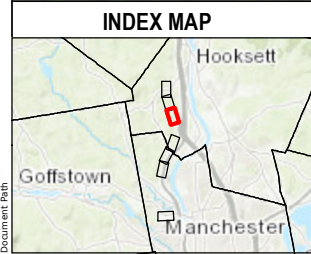
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1 inch = 200 feet

		EVERSOURCE ENERGY	
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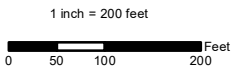


AoT Area A - Hooksett	
Map Sheets 1 to 4	
Disturbance Type	Impact (sq. ft)
New Access	33,906
Gravel Work Pad	79,148
Total AoT Disturbed Area	113,054
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
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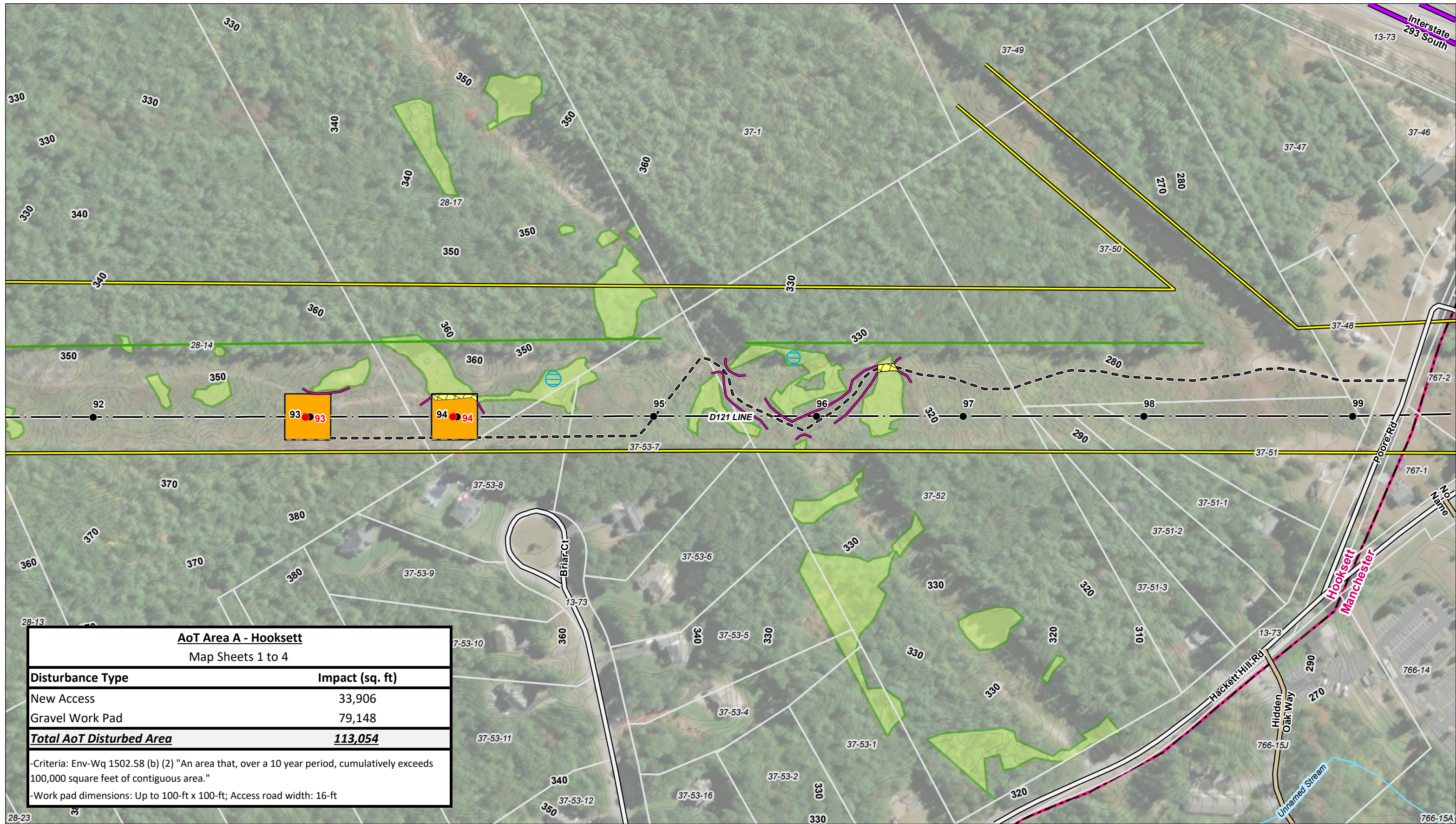


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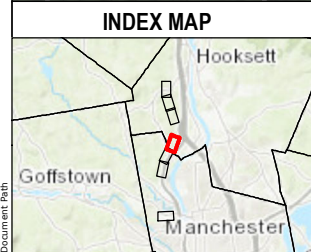
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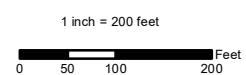


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New Access	33,906
Gravel Work Pad	79,148
Total AoT Disturbed Area	113,054
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
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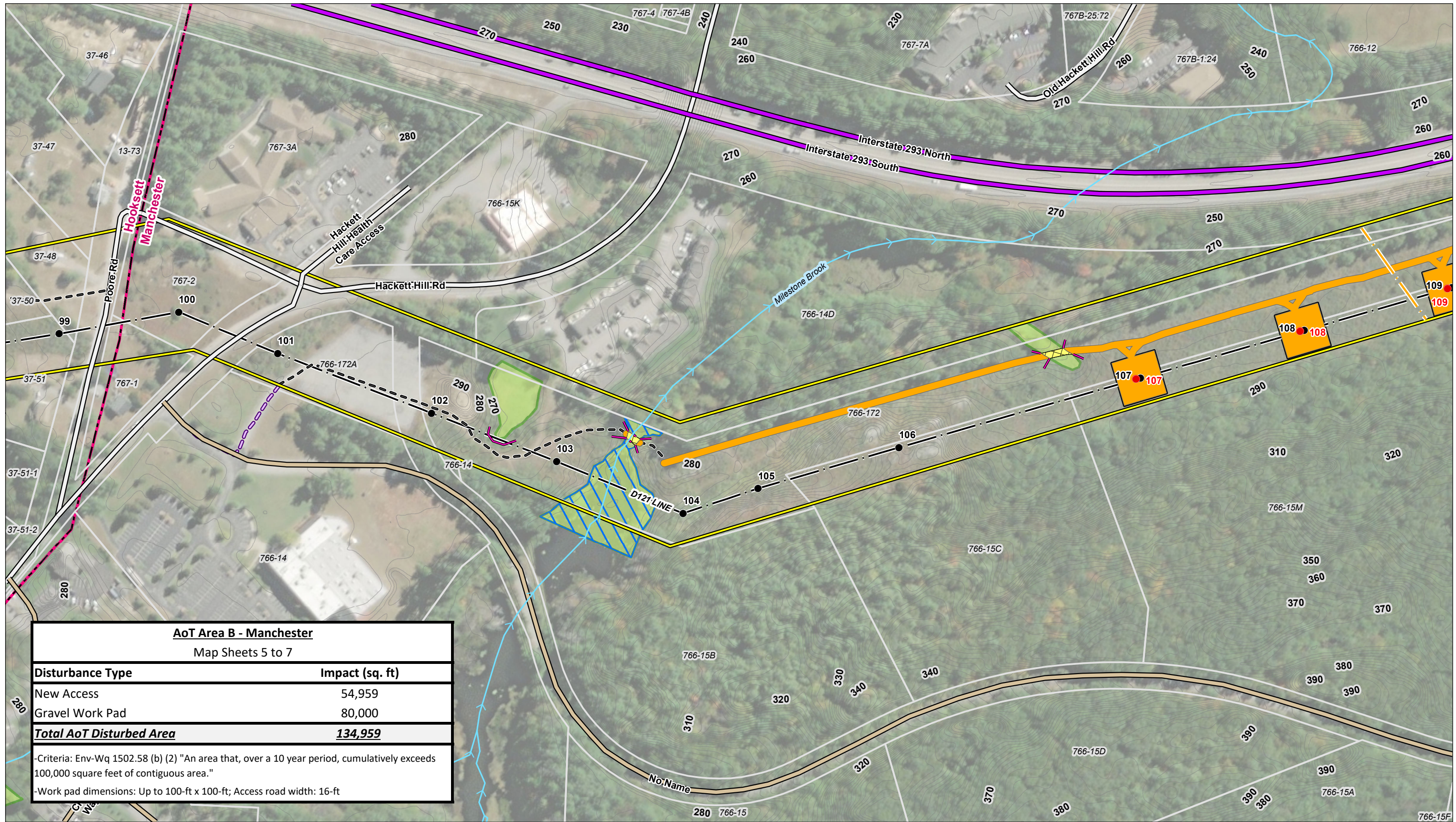


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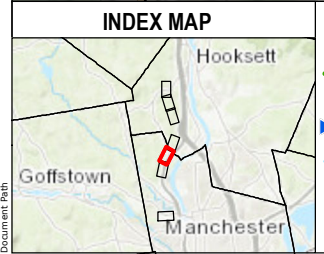
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AoT Area B - Manchester	
Map Sheets 5 to 7	
Disturbance Type	Impact (sq. ft)
New Access	54,959
Gravel Work Pad	80,000
Total AoT Disturbed Area	134,959
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft	

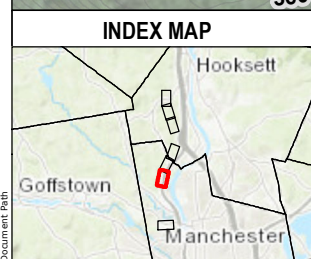
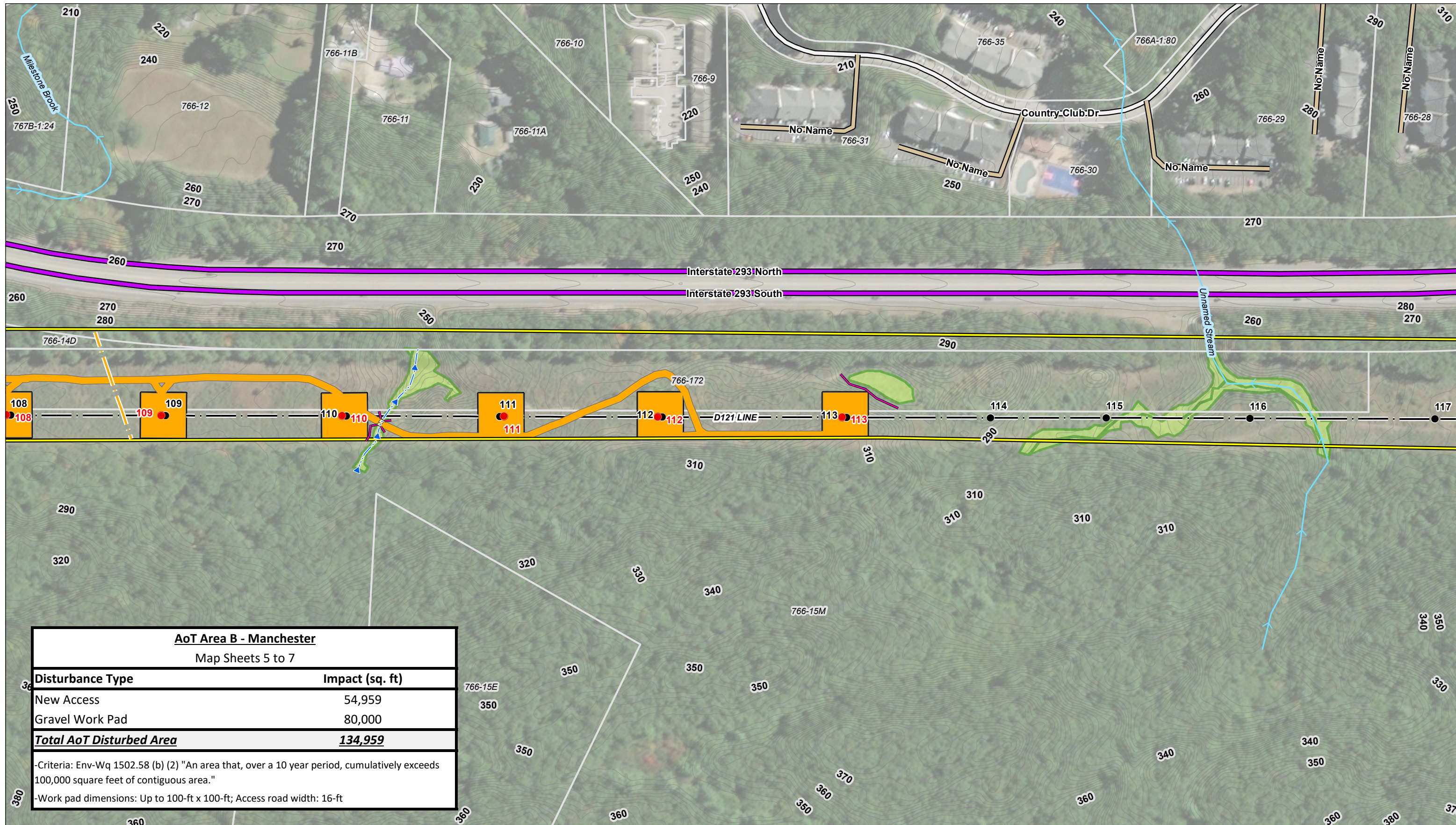


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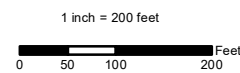
1 inch = 200 feet

EVERSOURCE ENERGY		
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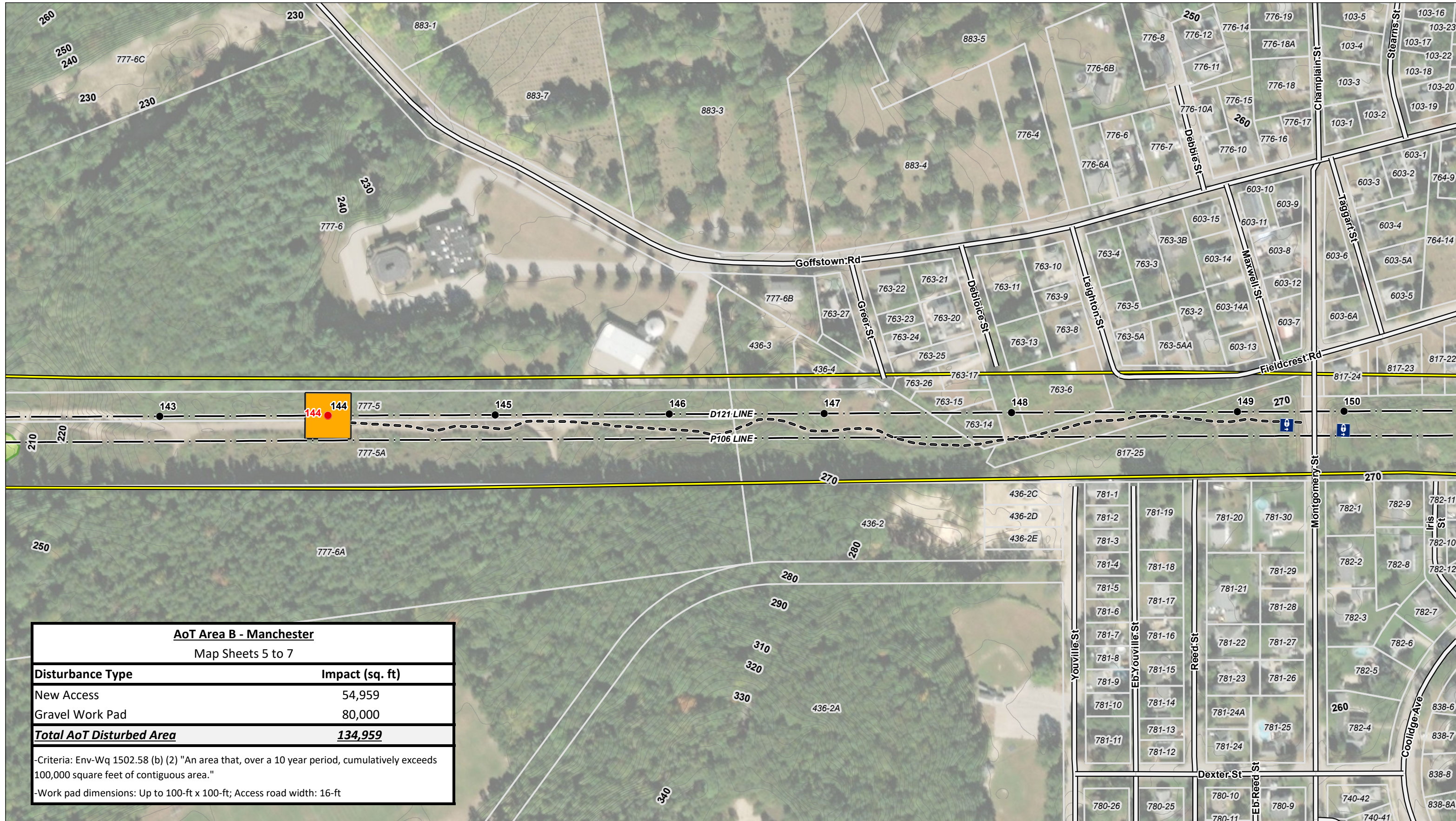


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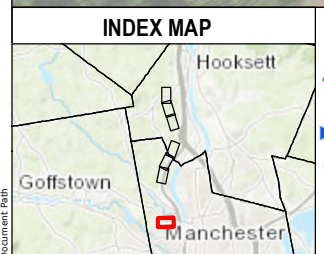


		EVERSOURCE ENERGY	
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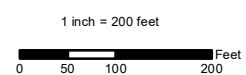
AoT Area B - Manchester Map Sheets 5 to 7	
Disturbance Type	Impact (sq. ft)
New Access	54,959
Gravel Work Pad	80,000
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CONSTRUCTION SEQUENCE:

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, AND CONSISTENT WITH THE NHDES MARCH 2019 BMP MANUAL FOR UTILITY MAINTENANCE.
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 SWAMP 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 AND PERIMETER CONTROLS WILL BE USED ALONG ACCESS ROUTES AND WORK PADS 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. REMOVAL OF THE OLD POLE WILL OCCUR ONCE THE CABLE HAS BEEN INSTALLED ON THE NEW STRUCTURE. THE OLD STRUCTURES WILL BE REMOVED FROM THE SITE. POLES WILL BE CUT AT THE GROUND SURFACE. FOOTINGS WILL BE ABANDONED IN PLACE TO MINIMIZE IMPACTS.
17. ALL TIMBER MATS, MATERIAL, AND DEBRIS WILL BE REMOVED FROM THE WORK AREA UPON THE COMPLETION OF CONSTRUCTION.
18. 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.
19. 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.
20. MULCH USED FOR STABILIZATION SHALL CONSIST OF SEEDLESS STRAW.
21. SEDIMENT AND EROSION CONTROL MEASURES WILL BE EVALUATED AND REMOVED IF NECESSARY UPON THE COMPLETION OF CONSTRUCTION.
22. COMMERCIAL LOAM WILL NOT BE USED AS PART OF RESTORATION. ONLY IN-SITU TOPSOIL WILL BE USED TO RESTORE DISTURBED AREAS.
23. 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.
24. NATURALLY VEGETATED LOCAL WETLAND BUFFER AREAS OUTSIDE OF EXISTING TRAILS MUST BE RESTORED UPON COMPLETION OF WORK.

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 CONFIRMED BY GZA GEOENVIRONMENTAL, INC. IN 2023, 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 WILL BE REVIEWED BY GZA GEOENVIRONMENTAL, INC. PRIOR TO START OF WORK.
3. GZA EVALUATED WETLANDS AS POTENTIAL VERNAL POOLS IN 2023 IN ACCORDANCE WITH "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE," 2016, NEW HAMPSHIRE FISH AND GAME DEPARTMENT, NONGAME AND ANDANGERED WILDLIFE PROGRAM.
4. AS APPLICABLE, GZA WILL COMPLETE WETLANDS FUNCTION AND VALUES ASSESSMENT IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999.
5. SITE PLAN IS FOR PERMITTING PURPOSES ONLY AND DOES NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
6. 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.
7. IN ACCORDANCE 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 WITH BMPS.
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.
7. EROSION CONTROL MATTING, IF REQUIRED, WILL CONSIST OF JUTE MATTING. MATTING WITH WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD WILL BE AVOIDED TO LIMIT UNINTENTIONAL MORTALITY TO SNAKES.

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D121 TRANSMISSION LINE STRUCTURE
REPLACEMENT PROJECT
BOW, HOOKSETT, AND MANCHESTER, NEW HAMPSHIRE

NOTES

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVSOURCE ENERGY	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S1
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 03/23/2023	PROJECT NO: 04.0191410.61	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:

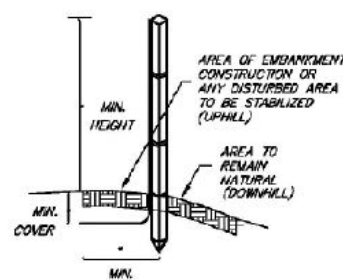
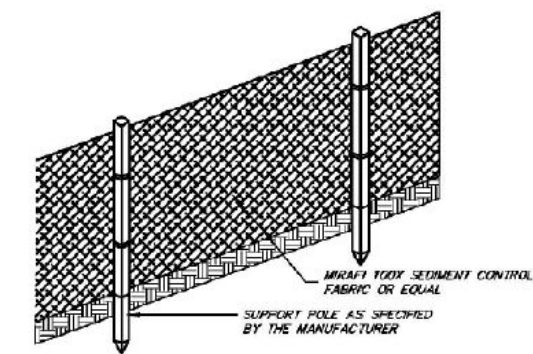
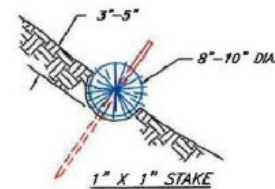
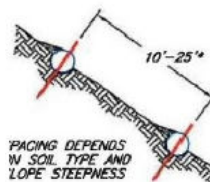
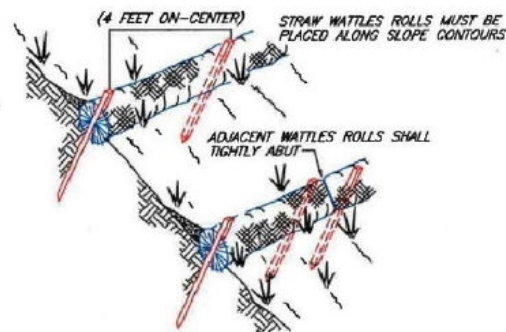
- * Along erodible or unstabilized slopes
- * Spread overland waterflow
- * Trap sediment
- * Around storm drain inlets to slow water and settle out sediment
- * Overlap ends approximately 6 inches

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)

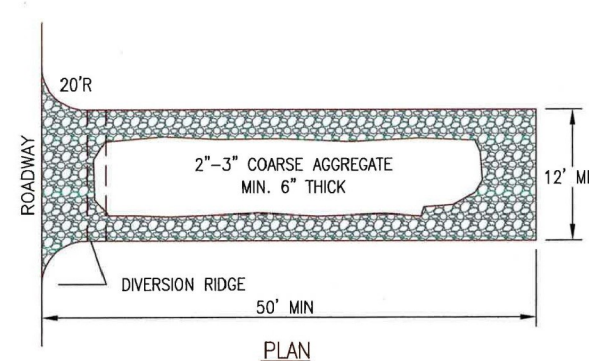
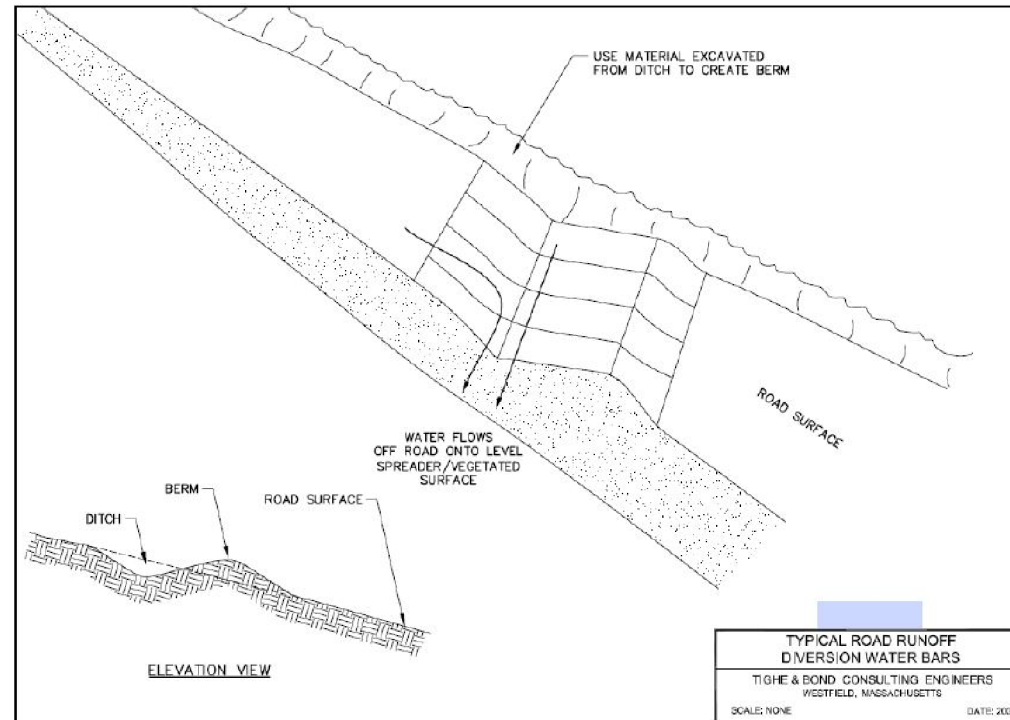


FRONT VIEW

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 SEEDING.



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

Figure 5

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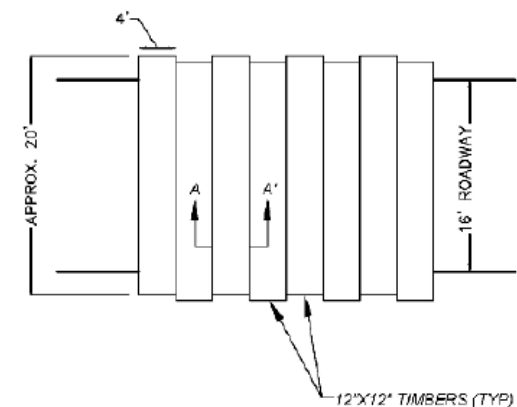
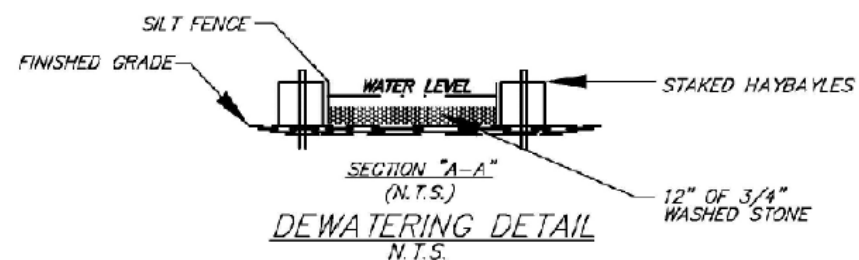
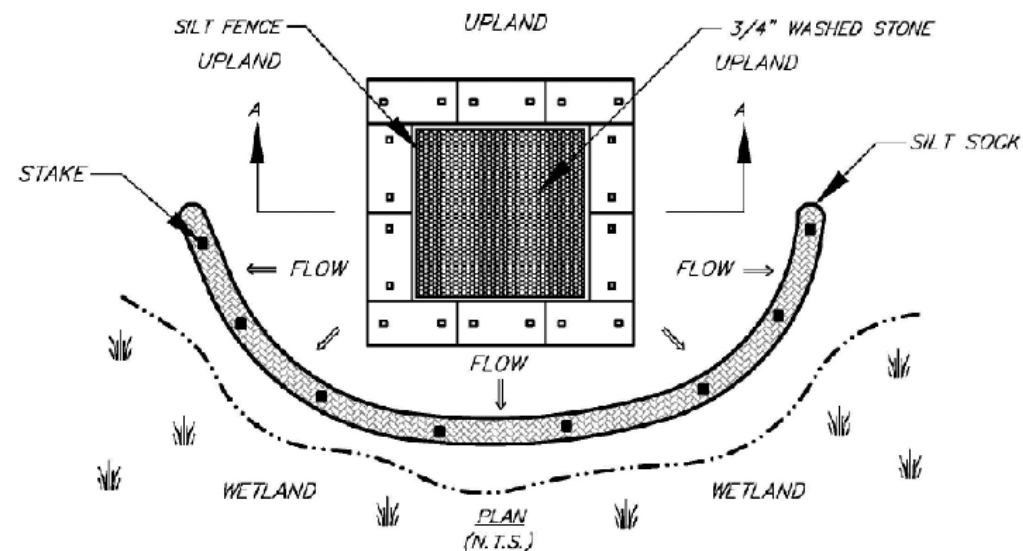
BMP DETAILS

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DATE: 03/23/2023	PROJECT NO: 04.0191410.61	REVISION NO:	

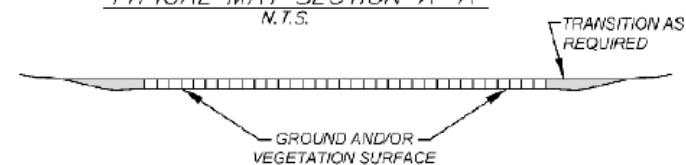
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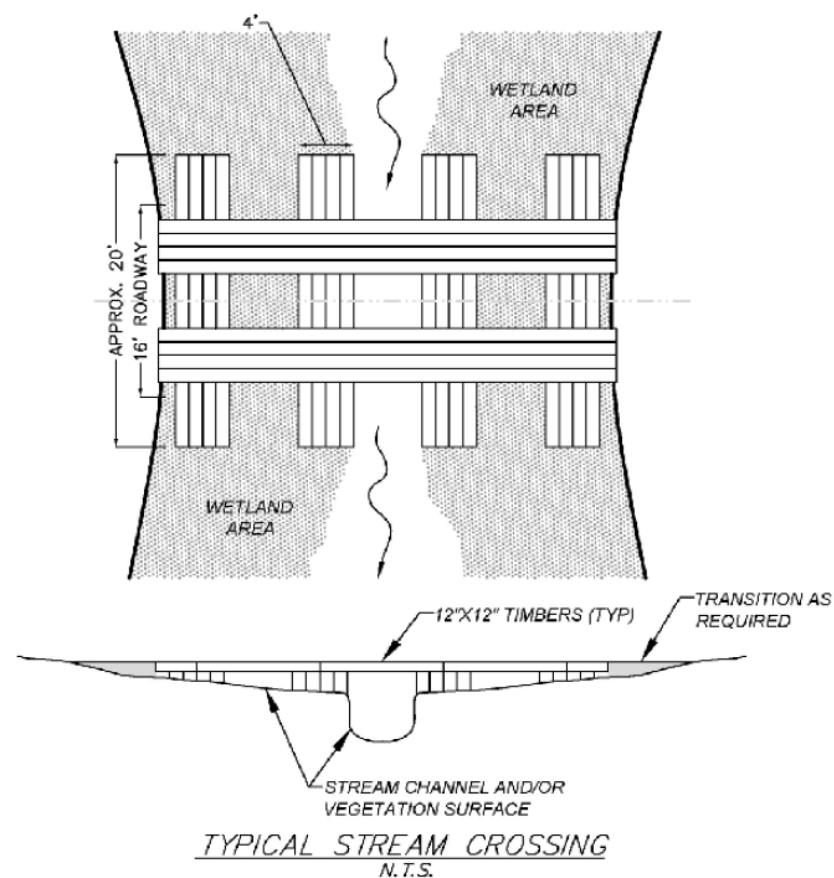
TYPICAL SWAMP MAT PLAN VIEW
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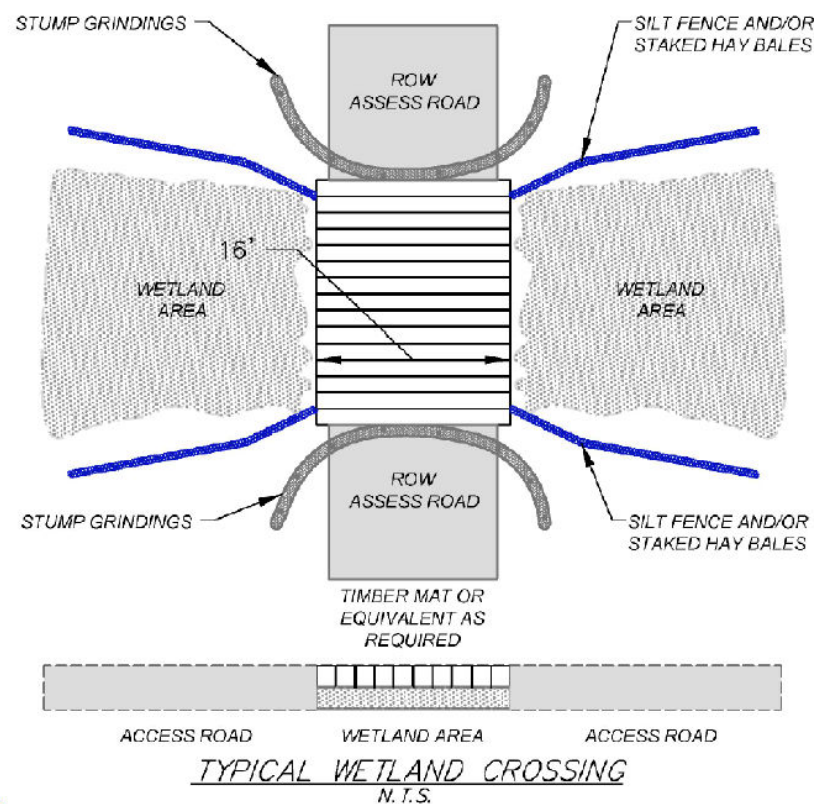
TYPICAL MAT SECTION A-A
N.T.S.



TYPICAL SWAMP MAT SECTION DETAIL
N.T.S.



TYPICAL STREAM CROSSING
N.T.S.



TYPICAL WETLAND CROSSING
N.T.S.

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STRUCTURE REPLACEMENT PROJECT
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BMP DETAILS

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NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS IN ACCORDANCE WITH ENV-WQ 1504.18 – WILDLIFE PROTECTION NOTES:

NHB23-0020 (BOW), NHB23-0021 (HOOKSETT), AND NHB23-0022 (MANCHESTER)

NEW HAMPSHIRE FISH AND GAME PERMIT CONDITIONS:

1. BLANDING'S TURTLE (STATE ENDANGERED), SPOTTED TURTLE (STATE THREATENED), WOOD TURTLE (STATE SPECIES OF SPECIAL CONCERN), AND NORTHERN BLACK RACER (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE POSTED ON SITE AT ALL TIMES AND COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT. SEE PLAN SHEET 5-6.
2. TURTLES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON. TURTLE NESTING SEASON OCCURS APPROXIMATELY MAY 15TH – JUNE 30TH. NESTING AREAS MAY INCLUDE WORK PADS AND ACCESS ROADS THAT ARE NOT HARD PACK GRAVEL AND OTHER SANDY/GRAVEL WORK AREAS. ALL TURTLE SPECIES NESTS ARE PROTECTED BY NH LAWS. BE AWARE OF THE POTENTIAL TO ENCOUNTER NESTING WILDLIFE IN THESE AREAS.
3. IF A NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. THE NEST OR SUSPECTED NEST SHALL BE MARKED (SURROUNDING ROPED OFF OR CONE BUFFER) AND AVOIDED; THIS SHALL BE COMMUNICATED TO ALL PERSONNEL ONSITE. SITE ACTIVITIES SHALL NOT OCCUR IN THE AREA SURROUNDING THE NEST OR SUSPECTED NEST UNTIL FURTHER GUIDANCE IS PROVIDED BY NHFG.
4. OBSERVATIONS OF NORTHERN BLACK RACERS IN THE MONTHS OF APRIL-MAY AND SEPTEMBER-OCTOBER MAY INDICATE THE POTENTIAL FOR A DEN SITE ON OR NEAR THE PROJECT SITE. OBSERVATIONS OF THIS SPECIES DURING THIS TIMEFRAME SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM, AND WORK SHOULD CEASE UNTIL FURTHER COORDINATION WITH NHFG. PLEASE CONTACT MELISSA WINTERS (603-479-1129) OR BRENDAN CLIFFORD (603-944-0885). OBSERVATIONS OF THIS SPECIES OUTSIDE OF THIS TIMEFRAME CAN FOLLOW GENERAL REPORTING GUIDANCE. PLEASE INCLUDE PHOTOGRAPH WITH TEXT IF FEASIBLE.
5. VERNAL POOLS AND POTENTIAL VERNAL POOLS SHALL BE FLAGGED PRIOR TO WORK, AND IMPACTS SHALL BE AVOIDED. NO DISTURB VEGETATIVE BUFFERS OF 50' SHALL BE MAINTAINED. PROVIDE LOCATION OF VERNAL POOLS ON PLAN SHEETS TO NHFG.
6. ALL MATTING WHICH WILL BE PLACED IN WATERBODIES DEEMED SUITABLE FOR HIBERNATING RARE TURTLES WILL BE PLACED PRIOR TO THE START OF THE INACTIVE SEASON (OCTOBER 16-MARCH 31) SO AS TO PREVENT ACCIDENTAL PLACEMENT ATOP HIBERNATING TURTLES. IMMEDIATELY PRIOR TO MATTING PLACEMENT IN THESE WETLANDS, THE AREA SHALL BE SWEEP BY A QUALIFIED BIOLOGIST OR HERPETOLOGIST. THEY SHALL WATCH FOR SIGNS THAT TURTLES ARE BEING DISTURBED IN THE AREA (EX. HEADS COMING ABOVE WATER, ANIMALS MOVING IN WATER). CONTACT NHFG IF BIOLOGIST/HERPETOLOGIST SEES OR SUSPECTS TURTLES IN MATTING AREAS. AREAS IDENTIFIED AS SUITABLE HIBERNATION HABITAT SHALL BE IDENTIFIED ON PLAN SHEETS AND PROVIDED TO NHFG AT LEAST TWO WEEKS PRIOR TO BEGINNING WORK. BIOLOGIST QUALIFICATIONS SHALL BE PROVIDED TO NHFG.
7. IMMEDIATELY PRIOR TO THE PLACEMENT OF MATTING IN WETLANDS NOT DEEMED SUITABLE FOR HIBERNATING RARE TURTLES DURING THE ACTIVE SEASON (APRIL 1-OCTOBER 15), THE AREAS SHALL BE CLEARED BY A TRAINED INDIVIDUAL. A TRAINED INDIVIDUAL SHALL BE DEFINED AS ANY CONTRACTOR WHO HAS GONE THROUGH PROJECT-SPECIES PROTECTION EDUCATION CONDUCTED BY THE QUALIFIED BIOLOGIST ON RARE WILDLIFE SPECIES AT THE SITE.
8. SEARCHES AND SWEEPS SHALL BE CONDUCTED BY TRAINED INDIVIDUALS IMMEDIATELY BEFORE THE START OF WORK AND MOVEMENT OF EQUIPMENT IN ORDER TO MINIMIZE THE CHANCE OF ANIMALS ENTERING AN AREA BETWEEN THE SWEEP AND WORK. A TRAINED INDIVIDUAL SHALL BE DEFINED AS ANY CONTRACTOR WHO HAS GONE THROUGH PROJECT-SPECIES PROTECTION EDUCATION CONDUCTED BY THE QUALIFIED BIOLOGIST ON RARE WILDLIFE SPECIES AT THE SITE.
9. ALL WORK ACTIVITIES SHALL BE RESTRICTED TO THE DEFINED ROADS, CONSTRUCTION AREAS, AND STAGING AREAS, WITH NO EQUIPMENT OR MATERIALS STAGED OR STORED OUTSIDE OF THE DEFINED AREAS AS SHOWN ON PLAN SHEETS.
10. WORK, PULL PADS, AND ACCESS SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE.
11. WORKS PADS SHALL BE REDUCED POST-CONSTRUCTION TO 30' X 60' AND RESTORED WITH A NATIVE VEGETATION SEED MIX.
12. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES;
13. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION;
14. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE;
15. IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.
-SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE AND IF IN DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.
16. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.



ADDITIONAL RECOMMENDATIONS:

1. THERE ARE KNOWN RECORDS OF EASTERN MEADOWLARK (STATE THREATENED), GRASSHOPPER SPARROW (STATE THREATENED), AND VESPER SPARROW (STATE SPECIES OF SPECIAL CONCERN) IN THE VICINITY OF STRUCTURES 119 TO 124. IF BIRDS ARE OBSERVED TO DISPLAY NESTING BEHAVIOR (FOR EXAMPLE: CALLING, SWOOPING, AGITATED/TERRITORIAL BEHAVIOR), CONTACT THE WILDLIFE DIVISION AT 603-271-2461 OR NHFGREVIEW@WILDLIFE.NH.GOV. PROVIDE NHB NUMBER AND PROJECT NAME. MIGRATORY BIRD NESTS ARE PROTECTED UNDER NH AND FEDERAL LAWS.

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BOW, HOOKSETT, AND MANCHESTER, NEW HAMPSHIRE

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			SHEET
			S4

WOOD TURTLE (GLYPTEMYS INSCULPTA)

STATE SPECIES OF SPECIAL CONCERN



WOOD TURTLE IDENTIFICATION

1. NECK AND FORELIMBS ARE ORANGE.
2. CHARACTERIZED BY ITS HIGHLY SCULPTED SHELL WITH EACH LARGE SCUTE TAKING ON AN IRREGULAR PYRAMIDAL SHAPE.
3. ADULTS CAN BE 5-8 INCHES LONG.

SPOTTED TURTLE (CLEMMYS GUTTATA)

STATE THREATENED



SPOTTED TURTLE IDENTIFICATION



1. SMALL, MOSTLY AQUATIC WITH BLACK OR DARK BROWN WITH YELLOW SPOTS.
2. FAIRLY FLAT SHELL COMPARED TO BLANDING'S TURTLE.
3. SPOTS VARY IN COLOR AND NUMBER.

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NEW HAMPSHIRE

WILDLIFE NOTES

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BLANDING'S TURTLE (EMYDOIDEA BLANDINGII)

STATE ENDANGERED



BLANDING'S TURTLE IDENTIFICATION

1. LARGE, DARK/BLACK DOMED SHELL WITH LIGHTER SPECKLES.
2. DISTINCT YELLOW THROAT/CHIN.
3. AQUATIC BUT OFTEN MOVES ON LAND.

NORTHERN BLACK RACER (COLUBER CONSTRICTOR)

STATE THREATENED





NORTHERN BALCK RACER IDENTIFICATION

1. SOLID BLACK WITH A WHITE THROAT
2. SLENDER WITH GLOSSY SCALES, 3-6 FT. LONG
3. HATCHLINGS ARE VERY SMALL AND PATTERNED

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