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Via Electronic Mail

February 20, 2026

Mr. Alexander Carli-Dorsey
EPA Project Manager
U.S. Environmental Protection Agency
New England Region
Five Post Office Square, Suite 100
Boston, MA 02109

Re: GE-Pittsfield/Housatonic River Site
Rest of River (GECD850)
Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6

Dear Mr. Carli-Dorsey:

As discussed with EPA, I am submitting herewith for EPA's review and approval GE's *Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6*, which presents the conceptual design for the planned rail transload areas at Utility Drive and Woods Pond Spur to support rail transport of removed sediments and soil for disposal.

Please let us know of any comments or questions about this design plan.

Very truly yours,

Lauren Putnam /for

Matthew Calacone
Senior Project Manager
GE Aerospace

Enclosure

Cc: (via electronic mail except where noted)
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Pittsfield Library at the Berkshire Atheneum (hard copy only)
Andrew Cambi, City of Pittsfield
Michael Coakley, PEDA
Melissa Provencher, BRPC
Jay Green, Town Administrator, Town of Lenox
Katherine O'Neil, Lenox Library (hard copy only)
R. Christopher Brittain, Town of Lee (plus hard copy)
Lee Library (hard copy only)
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Public Information Repository at David M. Hunt Library in Falls Village, CT (plus hard copy)
GE Internal Repository (plus hard copy)

General Electric Company

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6

Housatonic River – Rest of River
Pittsfield, Massachusetts

February 2026

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6

Housatonic River – Rest of River
Pittsfield, Massachusetts

February 2026

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Abbreviations

ARAR	Applicable or Relevant and Appropriate Requirement
BRA	baseline restoration assessment
BSRM	Berkshire Scenic Railway Museum
CD	Consent Decree
CRS	cultural resources survey
CSX	CSX Transportation, Inc.
C.T. Male	C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology D.P.C.
cy	cubic yards
cy/day	cy per day
cy/yr	cy per year
Darey WMA	George Darey Wildlife Management Area
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GE	General Electric Company
HRRC	Housatonic Railroad Corporation, Inc.
IPaC	Information for Planning and Consultation
MassDFG	Massachusetts Department of Fish and Game
MassDFW	Massachusetts Division of Fisheries and Wildlife
MassDOT	Massachusetts Department of Transportation
MESA	Massachusetts Endangered Species Act
MIPAG	Massachusetts Invasive Plant Advisory Group
MNHESP	Massachusetts Natural Heritage and Endangered Species Program
NAVD88	North American Vertical Datum of 1988
NGVD29	National Geodetic Vertical Datum of 1929
NRHP	National Register of Historic Places
PDI	pre-design investigation
Phase IB CRS Report for Reach 6	*Housatonic River – Rest of River, Phase IB Cultural Resources Survey Report for Reach 6*
POP	*Project Operations Plan*

RA	Remedial Action
Rail Conceptual Design Plan	*Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6*
Rail PDI Work Plan	*Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6*
RCRA	Resource Conservation and Recovery Act
Revised Final Permit	GE's Resource Conservation and Recovery Act Corrective Action Permit
Revised T&D Plan	*Revised On-Site and Off-Site Transportation and Disposal Plan*
ROR	Rest of River
SOP	Standard Operating Procedure
STP	shovel test pit
UDF	Upland Disposal Facility
USFWS	U.S. Fish and Wildlife Service

1 Introduction and Background

On December 16, 2020, pursuant to the 2000 Consent Decree (CD) for the GE-Pittsfield/Housatonic River Site (EPA and GE 2000), the United States Environmental Protection Agency (EPA) issued to General Electric Company (GE) a final revised modification of GE's Resource Conservation and Recovery Act (RCRA) Corrective Action Permit (Revised Final Permit) for the Housatonic Rest of River (ROR) (EPA 2020), which required GE to implement the Remedial Action (RA) selected by the EPA to address polychlorinated biphenyls in the ROR. The ROR is that portion of the Housatonic River and its backwaters and floodplain (excluding certain residential lawn areas) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. The ROR RA also includes construction and operation of an on-site Upland Disposal Facility (UDF) for the disposal of a portion of the materials removed from the ROR area.

On October 15, 2024, GE submitted a *Revised On-Site and Off-Site Transportation and Disposal Plan* (Revised T&D Plan; Arcadis 2024), which described GE's plans for the transportation and disposal of excavated material from the ROR. In that Revised T&D Plan, GE proposed to use rail transport for some of the materials removed during the RA; and to support that mode of transport, it proposed the construction of three rail loading and/or unloading areas (referred to herein as rail transload areas) at the following locations:

- **Utility Drive**, located adjacent to Reach 5A in the City of Pittsfield, near the Pittsfield Wastewater Treatment Plant;
- **Woods Pond Spur**, located adjacent to Reach 6 in the Town of Lenox, at a railway museum property; and
- **Rising Pond Property**, located adjacent to Reach 8 in the Town of Great Barrington.

These three locations are illustrated on Figure 1-1, which also shows the extent of the ROR RA activities and the separate remediation areas within the ROR. It is intended that each rail transload area will include a rail spur or siding and an associated support/operational area.

On April 29, 2025, the EPA issued a conditional approval letter for the Revised T&D Plan. That letter approved the three above-described locations for rail transload areas. It also directed GE to submit pre-design investigation (PDI) work plans to describe the investigations necessary to support the design of these rail transload areas, with the initial work plan to address the Utility Drive and Woods Pond Spur locations and a later plan to address the Rising Pond Property location. In response to that directive, on May 15, 2025, GE submitted a *Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6* (Rail PDI Work Plan; Arcadis and AECOM 2025) to present the proposed PDI activities for the Utility Drive and Woods Pond Spur rail transload areas.[1] EPA conditionally approved the Rail PDI Work Plan on July 24, 2025.[2]

In accordance with the Rail PDI Work Plan, the following PDI activities were conducted between July and October 2025:

- Topographic field survey;
- Soil geotechnical investigation;

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[1] In accordance with the EPA's April 29, 2025 letter, the PDI activities for the Rising Pond Property rail transload area will be presented in a later PDI work plan as part of the pre-design or design documents for Reach 7 and/or Reach 8 of the ROR.

[2] As described in the Rail PDI Work Plan, with approval from the EPA, some field activities were initiated before the EPA issued its conditional approval letter, as noted in Section 2.

- Baseline restoration assessment (BRA), including a wetland survey (where appropriate) and a survey of potential habitat for federally and/or state-listed threatened, endangered, and special concern species; and
- Cultural resources surveys (CRSs).

As discussed further below, some of these PDI activities, including topographic survey and the BRA, were conducted at the overall properties that will contain the rail transload areas (referred to herein as the rail transload area properties), and others (e.g. soil geotechnical investigations and CRS activities) were focused on the specific proposed footprints of the rail transload areas themselves (i.e., the proposed locations of the rail transload infrastructure).

In addition, GE contacted relevant parties (e.g., property owners, the local rail operator, relevant municipalities) to consult with such parties regarding the conceptual design for each rail transload area design; those consultations are ongoing.

These PDI activities were conducted to confirm GE's understanding of site conditions and to inform the conceptual design of each rail transload area. This *Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6* (Rail Conceptual Design Plan) describes the completed PDI activities and presents the resulting conceptual design for the Utility Drive and Woods Pond Spur rail transload areas. A summary of the results of the PDI activities are presented in Section 2. Section 3 presents the conceptual design. Section 4 outlines the overall project schedule and next steps.

The properties on which the Utility Drive and Woods Pond Spur rail transload areas will be constructed are shown on Figures 1-2 and 1-3, respectively, including the conceptual footprint of the rail transload areas on those properties, which are subject to modification as consultation with the relevant parties progresses and the design process continues. As noted above, some of the PDI activities (e.g., soil geotechnical and CRS investigations) were focused on the footprint of the rail transload areas proposed in the Rail PDI Work Plan. However, since approval of the Rail PDI Work Plan, the conceptual design alignment of the rail transload areas has been adjusted and expanded based on the results from the PDI as well as coordination with relevant parties. For example, the orientation of the Utility Drive rail transload area was rotated so that it extends eastward at an angle from the railroad mainline for a number of reasons: (a) to reduce the distance between the rail loading/unloading area and the Reach 5A staging area planned for the same property; (b) to reduce disturbance to existing topography; and (c) to allow adequate room for the rail length required for Housatonic Railroad Corporation (HRRC) and ROR RA operations without impacting the more densely vegetated adjacent property owned by the Massachusetts Division of Fisheries and Wildlife (MassDFW) to the north. The Woods Pond Spur rail transload area footprint was expanded and adjusted primarily based on input received from the property owner, the Berkshire Scenic Railway Museum (BSRM).

As a result of the adjustment of the alignment since approval of the Rail PDI Work Plan, not all of the soil geotechnical or CRS investigation locations are directly within the footprint of the conceptual design for the rail transload areas presented in this plan, and additional CRS activities will be necessary in the expanded portions of the transload areas (as discussed in Section 2.4).[3]

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[3] Although the PDI geotechnical boring locations were positioned based on the footprint of the then-proposed rail transload areas, GE has concluded, based on interpretation of the PDI results and the consistency in geotechnical conditions throughout each property, that the results are applicable to the current conceptual rail transload area alignment. Thus, no additional geotechnical investigations are necessary.

2 Summary of Pre-Design Investigations

The PDI activities were performed at each rail transload area property in accordance with the Rail PDI Work Plan and EPA's July 24, 2025 conditional approval letter, based on the preliminary transload area layouts presented in that document. The procedures used during the PDI activities were in accordance with the applicable provisions of the December 21, 2023 revised *Field Sampling Plan/Quality Assurance Project Plan* (Arcadis 2023), which was conditionally approved by EPA on March 21, 2024, or other Standard Operating Procedures (SOPs) approved by EPA.

2.1 Topographic Field Survey

A topographic field survey was conducted at each of the Utility Drive and Woods Pond Spur rail transload area properties by C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology D.P.C. (C.T. Male) to accurately document existing conditions (e.g., elevations, drainage features, utilities, and existing rail locations) and to support detailed design of the rail transload areas. A traditional field survey of each property was performed in July 2025, supplemented with an April 2025 Light Detection and Ranging survey prepared by BlueSky Geospatial, and provided to C.T. Male in July 2025. In addition, in September and October 2025, C.T. Male collected information on the overhead wires crossing the property on which the Utility Drive rail transload area is proposed.

Information from the survey was used to inform appropriate field locations for the soil geotechnical investigation (e.g., to represent areas of anticipated cut and anticipated fill). In addition, the survey results were used to yield a continuous model of the top of the existing ground surface for use for the design of the rail transload areas. The results of the topographic field survey are shown on the Conceptual Design Drawings in Appendix A.

2.2 Soil Geotechnical Investigation

Soil geotechnical investigation drilling activities were performed on October 1 and 2, 2025, in accordance with the Rail PDI Work Plan and EPA's conditional approval letter. Representatives of GE and EPA were present during the field activities. A total of four borings were advanced, two at each property, and the borings were positioned within the limits of the rail transload areas anticipated at the time of the Rail PDI Work Plan and slightly adjusted in the field based on review of information gathered during the topographic field survey and conceptual design options evaluated by the time drilling activities were initiated. The borings were advanced to depths ranging from approximately 20 to 25 feet below ground surface (slightly deeper than proposed in the Rail PDI Work Plan). Bedrock or refusal was not encountered during the geotechnical investigation, and no visual or olfactory evidence of unknown contamination was discovered at any point during the soil geotechnical investigation. The surveyed locations of the geotechnical borings are shown (by blue dots) on Figures 1-2 and 1-3 for the Utility Drive and Woods Pond Spur conceptual rail transload areas, respectively.

Selected soil samples from each rail transload area were submitted to a geotechnical laboratory for completing index property testing in accordance with American Society for Testing and Materials International standards to assist in the classification of subsurface strata and for use in establishing engineering properties of the materials encountered. The samples for laboratory testing were chosen from depths and locations within each boring based on field observations and at the discretion of the geotechnical engineer overseeing the work on behalf of GE, with EPA oversight.

After completion of the drilling activities, boreholes were backfilled with the soil cuttings, and excess soil cuttings were dispersed on site in the general vicinity of the boreholes. Other investigation-derived waste (e.g., personal protective equipment) was managed and disposed of in an appropriate manner in accordance with GE's Waste Characterization Plan, which is Appendix A of GE's revised *Project Operations Plan* (POP) for the site (Arcadis 2025).

Additional details of the soil geotechnical field exploration and laboratory testing results are presented in the Geotechnical Evaluation Report in Appendix B. Soil data were collected through field and laboratory testing to support and identify geotechnical design considerations, such as slope stability, bearing capacity, settlement, and other geotechnical performance aspects, as further described in Section 3.

2.3 Baseline Restoration Assessment

A BRA was conducted at the Utility Drive and Woods Pond Spur rail transload area properties to document existing ecological conditions at those properties. The BRA was informed by background reviews of available mapping and previous ecological characterizations and was implemented through field investigations conducted during the 2025 growing season. The assessment focused on identification and documentation of vegetated habitat cover types, wetlands (where present), soils (at the Utility Drive property only), invasive species, wildlife habitat, and the presence or potential presence of federal- and state-listed species and their habitats.

Identification of state-listed species habitats was based on species habitat mapping provided by the Massachusetts Natural Heritage and Endangered Species Program (MNHESP) in March 2025, and habitats for federally listed (or proposed) species were identified through review of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool (USFWS 2025). Species Habitat mapping provided by MNHESP in March 2025 indicates that the Utility Drive rail transload area overlaps with mapped habitats for three state-listed species – wood turtle (*Glyptemys insculpta*), American bittern (*Botaurus lentiginosus*), and mustard white butterfly (*Pieris oleracea*) – and that mapped habitat for the state-listed common gallinule (*Gallinula galeata*) occurs in portions of the property east of the rail transload area. The Woods Pond Spur rail transload area property does not include any mapped state-listed species habitats, although there is nearby mapped habitat for the common gallinule. The USFWS on-line IPaC tool (USFWS 2025) indicates that the Utility Drive rail transload area property could provide habitats for two federally proposed species – the tricolored bat (*Perimyotis subflavus*) and the monarch butterfly (*Danaus plexippus*) – and that the Woods Pond Spur rail transload area property could provide habitat for those two species plus the northern long-eared bat (*Myotis septentrionalis*) (federally listed as endangered). Field surveys for these state and federally listed species at the Utility Drive rail transload area property took place in 2025 and were incorporated into the BRA.[4] Such additional surveys will be conducted at the Woods Pond Spur transload area property in 2026.

The field survey work at the Utility Drive rail transload area property also included the identification, delineation, and verification of any wetlands identified. The verification included completing the USACE Wetland Determination Data Forms for the Northeast Region for any wetlands identified at that property. No wetlands were identified at the Woods Pond Spur rail transload area property.

The results of the BRA are summarized below for each rail transload area property. More detailed information on the methods and results of the BRA is provided in the BRA Report in Appendix C.

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[4] As required by the EPA's conditional approval letter, the rare species surveys were conducted in accordance with EPA-approved SOPs.

2.3.1 Utility Drive Rail Transload Area

The BRA activities for the Utility Drive rail transload area property occurred for a contiguous area bounded by the rail line to the west, Staging Area 6 to the north, the limits of the previous Reach 5A BRA to the east (as identified in the *Conceptual Remedial Design/Remedial Action Work Plan for Reach 5A* [Anchor QEA et al. 2023]), and Utility Drive to the south, so that the entire area was adequately covered. This approach ensured that the adjustments/expansion of the rail transload area design since submittal of the Rail PDI Work Plan were adequately assessed.

BRA field investigations conducted at the Utility Drive rail transload area property documented a range of upland and wetland habitat cover types within the assessment area. Habitat cover types identified at the site included upland field (grass/forbs and shrub/old field), northern hardwood forest, palustrine shallow marsh, palustrine deep marsh, palustrine shrub swamp, and swamp hardwood. In addition, limited areas associated with paved access roads and existing rail infrastructure were classified as non-vegetated, diminished habitat. Wetlands were identified and delineated in accordance with federal and state criteria, and U.S. Army Corps of Engineers Wetland Determination Data Forms were completed for identified wetland areas. However, it was found that only one such wetland area, an intermittent stream, will be impacted by the construction and operation of the transload area, which will require a crossing of that stream; that stream is considered a Bank resource area under the Massachusetts Wetlands Protection Act regulations. No vernal pools or potential vernal pool habitats were identified within the Utility Drive rail transload area property, and no vernal pool-dependent species were identified at that property.

Invasive plant species were documented throughout the Utility Drive rail transload area property through a combination of qualitative meander surveys and quantitative vegetation plot sampling. Invasive species were recorded regardless of relative cover, and multiple species listed by the Massachusetts Invasive Plant Advisory Group (MIPAG) were observed within upland and wetland cover types.

The majority of the Utility Drive rail transload area property is mapped by the MNHESP as Priority Habitat of rare species. As noted above, Species Habitat mapping provided by MNHESP indicates that this rail transload area overlaps with mapped habitats for three state-listed species – wood turtle, American bittern, and mustard white butterfly – and the USFWS IPaC tool indicates that this area could provide habitats for two federally proposed species – the tricolored bat (also state-listed) and the monarch butterfly (not state-listed). As noted above, an additional state-listed species (the common gallinule) is also mapped on the Utility Drive property to the east of the rail transload area.

Targeted surveys conducted during the 2025 growing season did not document the presence of any state-listed species within the Utility Drive rail transload area property. The wood turtle survey did not document the presence of that species within the Utility Drive property, although one individual was documented near the property. The rare bird surveys conducted during the 2025 breeding season did not document the presence of American bittern or common gallinule within or adjacent to the Utility Drive rail transload area property, including the mapped floodplain habitat east of the rail transload area. The rare butterfly surveys confirmed the presence of host plants for both the mustard white and the monarch butterfly within the Utility Drive rail transload area property, but no adult rare butterflies were observed. Finally, an acoustic survey of rare bat species confirmed the occurrence of five state-listed bat species, including one that is federally proposed, within Reach 5A, including areas proximal to the Utility Drive rail transload area property. These were the tricolored, little brown, eastern red, silver-haired, and hoary bats. The northern long-eared bat was not confirmed as occurring anywhere within Reach 5A, including the Utility Drive property.

2.3.2 Woods Pond Spur Rail Transload Area

The BRA activities for the Woods Pond Spur rail transload area property occurred for a contiguous area bounded by the rail line to the east, the property boundary to the north and west, and the existing buildings on the south end of the property, so that the entire area was adequately covered. This approach ensured that the adjustments/expansion of the rail transload area design since submittal of the Rail PDI Work Plan were adequately assessed.

At the Woods Pond Spur rail transload area property, the BRA documented that the assessment area consists largely of previously disturbed upland habitats associated with historical industrial and commercial use, including non-vegetated areas, gravel surfaces, and areas of sparse herbaceous and shrub cover. No wetlands or vernal pools were identified within or immediately adjacent to the site. Vegetated cover types and invasive plant species present at the Woods Pond Spur rail transload area property were documented through field investigations. Multiple invasive species listed by the MIPAG were observed within upland field and disturbed areas.

The current MNHESP Priority Habitat mapping does not include the Woods Pond Spur rail transload area footprint or the overall property, but instead is confined to the area to the east (encompassing the northern part of Woods Pond and its floodplain on the eastern side of the existing rail line). MNHESP has included a small section of the transload area limits within Core Area 2, but this small overlap between the transload area boundary and Core Area 2 may be a mapping/delineation issue rather than actually reflecting habitat conditions for Core Area 2 species. This area does not appear to provide habitat suitable for any of the Core Area 2 designated species (American bittern, common gallinule, mustard white butterfly, and wood turtle), considering both the existing habitat conditions and the long-term industrial use of the site along the railway.

As noted above, the USFWS IPaC on-line mapping tool indicated potential habitat for the northern long-eared bat, the tricolored bat, and the monarch butterfly in areas encompassing the Woods Pond Spur rail transload area property. In fact, the northern long-eared bat is the only federally listed species with potentially suitable habitat characteristics identified in the vicinity of the property, as mature forests around the perimeter of the adjacent Woods Pond may provide suitable summer roosting. As also noted above, the Species Habitat mapping provided by MNHESP did not include any state-listed species at the Woods Pond Spur transload area property, although there is mapped habitat for the common gallinule near that property. On August 8, 2025, as directed by EPA, GE submitted a proposal to conduct a rare marsh bird species survey, focused on the common gallinule, within and adjacent to the Woods Pond Spur transload area property (AECOM 2025). In its November 24, 2025 conditional approval letter for that proposal, EPA directed GE to expand the surveys in that area to also cover the northern long-eared bat, the tricolored bat, and the monarch butterfly; and it noted that these surveys could be conducted at the same time as the rare species surveys for Reach 6. These surveys will be conducted in 2026. If any federal or state-listed rare species are observed in or adjacent to the Woods Pond Spur rail transload area property, those observations and any potential impacts to such species associated with the construction and operation of the rail transload area will be discussed and addressed, as appropriate, in the Final Design Plan for the rail transload areas.

2.4 Phase IB Cultural Resources Survey

The Phase IB CRS for the rail transload areas in Reaches 5 and 6 was conducted in July 2025 and consisted of archaeological surveys and historic architectural surveys of the transload areas using the layouts shown in the Rail PDI Work Plan. The results of these CRS activities are presented in the Phase IB CRS Report provided in Appendix D.

The archaeological surveys included systematic pedestrian inspections and subsurface testing of the Utility Drive and Woods Pond Spur rail transload areas as shown in the approved work plan. The archaeological survey of the Utility Drive rail transload area encompassed a total of 1.65 hectares (4.08 acres) and involved the excavation of 159 shovel test pits (STPs); 24 proposed STPs were excluded due to disturbance or slope. No archaeological sites were identified during this survey. Three post-contact artifacts were recovered from this area, but these were classified as isolated field scatter and not designated as an archaeological artifact. The archaeological survey of the Woods Pond Spur rail transload area was conducted as part of the Reach 6 CRS and was previously described in the January 2026 *Phase IB Cultural Resources Survey Report for Reach 6* (Phase IB CRS Report for Reach 6) (AECOM 2026). It did not identify any archaeological sites or artifacts.

The historical architectural surveys included a background review and field surveys of the Utility Drive and Woods Pond Spur rail transload areas. The survey at the Utility Drive area did not identify any resources listed in or eligible for the National Register of Historic Places (NRHP) or any other previously identified or new historical architectural resources. The historical architectural survey of the Woods Pond Spur rail transload area, which was also part of the Reach 6 CRS and described in the Phase IB CRS Report for Reach 6, resulted in the identification of one previously identified NRHP-listed resource and four newly identified resources. It was determined that the NRHP-listed resource would not be adversely affected by the remediation project, including rail transload activities and that the four newly identified resources do not meet the eligibility criteria for the NRHP.

Based on the results of these Phase IB CRS activities, no additional archaeological or historical architectural investigations are recommended for rail transload area configurations presented in the Rail PDI Work Plan. However, since the layout of the rail transload areas has since changed and been expanded, the portions of the current footprints (as shown in this Conceptual Design Plan) that were not investigated in 2025 will be subject to additional CRS investigations in 2026. A work plan for those additional investigation is included in the Phase IB CRS Report in Appendix D. The results of those additional investigations will be presented in an addendum to that CRS Report, to be submitted as part of the Final Design Plan for the rail transload areas.

2.5 Consultations with Relevant Parties

In addition to the results from the field PDI activities described above, information has been obtained from relevant parties to inform the design for each rail transload area, including the design layout of necessary infrastructure and desired restoration design. The following relevant parties have been and continue to be consulted on a routine schedule throughout the conceptual design process:

- MassDFW, a division of the Massachusetts Department of Fish and Game (MassDFG), owner of the Utility Drive rail transload area property: Since summer 2025, GE and MassDFW have met routinely, including through multiple teleconference meetings, to discuss MassDFW concerns related to recreational impacts at the George Darey Wildlife Management Area (Darey WMA) during construction and use of the Utility Drive rail transload area, and potential ways to mitigate impacts on recreational opportunities at that WMA, to the extent practicable, with consideration for the use of the area for rail transload operations. This coordination is discussed further in Section 4.2.2. GE is continuing to consult and coordinate with the MassDFW regarding the use of its property during the ROR RA, including for construction and operation of the Utility Drive rail transload area.
- BSRM, owner of the Woods Pond Spur rail transload area property: Since summer 2025, GE and BSRM have met routinely to review the progression of the conceptual design for the rail transload areas so as to ensure that the redesign of the property will be sufficient for both ROR RA operations and BSRM use. The

conceptual design for the Woods Pond Spur rail transload area submitted in this Rail Conceptual Design Plan was found to be generally acceptable, on a conceptual level, to BSRM before submittal of this document.

- Massachusetts Department of Transportation (MassDOT), owner of the railroad mainline: Since summer 2025, GE and MassDOT have met monthly to review the progression of the conceptual design for the rail transload areas, review overlapping interests (e.g., connection to the mainline), and discuss the schedule and plan for MassDOT’s ongoing capital improvement project for the railroad mainline between the Woods Pond Spur and the City of Pittsfield. The conceptual design for each rail transload area submitted in this Rail Conceptual Design Plan was found to be generally acceptable, on a conceptual level, to MassDOT before submittal of this document.
- HRRC, the operator of the railroad mainline: Since 2024, GE and HRRC have met routinely to discuss use of rail to support the ROR RA and to ensure that the conceptual design for the rail transload areas will be sufficient to accommodate HRRC operations between the two rail transload areas (for material to be disposed of in the UDF) and from either rail transload area to the interchange with CSX Transportation, Inc. (CSX) in the City of Pittsfield (for materials to be disposed of off-site). The conceptual design for each rail transload area submitted in this Rail Conceptual Design Plan was found to be generally acceptable, on a conceptual level, to HRRC before submittal of this document.
- The Town of Lenox, the municipality in which the Woods Pond Spur property is located: GE has communicated with Town of Lenox officials to present the restoration design for potential future use of the Woods Pond Spur rail transload area. The Town has indicated its support for leaving the rail infrastructure in place at this property for the benefit of BSRM after its use as a rail transload area.

Input received from each relevant party has been incorporated into the conceptual design presented herein. In addition, the above-listed entities will receive copies of this Rail Conceptual Design Plan for review.

As appropriate, GE will schedule additional meetings with the relevant parties during the ongoing design activities for the rail transload areas.

3 Applicable or Relevant and Appropriate Requirements

The applicable or relevant and appropriate requirements (ARARs) that are pertinent to and were considered for the conceptual design of the rail transload areas are presented in Table 3-1. That table also specifies the actions to be taken during construction and use of the rail transload areas to comply with these ARARs (where not waived by EPA).

The ARARs presented in Table 3-1 include, but are not limited to, the substantive requirements of the federal Endangered Species Act and the Massachusetts Endangered Species Act (MESA) related to federally and state-listed rare species. In accordance with these requirements, GE has evaluated the potential direct, indirect, and both short-term impacts and potential long-term impacts (if any) to federally and state-listed rare species and their habitats (if present in the subject transload area). That evaluation is presented in Sections 4.2.7 and 4.3.7 of this Rail Conceptual Design Plan.

GE is also currently evaluating, in coordination with EPA and MNHESP, the potential long-term impacts caused by the overall Reach 5A remediation (including rail transload area construction and operation) to state-listed species and their habitats, including whether that project will result in a take of state-listed species. This evaluation will also include an assessment of potential mitigation measures for any unavoidable takes of state-listed species, including, where required by MESA, the development of a conservation and management plan providing a long-term net benefit to the affected species The results of these evaluations will be presented in the Final RD/RA Work Plan and/or Restoration Plan for Reach 5A. Similar evaluations will be conducted at a later date for Reach 6. If the inclusion of any required conservation and management plans in those Final RD/RA Work Plans or Restoration Plans would cause a delay in the construction of the rail transload areas and/or the implementation of remedial activities, GE will submit the plans for EPA review and approval in advance of the Final RD/RA Work Plans/Restoration Plans or as otherwise agreed upon by EPA and GE.

4 Design Process and Considerations

As stated in the Revised T&D Plan, the primary purpose of the rail transload areas is to support the disposal of materials removed during the ROR RA, both for on-site disposal at the UDF and for off-site disposal at an approved facility outside Massachusetts. This section outlines the key requirements considered during development of the conceptual design for each rail transload area, including the project/operational requirements, the requirements stated by relevant parties during ongoing consultations, industry standard railroad design requirements, and incorporation of the results from the PDI activities presented in Section 2 above (e.g., consideration measures to address habitat impacts). Specific operational assumptions used when evaluating operational capacity at each rail transload area are summarized below.

- Railcars will be up to six-axle cars that require approximately 90 feet of transload track.
- There will be full intermodal containers per railcar, with approximately 22 tons (15 cubic yards [cy]) of material per container and up to eight empty containers per railcar.
- All six full intermodal containers per railcar will be designated for the same disposal location, either all for disposal at the UDF or all for off-site disposal.
- Travel on site between the Utility Drive and Woods Pond Spur rail transload areas will occur one to two times during each operational day.
- Travel to the interchange with CSX in the City of Pittsfield can occur up to once per day to transfer the railcars with material for off-site disposal.
- Travel out of state to the off-site disposal facilities that will receive the material removed during the ROR RA could take four to six weeks round-trip.
- Because all intermodal containers will be lined with polyethylene, it is anticipated that empty containers can interchangeably be used, without decontamination, for either waste designated for on-site disposal or waste designated for off-site disposal.

During construction and operation of each rail transload area, construction-phase controls and monitoring will be implemented, including oversight, implementation of quality assurance/quality control measures, typical site controls (e.g., erosion controls), and routine inspections and maintenance. As part of those construction-phase controls, imported material will be characterized in accordance with GE's Soil Cover/Backfill Characterization Plan, which is Appendix B of GE's revised POP for the site. In addition, during construction and operation of each rail transload area, monitoring and controls will be implemented in accordance with the *Revised Quality of Life Compliance Plan* (Anchor QEA and Arcadis 2024) and the Ambient Air Monitoring Plan, which is Appendix G of GE's revised POP for the site. This will include monitoring for airborne particulate matter, meteorological conditions, noise, and (where necessary) lighting and odor. GE will also construct and operate the rail transload areas in such a manner as to minimize or mitigate impacts of the rail transload areas on recreational areas on each property (if any), where practicable.

The conceptual design of each rail transload area includes a preliminary layout of tracks, switches, staging areas, areas to be disturbed (i.e., limits of work), and infrastructure necessary to perform the required operations. The conceptual layout is based on a review of the site topography identified during the field survey and the results of the other PDI activities and considers input from the relevant parties as described above. The conceptual design for the Utility Drive and Woods Pond Spur rail transload areas is presented in the Conceptual Design Drawings included in Appendix A. Additional details regarding the design process and considerations for each rail transload area are provided in the remainder of this section.

4.1 Property Access

As discussed in Section 2, access to the two properties identified for the Reach 5 and 6 rail transload areas will be required to construct and operate the rail transload areas. Earthwork (i.e., soil removal and/or fill), construction of temporary access roads, construction of support areas at several locations, construction of the railroad bed and track, and operation of the rail transload area will occur on MassDFW property for the Utility Drive transload area and private (BSRM) property for the Woods Pond Spur transload area. As such, it will be necessary to obtain access agreements with the property owners. GE has begun discussions with those property owners regarding such agreements. In the event that GE is unable to obtain such agreements despite its best efforts to do so GE will notify EPA and provide support for any attempts by EPA to obtain access permission.

4.2 Utility Drive Temporary Rail Transload Area

The Utility Drive rail transload area is designed as two parallel spurs, each with an operational length of at least 450 feet, with a tail connecting the end of each (Figure 1-2). This track orientation will allow railroad engine operations to pull empty cars into one spur, disconnect, traverse around the tail, and connect to and push out full cars (backwards) from the other spur. It is anticipated that container loading/unloading equipment will be able to reach both rail spur tracks from the transload support area; however, it is also anticipated that, for each operational day, one track will be designated for only empty railcars and the other track will be designated for only full railcars. Construction of the Utility Drive rail transload area will require installation of a new switch off the existing railroad mainline.

As illustrated on Figure 1-2, the Utility Drive rail transload area is conceptually designed at an angle, extending east and away from the railroad mainline. This angle considers the maximum curvature and slope allowed for transporting PCB-impacted materials while optimizing the alignment to reduce earthwork disturbance at the property (i.e., by avoiding the large hill on the northwestern corner of the property). This angle also reduces the distance between the rail loading/unloading area and the Reach 5A staging area planned for the same property, which will reduce the need for separate access roads across the property to join the two areas. Finally, the angled alignment allows the entire rail length required for HRRC and ROR RA operations to fit on one property, eliminating disturbance to and tree cutting on the more densely vegetated MassDFW-owned property to the north and maintaining an undisturbed parcel between the residential community to the north and the rail transload area operations.

As stated in the Rail PDI Work Plan, the conceptual restoration plan for the Utility Drive rail transload area assumes that the rail transload area at that location will be temporary and will be removed after use for the ROR RA, subject to ongoing coordination with the property owner, MassDFW.

4.2.1 Operational Requirements

Railcars with containers full of removed material will only depart from the Utility Drive rail transload area; no material will travel to and be offloaded at this location. In this situation, the required Utility Drive rail transload area operational activities are anticipated to include the following steps:

- Receipt of trucks and unloading from such trucks sealed intermodal containers full of dewatered soil and sediment removed from Reach 5A;
- Temporary storage of those full intermodal containers in a designated area, as needed based on production and as possible based on space availability, until an empty railcar is available (some containers may be transferred directly from the truck to the railcar); and
- Loading of the full intermodal containers to the railcars for transport by rail to the appropriate disposal facility (i.e., either for on-site disposal at the UDF or for off-site disposal at an appropriate out-of-state disposal facility).

In addition, operational activities for the Utility Drive rail transloading area will include the opposite process to return empty intermodal containers to trucks for travel back to the Reach 5A staging areas for refilling. This return process will include the following steps:

- Receipt of railcars from the disposal facility and unloading the empty intermodal containers from such railcars;
- Temporary storage of those empty intermodal containers in a designated area, as needed based on production and as possible based on space availability, until an empty truck is available (some containers may be transferred directly from the railcar to the truck); and
- Loading of the empty intermodal containers to the truck for transport to the Reach 5A staging area for refilling.

Figure 4-1 illustrates the operational activities anticipated at the Utility Drive rail transload area. The Utility Drive rail transload area will be in operation only for the duration of the Reach 5A remedial activities, which are expected to occur over five years.

Based on the assumptions stated in Section 4, the anticipated operational capacity in cy per day (cy/day) of the Utility Drive rail transload area is approximately 440 cy/day, including approximately 88 cy/day for each of the five railcars that fit onto the length of one of the transload tracks. Assuming a construction season from mid-April through November and approximately 140 days of rail service within that time, the transload area’s maximum capacity is approximately 62,000 cy per year (cy/yr), which is anticipated to be more than sufficient to handle the annual volume of material expected to be removed from Reach 5A.

4.2.2 Property Use During Construction and Operation

During development of the conceptual design for the Utility Drive rail transload area, GE considered potential ways to mitigate impacts on recreational opportunities at the Darey WMA to the extent practicable and consistent with the use of the area for rail transload operations. However, at this time, it is expected that access to the property will be limited during the duration of operations. Specifically, it is anticipated that the pedestrian access tunnel underneath the railroad mainline will be closed to public access during active use of the Utility Drive rail transload area and other Reach 5A operations that will occur on the same property. GE will continue to consult with the property owner, MassDFW, to determine whether the property may be accessible during periods without active operations at the Utility Drive rail transload area.

4.2.3 Overhead Electric Utility Line Easement

An existing Eversource utility line easement is located on the western side of the property along the railroad mainline, as shown on Conceptual Design Drawing RT-101. A system of overhead electric wires, utility poles, and guy wires are located within the easement. The planimetric layout of the rail transload area has been developed to accommodate the easement and the utilities therein. Specifically, the rail transload area has been designed to avoid interference with the utility poles and guy wires; however, the railroad track connecting the mainline to the Utility Drive rail transload area track does cross the easement. The fill placement under the utility lines will be limited to the extent practicable and will occur at locations between the utility poles, and GE will coordinate with the utility companies during preparation of the Final Design Plan for the rail transload areas to ensure adherence to National Electrical Safety Code and other vertical clearance requirements for travel of railcars underneath the overhead wires.

The access road is located completely outside of the easement so that vehicle traffic on the access road is not required to travel beneath the overhead wires and is not restricted by overhead clearance to the wires. The rail loading area is also located completely outside of the easement. Design grading and location of other rail transload area-related features, including stormwater management system components, are shown on Conceptual Design Drawings RT-102 through RT-111.

GE will be coordinating closely with Eversource during the further design process, commencing with providing Eversource with a copy of this Rail Conceptual Design Plan. In addition, GE will share with Eversource for review a proposed grading plan for work within portions of the Eversource rights-of way as necessary to support the construction and operation of the rail transload area.

4.2.4 Site Preparation and Stormwater Management

A significant amount of earthwork will be required to create a level and usable area for the Utility Drive rail transload area, with both cut and fill activities anticipated across portions of the site. During earthwork operations, care will be taken to reduce disturbance to areas not directly identified for disturbance to construct the rail transload area. It is anticipated that the top approximate six-inch layer of topsoil will be scraped across the construction area and staged on site for reuse as topsoil during restoration. Additional cut materials will either be used as fill in areas currently lower than the design elevations or staged on site and reused post-construction to support site stabilization and restoration. Stockpiled materials will be covered with an appropriate erosion control seed mix and protected and monitored for the duration of use of the Utility Drive rail transload area. To the extent practicable, stockpile areas will be placed within designated disturbance areas, such as along the eastern side of the rail transload area (see Conceptual Design Drawings RT-102 and RT-103).

As discussed in Section 4 of the Geotechnical Evaluation Report in Appendix B, due to the soft nature of the existing materials at the Utility Drive property, compacted structural fill or use of another stabilization technique (e.g., geogrid) will be required in some areas to support the rail transload area infrastructure (e.g., railroad bed, support area), and the cut and fill volumes will be determined to account for the required structural fill (or other stabilization technique), as well as standard railroad ballast required underneath the railroad tracks. See Appendix B for other construction considerations regarding site preparation, including subgrade preparation and fill placement.

As illustrated on Conceptual Design Drawing RT-101, two large visible culverts and a silted and partially buried culvert currently extend under the railroad mainline and discharge onto the Utility Drive rail transload area property, and the existing drainage pattern is generally west to east and towards the wetland observed on the property. The two large visible culverts will be extended such that the discharge will be east and downgradient from the rail transload area, and site grading will ensure that other surface flow and stormwater, including from the silted culvert, are diverted away from the existing railroad mainline and the rail transload area. Existing drainage patterns will be restored during restoration of the property after conclusion of use of the Utility Drive rail transload area, as discussed in Section 4.2.7.

The proposed railroad bed and track and nearly all of the proposed supporting area are located outside of the 100-year floodplain; however, a portion of the access road and supporting/loading area is within the footprint of the 100-year floodplain defined by the Federal Emergency Management Agency (FEMA) (Figure 1-2 and Conceptual Design Drawing RT-101). In this area, the design elevation of the rail transload area is higher than that of the 100-year floodplain at the overlapping area. Specifically, the 100-year flood elevation in the area of the rail transload area is reported to be 966.8 feet North American Vertical Datum of 1988 (NAVD88) (FEMA 1982a), and the design elevation of the rail transload area is expected to be at or above approximately 975 feet NAVD88 (Conceptual Design Drawings RT-102 and RT-103).[5] Therefore, all portions of the rail transload area and access road will be outside of or above the elevation of the 100-year floodplain during use, and hence there will be no sealed containers with removed material stored at this rail transload area within areas at or below the 100-year floodplain elevation.

4.2.5 Rail Transload Area Design

After the site preparation activities, including placement and compaction of the required fill materials, the railroad bed (i.e., track subgrade/ballast) and track/ties and the access road and staging/loading area will be constructed. The geotechnical design requirements for the railroad and support areas are presented in Appendix B. The railroad design criteria used in developing this Rail Conceptual Design Plan are presented in Table 4-1.

As described in Appendix B, the staging and support area will likely be constructed of concrete to support the weight and movement of the heavy equipment required to lift, move, and load/unload the intermodal containers (e.g., top-pick lifts). Typical asphalt/pavement is anticipated to be sufficient for the access road and general storage areas where trucks will drive to transport the intermodal containers between the Reach 5A staging areas and the Utility Drive rail transload area.

The plan view and cross-sections for the Utility Drive rail transload area conceptual design are presented on Conceptual Design Drawings RT-102 through RT-111.

4.2.6 Consideration of Cultural Resources

As noted in Section 2.3, the 2025 Phase IB CRS at the Utility Drive transload area did not identify any archeological or historical resources that would require specific avoidance measures. However, additional CRS activities will be conducted in 2026 for those portions of the expanded transload area that were not covered by the 2025 investigations.

In addition, an Unanticipated Discoveries Plan will be developed during subsequent design phases and submitted to EPA to address the potential discovery of previously unidentified cultural or natural resources during construction activities. Further, in the event that there is an inadvertent discovery of human remains during construction, all relevant state and federal laws and recommendations regarding treatment of human remains will be followed. Additionally, if the remains are potentially part of the Stockbridge-Munsee Band of Mohican Indians, the *Stockbridge-Munsee Community Band of Mohican Indians Policy for Treatment and Disposition of Human*

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[5] The elevations in the flood map are reported in National Geodetic Vertical Datum of 1929 (NGVD29) and were converted to NAVD88 for consistency with the design.

Remains and Cultural Items That May be Discovered Inadvertently during Planned Activities (Stockbridge-Munsee Community 2020) will be followed.

4.2.7 Habitat Impacts, Measures to Address Them, and Restoration

Construction and operation of the Utility Drive rail transload area, including grading, cut-and-fill activities, and soil stockpiling, will result in temporary disturbance to existing upland and wetland-adjacent habitats. Efforts will be made prior to and during the performance of those activities to avoid or minimize those temporary impacts, as described below.

The layout and grading approach for the Utility Drive rail transload area have been developed to minimize direct impacts to delineated wetlands and to limit disturbance within the mapped 100-year floodplain, to the extent practicable, as described in Section 4.2.4. In particular, the construction and operation of the transload area will not affect any wetlands with the exception of the crossing of the intermittent stream mentioned in Section 2.3.1 (considered a Bank resource under the Massachusetts Wetlands Protection Act regulations). The drainage that is currently conveyed in that intermittent channel will be temporarily conveyed via culverts during the rail transload operation, and the surface water channel will be restored after site use.

GE has also developed a plan to address invasive plant species at the rail transload area. During construction, GE’s contractor will implement best management practices to prevent the introduction and spread of invasive plant species, including cleaning of equipment prior to entering and leaving the site, use of weed-free materials, and proper handling and disposal of soils that may contain seeds or vegetative material from invasive plants. In addition, GE will monitor for the introduction of invasive plant species at the transload area and will implement appropriate measures to prevent their establishment within the footprint of the rail transload area disturbance while construction activities are ongoing.

Further, disturbed areas associated with construction will be stabilized using a native seed mix appropriate for regional conditions (for example, a New England Wildflower mix or similar native stabilization mix). These areas will be monitored during rail operations for the presence of invasive plant species, with control measures implemented as necessary to minimize the colonization and spread of invasive species during operational activities. If newly established invasive plants are observed at or adjacent to the transload area, eradication measures will be implemented using a combination of mechanical and, where necessary, chemical controls. Invasive plant control may require the use of herbicides, which will be applied using targeted, direct-contact methods to minimize effects on non-target vegetation. Monitoring and invasive species control measures will continue during rail transload area use and until the site has been restored.

As described in the BRA Report (Appendix C) and summarized in Section 2.3.1, the Utility Drive rail transload area overlaps with the MNHESP-mapped species habitat for the state-listed wood turtle and mustard white butterfly, and it is possible that construction and operations could affect those species.[6] As also discussed in Section 2.3, the USFWS IPaC tool and GE’s acoustic survey indicated the potential presence of a number of state-listed bat species (including one species proposed for federal listing), as well as the monarch butterfly (proposed for federal listing), in or near this area. Potential impacts on the wood turtle will be avoided or minimized through turtle management measures such as pre-construction screening, use of turtle exclusion

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[6] As also noted in Section 2.3, although this rail transload area also overlaps with mapped species habitat for the state-listed American bittern and although mapped habitat for the state-listed common gallinule is present on the property to the east of the rail transload area, the 2025 rare bird survey found no evidence of American bitterns or common gallinules in this transload area property or elsewhere in Reach 5A. Thus, it is not expected that the construction or operation of this transload area will have any impact on those bird species.

fencing, training of contractors and site managers, and continued monitoring and removal of wood turtles during operations, which together should avoid a take of this species at the rail transload area. As also described in the BRA Report and summarized in Section 2.3.1, no mustard white butterflies or monarch butterflies were observed during the BRA at the Utility Drive rail transload area property, and observation of the host plants for such butterflies were minimal. Potential impacts on the host plants and associated habitat for the mustard white butterfly as well as monarch butterflies are thus anticipated to be minimal. In any case, such potential impacts will be considered as part of the evaluation of the potential impacts of the overall Reach 5A remediation on state-listed species and their habitats, which will be presented in the Final RD/RA Work Plan and/or Restoration Plan for Reach 5A. Finally, potential impacts on the state-listed bat species will be avoided by limiting tree removal to the November through March period, when any bats present will be hibernating and not using trees in the transload area for roosting.

The conceptual restoration plan for the Utility Drive rail transload area assumes that this transload area will be temporary and will be removed after use for the ROR RA, subject to ongoing coordination with the property owner. Restoration measures for this transload area are intended to address the temporary impacts following decommissioning of the rail transload facility and to return disturbed areas to stable habitat conditions generally consistent with baseline cover types and ecological functions documented in the BRA. Under this conceptual plan, following completion of Reach 5A material removal activities, the rail transload area infrastructure (i.e., railroad spur and operational support area) and imported fill material will be removed from the property, and the disturbed areas will be regraded to stable conditions that restore existing drainage patterns to support reestablishment of current habitat functions. The restoration grading plan will ensure no loss of flood storage capacity within the 100-year floodplain and will provide for replacement of the existing habitat, including appropriate vegetation for the sensitive species observed on the property during the PDI (e.g., host plants for the mustard white butterfly). Restoration of upland areas will focus on re-establishing open field and meadow conditions using native grasses and forbs appropriate for upland settings, with limited shrub and tree plantings incorporated, where appropriate, to reestablish habitat structure consistent with baseline conditions. In addition, existing drainageways will be restored, including restoration of the affected intermittent stream to an open channel that drains into the existing wetland. It is also anticipated that, in the unlikely event that there are any exposed soil areas (i.e., areas that were not covered by concrete, asphalt, or imported fill material that will be removed during restoration) where PCB-containing materials were handled and loaded into rail cars and that will be accessible to users after the restoration, such areas will be sampled for PCBs to ensure that they were not impacted by the handling of such materials during transload operations.

Restoration measures will be implemented with consideration of the affected rare species. For the wood turtle, restored conditions will maintain open upland habitats with areas of dense herbaceous and shrub cover that may be used seasonally for movement or foraging, and will avoid creating barriers to wood turtle movement, particularly in areas adjacent to wetlands. For the mustard white butterfly, restoration of open field and meadow areas may include incorporation of appropriate native host plants within the mustard family, where feasible and consistent with site conditions and planting objectives. Similarly, restoration of open field habitats and meadows will also incorporate plantings of milkweed where appropriate to provide host plants for monarch butterflies. No invasive plant species will be used in restoration plantings. Finally, restoration of the pre-existing plant communities and preservation of forest-field edges will provide suitable forage habitats for rare bat species.

The details of the restoration plan will be further developed and presented in the forthcoming Final Design Plan (see Section 6).

4.3 Woods Pond Spur Rail Transload Area

The Woods Pond Spur rail transload area is designed as two parallel spurs, each with an operational length of at least 450 feet (Figure 1-3). This track orientation will allow railroad engine operations to push empty cars into one spur, disconnect, traverse to the parallel spur, and connect to and pull out full cars forward from the other spur. Because of existing rail sidings parallel to the mainline track adjacent to the Woods Pond Spur area and due to space constraints on the property and the proximity of existing sidings along the mainline to support logistics, a tail to connect to the parallel transload spurs is not included in the conceptual design. It is anticipated that container loading and unloading equipment will be able to reach both rail spur tracks from the transload support area; however, it is also anticipated that, for each operational day, one track will be designated for only empty railcars and the other track will be designated for only full railcars. Construction of the Woods Pond Spur rail transload area will utilize the existing switch off the existing Lenox Team Track, which is a siding that runs parallel to the railroad mainline in this area.

In addition, as required by the property owner, BSRM, on the same property, GE will construct three additional rail spurs and an inspection pit for use by BSRM for storage of the 26 existing railroad cars that BSRM expects to be on site at the start of construction of the Woods Pond Spur rail transload area. These three additional rail spurs are illustrated on Figure 1-3 closest to the railroad mainline and will be isolated from the two transload tracks during active rail transloading operations.

As stated in the Rail PDI Work Plan, the rail enhancements made for the Woods Pond Spur rail transload area are expected to be left in place and made permanent, subject to ongoing coordination with the property owner.

4.3.1 Operational Requirements

In addition to loading departing railcars with containers full of removed material, as is planned for the Utility Drive rail transload area, the Woods Pond Spur rail transload area will receive railcars with containers full of removed material for offloading and transport for disposal in the UDF. During the first year of operation, the required Woods Pond Spur rail transload area operational activities are anticipated to include the following steps:

- Receipt of railcars loaded at the Utility Drive rail transload area and unloading from such railcars the sealed intermodal containers full of dewatered material removed from Reach 5A for disposal in the UDF;
- Temporary storage of those full intermodal containers in a designated area, as needed based on production and as possible based on space availability, until an empty truck is available (some containers may be transferred directly from the railcar to the truck); and
- Loading of the full intermodal containers to a truck for transport to the UDF for disposal of the material.

In addition, the operational activities for the Woods Pond Spur rail transload area in the first year will include the opposite process to return empty intermodal containers by truck or rail (as appropriate) to their prior location for refilling.

In subsequent years, the Woods Pond Spur rail transload area will continue to receive, via the railroad, material removed from Reach 5A and bound for the UDF for disposal. In addition, likely starting with the second year of the ROR RA, the Woods Pond Spur rail transload area operational activities will include the following steps:

- Receipt of trucks and unloading from such trucks sealed intermodal containers full of dewatered soil and sediment removed from Reaches 5B, 5C, and/or 6;
- Temporary storage of those full intermodal containers in a designated area, as needed based on production and as possible based on space availability, until an empty railcar is available (some containers may be transferred directly from the truck to the railcar); and
- Loading of the full intermodal containers to the railcars for transport, by rail, to the appropriate out-of-state disposal facility.

In addition, similar to the process described for the Utility Drive rail transload area, the operational activities at the Woods Pond Spur rail transloading area will include the opposite process to return empty intermodal containers to trucks for travel back to the Reach 5B, 5C, or 6 staging areas for filling.

Figure 4-2 illustrates the operational activities anticipated at the Woods Pond Spur rail transload area. That transload area will be in operation starting with the Reach 5A remedial activities and throughout the remainder of the ROR RA.

Based on the assumptions stated in Section 4, the anticipated operational capacity in cy/day of the Woods Pond Spur rail transload area is approximately 440 cy/day, including approximately 88 cy/day for each of the five railcars that fit onto the length of one of the transload tracks. Unlike the Utility Drive rail transload area capacity, the capacity for the Woods Pond Spur rail transload area accounts for both the receipt and unloading of railcars from the Utility Drive rail transload area and the loading and distribution of railcars for off-site disposal of waste from Reaches 5B, 5C, and 6. It is anticipated that, on average, the Woods Pond Rail Spur rail transload area will receive three to four full railcars daily from the Utility Drive rail transload area (i.e., 264 cy/day to 352 cy/day) and, on days with only three inbound railcars, send two railcars off-site for disposal (176 cy/day).

Assuming the same construction season and 140 days of rail service, as described in Section 4.2.1, the Woods Pond Spur transload area's maximum capacity for receipt of material is approximately 37,000 to 49,000 cy/yr, which is anticipated to be more than sufficient to handle the annual volume of material expected to be removed from Reach 5A. In addition, the transload area's maximum capacity for loading of material for off-site disposal is approximately 25,000 cy/yr, which is anticipated to be more than sufficient to handle the annual volume of material expected to be removed from Reaches 5B, 5C, and 6.

4.3.2 Property Use During Construction and Operation

As discussed in Section 2.5, during development of the conceptual design for the Woods Pond Spur rail transload area, GE consulted with the owner of the property, BSRM, regarding the design and use of the transload area during the ROR RA. As a result, the conceptual design for this transload area includes approximately 2,000 linear feet of railroad track in excess of what is required for ROR RA operational requirements, to be used for storage of existing BSRM equipment (i.e., BSRM Tracks #1 through #3 on Conceptual Design Drawing RT-202). In addition, the conceptual design includes additional infrastructure (e.g., parking, fencing, access roads) to support ongoing use of the property by BSRM during the ROR RA. GE will continue to consult with BSRM as the design progresses.

4.3.3 Overhead Electric Utility Line Easement

An existing Eversource utility line easement is located diagonally across the property, as shown on Conceptual Design Drawing RT-201. A system of overhead electric wires, towers, and guy wires are located within the easement. The planimetric layout of the rail transload area has been developed to accommodate the easement and the utilities on it. Specifically, the rail transload area has been designed to avoid interference with the towers and guy wires. Although the railroad track connecting the mainline to the Woods Pond Spur transload area track does cross the easement, the fill placement under the utility lines will be limited to the extent practicable and will occur at locations between the utility poles, such that that travel and loading of railcars will not be restricted by overhead clearance to the wires. The majority of the rail transload area support area is located completely outside of the easement, and vehicle traffic on the access road is not expected to be restricted by overhead clearance to the wires. Design grading and location of other rail transload area-related features are shown on Conceptual Design Drawings RT-202 and RT-205.

GE will be coordinating closely with Eversource during the further design process, commencing with providing Eversource with a copy of this Rail Conceptual Design Plan. In addition, GE will share with Eversource for review a proposed grading plan for work within portions of the Eversource rights-of way as necessary to support the construction and operation of the rail transload area.

4.3.4 Site Preparation and Stormwater Management

A significant amount of earthwork will be required to create a level and usable area for the Woods Pond Spur rail transload area, with both cut and fill activities anticipated across portions of that area. During earthwork operations, care will be taken to reduce disturbance to areas not directly identified for disturbance to construct the rail transload area. It is anticipated that cut materials will be used as fill in areas currently lower than the design elevations, reused for fill in other areas at the property outside of the footprint of the rail transload area, or, if they are to be removed from the property, characterized as necessary for transport and disposal (e.g. at the UDF) or for transport and reuse elsewhere.

As discussed in Section 4 of Appendix B, due to the nature of the existing materials at the Woods Pond Spur rail transload area property, compacted structural fill or use of another stabilization technique (e.g., geogrid) will be required in some areas to support the rail transload area infrastructure (e.g., railroad bed, support area), and the cut and fill volumes will be determined to account for the required structural fill (or other stabilization technique) as well as standard railroad ballast required underneath the railroad tracks. In addition, the portion of this rail transload area where PCB-containing materials will be handled (i.e., the loading/unloading area) will be covered with a demarcation layer and a minimum of six inches of imported clean fill and/or hardscape (in this case, concrete) so that all such loading and unloading operations are conducted on the top of that new clean layer. See Appendix B for other construction considerations regarding site preparation, including subgrade preparation and fill placement.

All of the proposed supporting area and nearly all of the proposed railroad bed and track are located outside of the 100-year floodplain; however, a portion of the proposed (and existing) railroad track are within the footprint of the 100-year floodplain defined by FEMA (Figure 1-2 and Conceptual Design Drawing RT-201). In this area, the 100-year flood elevation in the area of the rail transload area is reported to be 956.4 feet NAVD88 (FEMA 1982b), which is slightly higher in elevation than the mainline track in this area (between approximately 955 and 956 feet

NAVD88).[7] The portion of the rail transload area within the planimetric mapping of the 100-year floodplain, which will not be part of the rail loading/unloading area that will be covered by imported clean fill or hardscape, is expected to be constructed to be similar to the existing conditions such that drainage and flood storage in this area is not impacted. In any case, an evaluation of the impacts of the constructed transload area on flood storage capacity in the floodplain will be conducted to confirm that there will be no loss of flood storage capacity due to the construction of the rail transload area, which is intended to remain in place after completion of use for the ROR RA.

4.3.5 Rail Transload Area Design

The design for the Woods Pond Spur rail transload area is similar to that described in Section 4.2.5 for the Utility Drive rail transload area. After the site preparation activities, including placement and compaction of the required fill materials, the railroad bed and track/ties and the access road and staging/loading area will be constructed. The geotechnical design requirements for the railroad and support areas are included in Appendix B. The railroad design criteria used in developing this Rail Conceptual Design Plan are presented in Table 4-1.

As described in Appendix B, the staging and support area will likely be constructed of concrete to support the weight and movement of the heavy equipment required to lift, move, and load/unload the intermodal containers. Typical asphalt/pavement is anticipated to be sufficient for the access road and general storage areas where trucks will drive to transport the intermodal containers between the Reach 5B, 5C, and 6 staging areas and the Woods Pond Spur rail transload area and between that transload area and the UDF.

The plan view and cross-sections for the Woods Pond Spur rail transload area conceptual design are presented in Conceptual Design Drawings RT-202 through RT-205.

4.3.6 Consideration of Cultural Resources

As noted in Section 2.3, the 2025 Phase IB CRS at the Woods Pond Spur transload area did not identify any archeological or historical resources that would require specific avoidance measures. However, additional CRS activities will be conducted in 2026 for those portions of the modified transload area that were not covered by the 2025 investigations. Beyond that, the same actions described in Section 4.2.6 relating to development of an Unanticipated Discoveries Plan and actions to be taken in the event of an inadvertent discovery of human remains during construction will also be implemented at the Woods Pond Spur rail transload area.

4.3.7 Habitat Impacts, Measures to Address Them, and Restoration

The Woods Pond rail transload area property differs substantially from the Utility Drive property in baseline habitat conditions and ecological function. As documented in Appendix C, the Woods Pond rail transload area property consists primarily of previously disturbed industrial surfaces with limited vegetative cover and no wetland resources within the property boundaries. In terms of potential impacts on rare species, as discussed in Section 2.3.2, although the USFWS IPaC tool indicated potential habitat for the northern long-eared bat, the tricolored bat, and the monarch butterfly in areas encompassing this property, the northern long-eared bat is the only federally listed species with potentially suitable habitat characteristics identified in the vicinity of this property. In any event, any tree removal in or near this property will be limited to the November through March period to avoid potential impacts to roosting bats. As also noted above, the Species Habitat mapping provided by MNHESP did not include

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[7] The elevations in the flood map are reported in NGVD29 and were converted to NAVD88 for consistency with the design.

any state-listed species at the Woods Pond Spur transload area property. For these reasons, based on current information, it is not expected that the construction and operation of this transload area will impact any federally or state-listed rare species. In the event that the additional rare species survey to be conducted at and adjacent to this property in 2026 (as discussed in Section 2.3.2) indicates that there could be such impacts, they will be addressed in the Final Design Plan.

After consultation with the relevant parties described in Section 2.5, it is anticipated that nearly all infrastructure installed by GE at the Woods Pond Spur rail transload area during the ROR RA (i.e., railroad track, parking, access roads) will remain in place after use for the ROR RA, with the exception of appurtenances like construction fencing. In addition, it is anticipated that the surface cover placed over the portion of the transload area where PCB-containing materials were handled (i.e., the loading/unloading area) will be sampled for PCBs to ensure that it was not contaminated by the handling of such materials during transload operations. It is anticipated that, in hardscape areas, such sampling will include core sampling of the concrete for PCBs. A representative sampling plan will be developed and submitted to EPA for approval prior to completion of restoration of this transload area. Assuming that such sampling does not show unacceptable levels of PCBs, the constructed surface cover placed over the loading/unloading area will remain in place. In these circumstances, decommissioning of the rail transload area is not anticipated to require extensive habitat restoration, and restoration will be limited to stabilization and re-establishment of the native vegetative cover in vegetated areas as appropriate. Hardscape areas will remain and thus re-establishment of vegetative cover in those areas is unnecessary. The details of the restoration plan will be further developed and presented in the forthcoming Final Design Plan (see Section 6).

5 Supplemental Data Collection

As described in the preceding sections of this Rail Conceptual Design Plan, certain supplemental data collection activities are necessary to supplement the existing data and provide additional information to support the final design for the rail transload areas. The supplemental data collection will include the following additional activities:

- An additional BRA rare species survey at and adjacent to the Woods Pond Spur rail transload area property in accordance with GE's August 8, 2025 proposal for such a survey and EPA's November 24, 2025 conditional approval letter for it; and
- Additional CRS investigations at both rail transload area properties to cover the extent of the current conceptual design alignment that is outside of the areas investigated in 2025, as described in the work plan in Section 6 of Appendix D.

The results of these supplemental data collection activities will be used to inform the final design for the rail transload areas and will be described in, or in submissions attached to, the forthcoming Final Design Plan (see Section 6).

6 Schedule and Next Steps

Based on further design evaluations, EPA's comments on this Rail Conceptual Design Plan, and ongoing consultations with relevant parties, GE will prepare and submit to EPA a Final Design Plan for the Utility Drive and the Woods Pond Spur rail transload areas. It is anticipated that that plan will be submitted to the EPA in late fall 2026; however, the precise timing is dependent on the timing of comments on and/or approval of this Rail Conceptual Design Plan and the duration of the supplemental data collection activities summarized in Section 5. Similar to the distribution list for this Rail Conceptual Design Plan, copies of the Final Design Plan will be provided to the relevant property owners, the owner and operator of the railroad, and the local municipalities.

It is anticipated that the rail transload areas will be constructed and operational before remediation activities in Reach 5A begin; however, the construction schedule is dependent on a number of factors outside of GE's control. Specifically, the schedule is dependent on the following assumptions, which, if not met, may delay the schedule for construction and operation of the rail transload areas:

- Property owner agreement with the Final Design Plan for the Utility Drive and the Woods Pond Spur rail transload areas is received by the end of 2026;
- EPA approval of the Final Design Plan for these rail transload areas is received by the end of 2026;
- Access agreements with the property owners are executed by the end of 2026;
- GE has received approval from MassDOT to allow tie-in of the Utility Drive rail transload area track to the railroad mainline by the end of 2026;
- Agreement is reached with HRRC by the end of 2027 on an operations plan for movement of ROR RA-related trains as necessary support the ROR RA project schedule;
- The MassDOT capital improvement project for the railroad mainline between the Woods Pond Spur and the City of Pittsfield is completed before the spring of 2028;
- No unexpectedly long lead times are required for materials necessary for construction of the rail transload areas (generally greater than six months, except for switches, which can take up to nine months); and
- Weather conditions are appropriate for construction of the rail transload areas by spring 2028.

As described in the Revised T&D Plan, if at any time during the ROR RA use of rail transport for material disposal cannot match target production rates for sediment and soil removal (i.e., if material is being removed and stockpiled faster than it can be transported for disposal, with the risk of running out of room), truck transport will be utilized to supplement rail transport and convey removed materials for disposal.

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Tables

Table 3-1
Applicable or Relevant and Appropriate Requirements for Rail Transload Areas in Reaches 5 and 6[1]

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6
Housatonic River – Rest of River
Pittsfield, Massachusetts

Statute/Regulation	Citation	Synopsis of Requirements	Status	Action(s) to Be Taken to Comply with ARARs[2]
Chemical-Specific ARARs				
Federal ARARs				
None				
State ARARs				
Massachusetts Contingency Plan	310 CMR 40.0361 – Reportable Concentrations of Oil and Hazardous Material in Soil	This regulation defines reportable concentrations in soils for chemical constituents that are listed on 105 CMR, § 670.010 (Massachusetts Substance List) to determine whether the soil contains hazardous materials.	Relevant and appropriate	Soil and aggregates to be obtained from licensed borrow sources for construction of the rail transload areas will be sampled to confirm that earthwork and railbed materials meet specifications and are not above background soil concentrations.
To Be Considered				
Location-Specific ARARs				
Federal ARARs				
Clean Water Act – Section 404 and implementing regulations	33 USC 1344 33 CFR Parts 320-323, 325, and 332 (ACOE) 40 CFR 120.2 and Part 230 (EPA)	For the discharge of dredged or fill material into waters of the United State (as defined in 2023 in 40 CFR 120.2), there must be no practicable alternative with less adverse effect on the aquatic ecosystem; the discharge cannot cause or contribute, after consideration of disposal site dilution and dispersion, to violation of any applicable water quality standard, violate an applicable toxic effluent standard, jeopardize existence of endangered or threatened species, or contribute to significant degradation of waters of the U.S. The discharger must take appropriate and practicable steps to minimize potential adverse impacts of the discharge on the aquatic ecosystem. The discharger must evaluate impacts on flood level, flood velocity, and flood storage capacity. Mitigation/restoration is required for unavoidable impacts on resources.	Applicable to the extent that construction activities for the rail transload areas would involve a discharge of dredged or fill material to a water of the United States	It is not anticipated that construction of the Woods Pond Spur rail transload area will involve the discharge of dredged or fill material into a water of the U.S. The same is true for construction of the Utility Drive rail transload area except that construction of that area will require the crossing of an intermittent stream channel which could be considered a water of the U.S. The drainage that is currently conveyed in that intermittent channel will be temporarily conveyed via culverts during the rail transload operation, and then a surface water channel will be restored after use of the rail transload area has been completed. To the extent that construction activities associated with the development of the rail transload areas (including the crossing of the intermittent stream) should result in a discharge of dredged or fill material to a water of the U.S., the substantive requirements of these regulations will be met. EPA has determined that there is no practicable alternative with less adverse impact on the aquatic ecosystem, and these construction activities will include appropriate and practicable steps (e.g., appropriate soil erosion controls) to minimize potential adverse impacts of such discharge on the waters of the U.S. In particular, excavation, filling, grading, and construction activities will be managed in a manner that limits impacts to adjacent areas and avoids the uncontrolled discharge of stormwater runoff beyond designated areas, and will provide for management of construction-based stormwater. If necessary, mitigation/restoration will be conducted consistent with the substantive requirements of these regulations. See also next entry regarding potential impacts on flood storage capacity.

Statute/Regulation	Citation	Synopsis of Requirements	Status	Action(s) to Be Taken to Comply with ARARs[2]
Floodplain Management and Protection of Wetlands	44 CFR Part 9	Regulation sets forth policy, procedures, and responsibilities to implement and enforce Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands.	Relevant and appropriate	The construction and operation of the rail transload areas will be conducted in accordance with the substantive requirements of this regulation. There will be no significant impact on the floodplains. The Woods Pond Spur rail transload area will be located outside of or above the elevation of the 100-year floodplain. The Utility Drive rail transload area will be located largely outside of the 100-year floodplain, and the portion within the planimetric extent of that floodplain (which will not be used for loading operations) will be restored so that flood storage capacity will not be reduced. In any case, a post-restoration evaluation will be conducted at each transload area to confirm that there will be no loss of flood storage capacity in the 100-year floodplain. In addition, the work to construct and operate these rail transload areas is not expected to adversely affect any wetlands with the exception of the intermittent stream at the Utility Drive rail transload area, which will be restored as described above.
RCRA requirements for hazardous waste facilities in floodplains	40 CFR 264.1(j)(7) 40 CFR 264.18(b)	Remediation waste management sites must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood, unless procedures are in effect to have waste removed safely before flood waters reach the facility or there will be no adverse effects on human health or the environment if washout occurs.	Potentially relevant and appropriate	It is not anticipated that the rail transload area will manage any hazardous waste under RCRA. Even if they did, the substantive requirements of these regulations would be met. The areas at both the Woods Pond Spur and Utility Drive transload areas where removed materials will be staged have been conceptually designed to be located outside of or higher in elevation than the 100-year floodplain and material will be containerized (i.e., not in an exposed stockpile).
National Historic Preservation Act (NHPA) and regulations	54 USC 300101 et seq., including Section 306108 (Section 106 of NHPA) 36 CFR Part 800	A federal agency must take into account the project's effect on properties or resources included or eligible for inclusion in the National Register of Historic Places (NRHP).	Applicable to EPA; relevant and appropriate to work that could affect properties or resources included or eligible for inclusion in the NRHP	Cultural resource survey activities (CRS) to date at the rail transload area properties have not identified any properties or resources that are included or eligible for inclusion in the NRHP. If any such properties or resources are identified during further surveys at the rail transload areas, activities will be conducted, in coordination with the relevant federal, state, and tribal authorities, to avoid or mitigate impacts on those properties or resources to the extent required by the substantive provisions of these regulations.
Archaeological and Historic Preservation Act	54 USC 312501 et seq.	When a federal agency finds, or is notified, that its activities in connection with a federal construction project may cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data, such agency shall notify the U.S. Department of the Interior. If the U.S. Department of the Interior determines the data are significant and may be irrevocably lost or destroyed, it is to conduct a survey and other investigation of the affected area and recover and preserve such data as necessary in the public interest.	Applicable to EPA; relevant and appropriate to work in areas where archaeological or historic data may be present	CRS activities to date have not identified any such significant scientific, prehistorical, historical, or archeological data at either of the rail transload area properties. If any such data are found in the future, EPA will make the notification required by this Act, and the substantive requirements of this Act will be met.

Statute/Regulation	Citation	Synopsis of Requirements	Status	Action(s) to Be Taken to Comply with ARARs[2]
Endangered Species Act and Regulations	16 USC 1536(a)-(d) 50 CFR Part 402, Subparts A&B 50 CFR 17	A federal agency must determine whether a federally authorized project is likely to jeopardize the continued existence of a listed threatened or endangered (T&E) species or result in destruction or adverse modification of its critical habitat. If so, "reasonable and prudent" measures must be taken to avoid and/or minimize such effects.	Applicable to EPA; relevant and appropriate to work that could affect T&E species or their habitat	GE's baseline restoration assessment (BRA) activities for the rail transload area properties identified habitat for and the potential presence of one federally listed T&E species, the northern long-eared bat (NLEB), as well as two species proposed for listing, the tricolored bat (TCB) and monarch butterfly, within the Woods Pond Spur transload area property and the latter two species at the Utility Drive transload area property. A bat acoustic survey conducted in Reach 5A detected the presence of the TCB (but not the NLEB), which could forage at or near the Utility Drive transload area property. Although a rare butterfly survey in Reach 5A did not observe any monarch butterflies in the Utility Drive transload area property, that property contains suitable habitat for them (i.e., their host plant species). Surveys for the two bat species and the monarch butterfly at the Woods Pond Spur transload area property will be conducted in 2026. To the extent that the construction or operation of the rail transload areas is determined to adversely impact any federally listed T&E species, GE will conduct reasonable and prudent measures to avoid or minimize such impacts. Notably, any tree cutting required at either rail transload area property will be conducted between November 1 and March 30 to avoid any direct impact to rare bat roosting habitat. Habitat restoration after rail use will mitigate any long-term impacts to rare bat use of these areas. Potential impacts on monarch butterflies can be addressed through restoration measures focused on their host plants.
State ARARs				
Massachusetts Clean Water Act – Water Quality Certification Regulations	314 CMR 9.00 et seq., including 9.06-9.07	For discharge of fill material to waters of the U.S. within Massachusetts, the criteria in Section 9.06 include, without limitation, the following: (a) no discharge is permitted for the impoundment or detention of stormwater for purposes of controlling sedimentation or other pollutant attenuation; (b) stormwater is to be controlled with BMPs; and (c) no discharge shall be permitted in rare circumstances where the activity will result in substantial adverse impacts to the physical, chemical, or biological integrity of surface waters. For management of dredged material, the criteria in Section 9.07 include, without limitation, the following: (a) dredged material management must be conducted to ensure protection of human health, public safety, public welfare and the environment; and (b) placement of dredged material in an intermediate facility for sediment management (handling of sealed containers containing dewatered materials) prior to disposal or reuse must meet certain requirements in Section 9.07(4), including requirements governing method of placement/storage of dredged material and siting criteria.	Applicable to work involving discharge of dredged or fill material to waters of the U.S.; relevant and appropriate to management of dredged material	As noted above, it is not anticipated that construction of the Utility Drive or Woods Pond Spur rail transload area will involve the discharge of dredged or fill material into waters of the U.S., with the exception that the Utility Drive transload area construction will require the crossing of an intermittent stream channel that could be considered a water of the U.S. That crossing is discussed above under the entry for Section 404 of the Clean Water Act. To the extent that the rail transload area construction activities would involve the discharge of fill material to a water of the U.S., the substantive provisions of these regulations relating to such discharge will be met. In particular, without limitation, the rail transload area construction and use will not involve impoundment or detention of stormwater to control sedimentation or pollutant attenuation, will use BMPs to control stormwater, and will not include activities that result in substantial adverse impacts to the physical, chemical, or biological integrity of surface waters. The management of dredged material at these rail transload areas will be conducted in accordance with the substantive provisions of these regulations relating to such management. In particular, without limitation: • Dredged material management (handling of sealed containers containing dewatered materials) will be conducted in a manner that ensures protection of human health, public safety, public welfare, and the environment. • Temporary staging areas at the rail transload areas will meet the requirements for an intermediate facility in 314 CMR 9.07(4) except as otherwise approved by EPA.

Table 3-1
Applicable or Relevant and Appropriate Requirements for Rail Transload Areas in Reaches 5 and 6[1]

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6
Housatonic River – Rest of River
Pittsfield, Massachusetts

Statute/Regulation	Citation	Synopsis of Requirements	Status	Action(s) to Be Taken to Comply with ARARs[2]
Massachusetts Wetlands Protection Act and Regulations	MGL c. 131, Section 40 310 CMR 10.00, including 10.53	These requirements govern removal, dredging, filling, or altering of “Resource Areas,” including Riverfront Areas, inland wetlands, land subject to flooding and certain other areas. Provisions include Section 10.53(3), which authorizes certain projects as “limited projects,” including, in 10.53(3)(q), actions responding to a release or threat of release of oil and/or hazardous materials in accordance with the MCP, where (a) there is no practicable alternative consistent with the MCP that would be less damaging to Resource Areas, and (b) steps are taken to avoid or minimize impacts to Resource Areas, including meeting specific standards to the maximum extent practicable. Further, under 310 CMR 10.59, the action must have no adverse effect on estimated habitat of state-listed rare wildlife species.	Applicable to work in defined Resource Areas	The construction and operation of the two rail transload areas will not affect any Resource Areas under this Act with one exception: The construction of the Utility Drive transload area will require minor and temporary work in an intermittent stream, which is considered a Bank resource under these regulations. Such work, as part of a CERCLA response actions and thus considered adequately regulated under the MCP, will be considered a limited project under these regulations; and it will meet the substantive requirements of these regulations for such projects. There is no practicable alterative that would be less damaging to this stream, and steps will be taken to avoid or minimize impacts to this stream to the maximum extent practicable. In particular, BMPs will be used in construction of the stream crossing, the drainage that is currently conveyed in the intermittent channel will be temporarily conveyed via culverts during the rail transload operation to avoid hydrological changes, and the intermittent stream channel will be restored after use of the rail transload area has been completed. With respect to the potential impacts on the estimated habitat of state-listed rare species, see the entry below for the Massachusetts Endangered Species Act.
Massachusetts Site Suitability Criteria	310 CMR 16.40(3),(4)	Site suitability criteria for solid waste handling facilities, including facility-specific and general site suitability criteria.	Potentially applicable to the temporary management of excavated materials at rail transload areas	To the extent that these siting criteria apply to solid waste handling facilities at the rail transload areas these criteria will be met except as follows: For any such requirements that would prohibit or restrict temporary solid waste management at these transload areas – including the prohibition on the location of such management facilities within an Area of Critical Environmental Concern (ACEC) – EPA, in consultation with the Commonwealth, has waived those requirements pursuant to CERCLA 121(d)(4)(B) on the ground that compliance with them would create a greater risk to human health and the environment than implementation of the selected remedy.
Massachusetts Facility Location Standards	310 CMR 30.700-708	Location standards for hazardous waste management facilities, including temporary storage units for waste defined by the state regulations as hazardous waste. They include, but are not limited to, a prohibition on the location of any such facility in the 100-year floodplain or in an ACEC, as well as various other locational requirements for the active portion of the facility. Note that waste containing PCBs at a concentration equal to or greater 50 mg/kg constitutes hazardous waste under the Massachusetts regulations. Note further that these regulations exempt: (a) temporary storage of dredged materials at an intermediate facility when managed under a state water quality certification and under Section 404 of the federal Clean Water Act; or (b) facilities for wastes with a PCB concentration equal to or greater than 50 mg/kg if such facilities comply with EPA’s TSCA regulations (40 CFR Part 761) except with respect to a facility located in an ACEC (see 310 CMR 30.501(3)(a)).	Potentially applicable to the temporary management of excavated materials at rail transload areas	To the extent that the location standards of these regulations apply to the temporary management of materials at the rail transload areas (assuming that those materials constitute hazardous waste under these regulations and that their temporary management is not subject to any regulatory exemption), these location requirements will be met except as follows: For any such requirements that would prohibit or restrict temporary hazardous waste management at these rail transload areas – including the prohibition on the location of such management facilities within the ACEC – EPA, in consultation with the Commonwealth, has waived those requirements pursuant to CERCLA 121(d)(4)(B) on the ground that compliance with them would create a greater risk to human health and the environment than implementation of the selected remedy.

Statute/Regulation	Citation	Synopsis of Requirements	Status	Action(s) to Be Taken to Comply with ARARs[2]
Massachusetts Historical Commission (MHC) Act and regulations	MGL c. 9, Section 27C 950 CMR 71.07	If the MHC determines that a state-authorized project could cause a change in the historical, architectural, archaeological, or cultural qualities of a property on the State Register of Historic Places (SRHP), these provisions establish a process for notification, determination of adverse impact, and evaluation of alternatives to avoid, minimize, or mitigate such impacts	Relevant and appropriate to work that could affect properties included on the SRHP	CRS activities to date have not identified any property listed on the SRHP at either of the rail transload area properties. If future surveys identify any such listed properties at the transload areas, the substantive requirements of these regulations will be met in coordination with the MHC, as well as EPA and relevant tribal authorities.
Massachusetts Endangered Species Act (MESA) and regulations	MGL c. 131A 321 CMR 10.00, Parts I, II, and V 321 CMR 10.00, Part IV	Under Parts I, II, and V, a proposed activity in mapped Priority Habitat for a state-listed threatened or endangered species or species of special concern, or other area where such a species has occurred may not result in a "take" of such species, unless it has been authorized by a conservation and management permit. A conservation and management permit may be issued provided that an adequate assessment of alternatives to both temporary and permanent impacts to state-listed species has taken place, an insignificant portion of the local population would be impacted by the project or activity, and the project proponent agrees to carry out a conservation and management plan is carried out that provides a long-term net benefit to the conservation of the state-listed species. Under Part IV, projects that will alter a designated Significant Habitat must be reviewed to ensure that they will not reduce the viability of the habitat to sustain an endangered or threatened species.	Applicable	The Utility Drive rail transload area property is located within a Priority Habitat designated by the Massachusetts Natural Heritage and Endangered Species Program (MNHESP) for state-listed species; and the transload area overlaps with mapped habitat provided by MNHESP for three state-listed species – the wood turtle, the American bittern, and the mustard white butterfly – although no evidence of the American bittern was found at this area in a 2025 survey. This property also contains potential habitat for several state-listed bat species (TCB, little brown bat, silver-haired bat, eastern red bat, and hoary bat). The Woods Pond Spur rail transload area property does not include any Priority Habitat or mapped MNHESP habitat for any state-listed species, although a survey for one such species (the common gallinule, with nearby mapped habitat) will be conducted within and adjacent to that property in 2026. To the extent that the construction or operation of the rail transload areas is determined to adversely impact any state-listed species, the substantive requirements of the MESA regulations will be followed. This will include an evaluation of potential measures to avoid a "take" of a state-listed species, and will also include, where necessary in response to an unavoidable "take" of such a species, the development of a conservation and management plan (as part of an overall plan for Reach 5A or Reach 6, as applicable) that provides a long-term net benefit to the species. There are no designated Significant Habitats in either of the rail transload area properties.
Massachusetts ACEC	301 CMR 12.11(1)(c)	Provides for establishment of ACEC in the state, which includes the rail transload areas. ACEC designation affects other state laws and regulations.	Relevant and appropriate	The ACEC regulations pertain to state agency actions and are not applicable to the federal EPA action. However, the rail transload area construction and use will comply with the substantive requirements of 301 CMR 12.11(1)(c), which may be relevant and appropriate, by contributing to a project that will advance the values of 301 CMR 12.11(1)(c), while avoiding adverse effects on identified values in Section 12.11(1)(c) to the extent practicable.
Action-Specific ARARs				
Federal ARARs				
TSCA Regulations on Cleanup of PCB Remediation Waste	40 CFR 761.61(c)	Provides for risk-based approval of PCB sampling, cleanup, storage, and disposal methods through an EPA determination that such method(s) will not pose an unreasonable risk of injury to health or the environment	Applicable	Attachment D to the Revised Final Permit contains a risk-based determination by EPA under this provision that the remedy specified in the Revised Final Permit will not pose an unreasonable risk of injury to health or the environment as long as it complies with the conditions set out in that determination, which the Housatonic ROR remedy will do. This determination covers the storage of PCB-containing materials at the rail transload areas.

Table 3-1
Applicable or Relevant and Appropriate Requirements for Rail Transload Areas in Reaches 5 and 6[1]

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6
Housatonic River – Rest of River
Pittsfield, Massachusetts

Statute/Regulation	Citation	Synopsis of Requirements	Status	Action(s) to Be Taken to Comply with ARARs[2]
TSCA Regulations on Storage of PCB Remediation Waste	40 CFR 761.50 40 CFR 761.65 40 CFR 761.61(c)	General and specific requirements for storage of PCB Remediation Waste. Regulations include specific provisions for storage of PCB Remediation Waste in piles at the cleanup site or site of generation for up to 180 days (761.65(c)(9)). Also allows for risk-based approval by EPA of alternate storage method (761.61(c)), based on demonstration that it will not pose an unreasonable risk of injury to health or the environment.	Applicable	The storage of PCB Remediation Waste at the rail transload areas will comply with these provisions. EPA's risk-based approval contained in Attachment D to the Revised Final Permit covers the storage of such materials in accordance with the requirements of the Revised Final Permit. The temporary storage of PCB-containing sediments and soils at the rail transload areas will meet the applicable requirements established under the Revised Final Permit for such storage.
TSCA Regulations on Decontamination	40 CFR 761.79	Establishes decontamination standards and procedures for removing PCBs from water, organic liquids, and various types of surfaces.	Applicable	Although not anticipated to be necessary at the rail transload areas, if decontamination activities are conducted at the rail transload areas as part of the Housatonic ROR remedy, they will comply with these requirements.
Clean Water Act – NPDES Regulations (stormwater discharges)	40 CFR 122.26(c)(1)(ii)(C) 40 CFR 122.44(k)	Best management practices (BMPs) must be employed to control pollutants in stormwater discharges during construction activities.	Applicable	Erosion and sedimentation control measures and BMPs will be implemented during construction activities at the rail transload areas to comply with these stormwater requirements.
RCRA Regulations on Identification of Hazardous Waste	40 CFR 261	Establishes standards for determining whether a waste constitutes hazardous waste under RCRA.	Potentially applicable	If necessary to determine whether materials present at rail transload areas or to be removed from those areas during restoration constitute hazardous waste under RCRA, waste characterization sampling of such materials will be conducted consistent with these requirements to make that determination.
RCRA Regulations for Hazardous Waste Management Facilities – General	40 CFR 264.1(j)	General requirements for hazardous waste management facilities (waste analysis, security, precautions regarding ignition or reaction of wastes, preventing washout of units)	Potentially applicable	If it is determined that materials managed at the rail transload areas constitute RCRA hazardous wastes and that those areas are outside the overall Area of Contamination, these requirements will be met.
State ARARs				
Massachusetts Clean Waters Act – Water Quality Certification Regulations	314 CMR 9.01-9.08	See synopsis of requirements in the location-specific entry for this ARAR.	Applicable	See the location-specific entry for this ARAR.
Massachusetts Clean Water Act and Wetlands Protection Act – Stormwater Management Standards	310 CMR 10.05(6)(k) 314 CMR 9.06(6)(a)	Projects subject to regulation under the Wetlands Protection Act (WPA) or that involve discharge of fill material into a water of the U.S. must incorporate stormwater BMPs to attenuate pollutants in stormwater discharges, as well as to provide a setback from receiving waters and wetlands, in accordance with 10 specified stormwater management standards.	Applicable to the extent that rail transload areas would affect a Resource Area under the WPA and/or a water of the U.S.	The construction and operation of the rail transload areas are not anticipated to affect a Resource Area under the WPA or involve a discharge of dredged or fill material to a water of the U.S., with one exception – the crossing of an intermittent stream channel at the Utility Drive transload area, For that work, erosion and sedimentation control measures and BMPs will be implemented to comply with these stormwater requirements.
Massachusetts Hazardous Waste Regulations on Identification and Listing of Hazardous Waste	310 CMR 30.100	Establishes criteria and lists for determining whether a waste is a hazardous waste under state law. Note: Waste containing PCBs at a concentration equal to or greater 50 mg/kg constitutes a listed hazardous waste under the Massachusetts regulations, but the Massachusetts hazardous waste regulations do not apply to facilities for such waste that comply with EPA's TSCA regulations (40 CFR Part 761) except with respect to a facility located in an ACEC (see 310 CMR 30.501(3)(a)).	Applicable	If necessary to determine whether materials present at the rail transload areas or to be removed from those areas during restoration constitute hazardous waste under state law on a basis other than containing PCB concentrations at or above 50 mg/kg, waste characterization sampling of such materials will be conducted consistent with these regulations to make that determination. Note: With respect to waste containing PCB concentrations at or above 50 mg/kg, any facilities for the storage of such waste as part of the Housatonic ROR remedy, including the rail transload areas, will comply with the TSCA regulations (by virtue of EPA's risk-based determination in Attachment D to the Revised Final Permit), and the prohibition on the location of such a facility in an ACEC has been waived by EPA, after consultation with the Commonwealth, pursuant to CERCLA 121(d)(4)(B).

Table 3-1
Applicable or Relevant and Appropriate Requirements for Rail Transload Areas in Reaches 5 and 6[1]

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6
Housatonic River – Rest of River
Pittsfield, Massachusetts

Statute/Regulation	Citation	Synopsis of Requirements	Status	Action(s) to Be Taken to Comply with ARARs[2]
Massachusetts hazardous waste management – general requirements	310 CMR 30.513, 514, 524, 560	General requirements for hazardous waste management facilities	Potentially applicable	If it is determined that materials managed at the rail transload areas constitute non-PCB hazardous wastes under state law and that those areas are outside the overall Area of Contamination, the substantive provisions of these general regulations will be met.
Massachusetts hazardous waste regulations – technical requirements for storage	310 CMR 602, 640, 580, 660.	Requirements related to storage of hazardous waste.	Potentially applicable	If it is determined that materials managed at the rail transload areas constitute non-PCB hazardous wastes under state law and that those areas are outside the overall Area of Contamination, the substantive requirements of these regulations will be met.
Massachusetts Air Pollution Control Regulations	310 CMR 7.00, 7.01, 7.06, 7.09, 7.10, and 7.11	These provisions regulate air emissions, dust, odor, and noise, among other things.	Applicable	The rail transload area construction, use, and restoration will comply with the substantive provisions of these regulations. Specifically, those activities will comply with the air monitoring and air emission control requirements set forth in the Quality of Life Compliance Plan and in the Ambient Air Monitoring Plan included in the Project Operations Plan, and will comply with the noise and odor monitoring and control requirements set forth in the Quality of Life Compliance Plan. In addition, control and mitigation of dust emissions will be implemented, as needed, during construction, operation, and restoration of the rail transload areas.
To Be Considered				
TSCA PCB Spill Cleanup Policy	40 CFR Part 761, Subpart G	Policy used to determine adequacy of cleanup of spills resulting from the release of materials containing PCBs at concentration of 50 mg/kg or greater.	To be considered for any new PCB spills that occur during work at the rail transload areas	Will be considered in the event of any new spill that results in the release of PCBs at a concentration of 50 mg/kg or greater during the operation of the rail transload areas.

Notes:

1. This table has been adapted from Attachment C of the Revised Final Permit with a number of modifications relevant to the rail transload areas.
2. Compliance with ARARs refers to compliance with the substantive requirements, criteria, or limitations of each provision, not any administrative, procedural, or permitting requirements included therein.

Acronyms:

ACEC: Area of Critical Environmental Concern
ARAR: applicable or relevant and appropriate requirement
BMP: best management practice
BRA: Baseline Restoration Assessment
CFR: Code of Federal Regulations
CMR: Code of Massachusetts Regulations
CRS: Cultural Resource Survey
EPA: U.S. Environmental Protection Agency
GE: General Electric Company
MCP: Massachusetts Contingency Plan
MESA: Massachusetts Endangered Species Act
mg/kg: milligram per kilogram
NLEB: northern long-eared bat
MGL: Massachusetts General Law
MHC: Massachusetts Historical Commission
NHPA: National Historic Preservation Act
NPDES: National Pollutant Discharge Elimination System
NRHP: National Register of Historic Places
PCB: polychlorinated biphenyl
RCRA: Resource Conservation and Recovery Act
ROR: Rest of River
SRHP: State Register of Historic Places
T&E: threatened or endangered
TCB: tricolored bat
TSCA: Toxic Substances Control Act
USC: United States Code

Table 4-1
Rail Transload Area Design Criteria

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6
Housatonic River – Rest of River
Pittsfield, Massachusetts

Design Element		Design Criteria		Comments/Remarks
		Criteria	Reference	
Design Speeds	**HRRC Main Line**	25 MPH	General Practice	
	Industrial Leads	10 MPH	General Practice	
	HRRC Main Line - Turnouts	15 MPH	General Practice	
	GE Industrial Lead - Turnouts	10 MPH	General Practice	
	BRSM Industrial Tracks - Turnouts	5 MPH	General Practice	
Horizontal Alignment	**Maximum Curvature**	10D Max., 7.5D Preferred	General Practice	
	Tangent Between Reverse Curves	100'	CSX	
	Distance between PS to curve	70' Min.	CSX	
	to reverse curve	100' Min.	CSX	
Vertical Alignment	**Length of Vertical Curves**	$L = \frac{D * V^2 * K}{A}$	AREMA Section 5.3.6	Speed based criteria may be used with permission of HRRC Engineering
	L = Length of Vertical Curve (ft)	100' Min. Preferred		
	D = Absolute Difference in Grade			
	V = Speed in MPH	$\mathbf{r = \frac{G_2 - G_1}{LVC_{(Stations)}} \times 100}$		To be used for design when possible
	K = 2.15			r max (crest) = 0.2 (mains), 0.4 (sec.)
	A = 0.1 Freight			r max (sag) = 0.1 (mains), 0.2 (sec.)
	Maximum Track Grade	1.0%	HAZMAT Requirement	Curve Compensation Required
	Compensated Curve Slope (max)	0.04 x degree of curve	AREMA	Standard for tractive effort
	Minimum Distance Between Vertical Curves	100' Preferred	CSX	
Track Section	**Rail Section**	Jointed		Existing HRRC
	HRRC	#132/#136	AREMA	
	GE ROR	#115	AREMA	
	BSRM	#105	AREMA	
	Ties	Timber	AREMA	8'-6" x 7" x 9"
	Tie Spacing	20"	AREMA	
	Fasteners	12" Plates, 5 1/2" Rail Base	AREMA	
		Spiked	AREMA	
		Anchors Every Other Tie	AREMA	
Turnouts	**Mainline Crossover**	#10	CSX	
	Mainline Turnout	#10	CSX	
	Industrial	#8	CSX	
	BRSM Industrial	#6 Min.	AREMA	
	Switch Operations	Hand Throw	AREMA	
Roadbed	**Roadbed Shoulders - No Access Road**	12'	CSX	C/L Track to Top Edge of Subballast
	Roadbed Shoulders - With Access Road	20'	CSX	C/L Track to Top Edge of Subballast
	Ballast Depth	6"		Minimum below tie
	Subballast Depth	6"		Minimum below tie - 40:1 slope

Table 4-1
Rail Transload Area Design Criteria

Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6
Housatonic River – Rest of River
Pittsfield, Massachusetts

Design Element		Design Criteria		Comments/Remarks
		Criteria	Reference	
Roadbed (cont.)	**T/R to T/Subgrade (7"x9" Tie, 115RE Rail) (Crest under CL Track)**	26.38" = 2.20'		Curves up to 8 degrees, ties @ 19.5" centers
	Ballast Shoulder	12"		Tangent or curve
	Ballast Size - Main Track	AREMA No. 4A		2 1/2" minus (Granite)
	Ballast Size - Industrial	AREMA No. 5		
	Subballast Type	AREMA 1.2.2.11	CSX Subballast gradation	
	Embankment Slopes (BSRM Adjacent)	4:1	General Practice	
	Embankment Slopes (Roadway Adjacent)	3:1	General Practice	
	Embankment Slopes (Minimum)	2:1	General Practice	
Construction Clearances	**Horizontal**			
		15'	CSX	Fixed Structures
		8'-6"	CSX	General horizontal clearance
		9'-0"	State of Massachusetts	General horizontal clearance
		Increase Clearance 1 1/2" per Degree of Curve	AREMA	
	Roadway Under Railroad			
	Vertical	14' - 6"	General Practice	Maintain or better existing clearance
	Power Lines and Aerial Cables			
	Vertical above T/R - Electric	30' Min.	NESC	Overhead power lines, increase with voltage above 750V
	Other	27' Min.	NESC	Guys, messenger and communication spans
	Horizontal - To Buildings	8'-6"	State of Massachusetts	Increase for curvature
	Track Centers			
	Main Tracks - CSX Standard	15'	CSX	Track to track
	New Construction - Track to Track	14'	General Practice	
	Other Railroads	25'	General Practice	
Operational Clearances	**Offset Between Track Centerline**			
	GE ROR	14'	General Practice	May be reduced if required by equipment and space limitations
	BSRM	12'		Only between BSRM tracks

References:

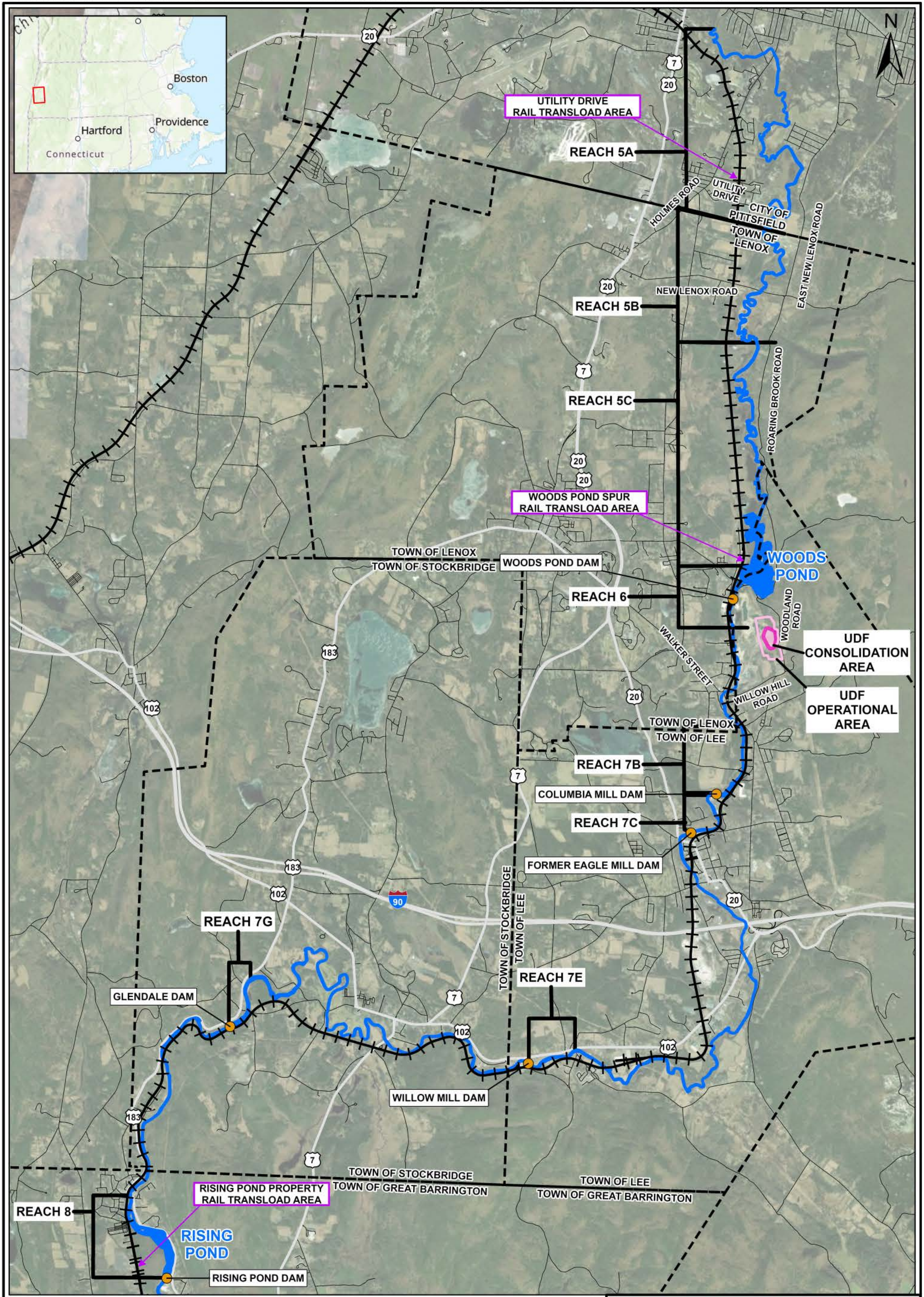
1. CSX. 2023. Standard Specifications for the Desing and Construction of Private Sidetracks. August 23.
2. AREMA. 2025. 2025 Manual for Railway Engineering. April. Available online at: https://publications.arema.org/Publication/MRE_2025.
3. NESC. 2023. IEEE SA National Electrical Safety Code, ANSI C2.

Abbreviations:

AREMA = American Railway Engineering and Maintenance-of-Way Association
BSRM = Berkshire Scenic Railway Museum
Max. = maximum
Min. = minimum
MPH = miles per hour
ROR = Rest of River
TBD = to be determined
MassDOT = Massachusetts Department of Transportation
NESC = National Electrical Safety Code

Figures

Path: \\arcadis-us.com\app\GIS\Processing_ENV\GE\GE_Housatonic\ArcPro Projects\ROR\Engineering Report\ConceptualDesignRailArea_Reaches5_6.aprx\Fig1-1 Reaches 5A through 8   Last Saved By: ksinsabaugh 2/4/2026



LEGEND

- ● DAM LOCATION
- ⌐¬ TOWNSHIP BOUNDARY
- — ROAD
- + RAILROAD
- ▬ HOUSATONIC RIVER

NOTES:

1. COORDINATE SYSTEM: NAD83 STATE PLANE MASSACHUSETTS MAINLAND FIPS 2001
2. BASEMAP SOURCE: VIVID IMAGERY PROVIDED BY MAXAR, ACCESSED 2/4/2026
3. UDF = UPLAND DISPOSAL FACILITY

0 5,000 10,000

GRAPHIC SCALE IN FEET

GENERAL ELECTRIC COMPANY
HOUSATONIC RIVER - REST OF RIVER
CONCEPTUAL DESIGN PLAN FOR
RAIL TRANSLOAD AREAS IN REACHES 5 AND 6

HOUSATONIC RIVER: REACHES 5A THROUGH 8

ARCADIS

FIGURE
1-1

GENERAL ELECTRIC COMPANY
HOUSATONIC RIVER - REST OF RIVER
CONCEPTUAL DESIGN PLAN FOR
RAIL TRANSLOAD AREAS IN REACHES 5 AND 6

UTILITY DRIVE CONCEPTUAL TEMPORARY RAIL TRANSLOAD AREA

ARCADIS

FIGURE
1-2

LEGEND

●	AS-DRILLED GEOTECHNICAL BORING LOCATION (ARCADIS, 2025)
●	AS-DRILLED GEOTECHNICAL BORING LOCATION (QEA, 2024)
▲	BULK SAMPLE LOCATION (ARCADIS, 2025)
+	RAILROAD
+	CONCEPTUAL LOCATION OF RAIL SPUR/SIDING
—	CONTOURS (5 FOOT)
▭	TOWNSHIP BOUNDARY
🟩	100-YEAR FLOODPLAIN
☐	PROPERTY BOUNDARY
▭	CONCEPTUAL LOCATION OF RAIL LOADING OPERATIONAL AREA

0 100 200
FEET

NOTES:
1. COORDINATE SYSTEM: WGS84
2. BASEMAP SOURCE: IMAGERY CAPTURED BY BLUESKY GEOSPATIAL LTD OF NORTH ADAMS, MASSACHUSETTS, ON BEHALF OF GE, ON APRIL 25, 2025.
3. TOPOGRAPHIC INFORMATION COLLECTED BY C.T. MALE ASSOCIATES ENGINEERING, SURVEYING, ARCHITECTURE, LANDSCAPE ARCHITECTURE & GEOLOGY D.P.C. DURING THE MONTH OF JULY, 2025. VERTICAL DATUM NAVD88.

LEGEND

- ● AS-DRILLED GEOTECHNICAL BORING LOCATION (ARCADIS, 2025)
- ✚ RAILROAD
- ✚ CONCEPTUAL LOCATION OF RAIL SPUR/ SIDING
- ― CONTOURS (5 FOOT)
- ▭ TOWNSHIP BOUNDARY
- 🟩 100-YEAR FLOODPLAIN
- ▭ PROPERTY BOUNDARY
- ▭ CONCEPTUAL LOCATION OF RAIL LOADING/OFF-LOADING OPERATIONAL AREA

0 75 150
FEET

NOTES:
1. COORDINATE SYSTEM: WGS84
2. BASEMAP SOURCE: IMAGERY CAPTURED BY BLUESKY GEOSPATIAL LTD OF NORTH ADAMS, MASSACHUSETTS, ON BEHALF OF GE, ON APRIL 25, 2025.
3. TOPOGRAPHIC INFORMATION COLLECTED BY C.T. MALE ASSOCIATES ENGINEERING, SURVEYING, ARCHITECTURE, LANDSCAPE ARCHITECTURE & GEOLOGY D.P.C. DURING THE MONTH OF JULY, 2025. VERTICAL DATUM NAVD88.

GENERAL ELECTRIC COMPANY
HOUSATONIC RIVER - REST OF RIVER
CONCEPTUAL DESIGN PLAN FOR RAIL TRANSLOAD AREAS IN REACHES 5 AND 6

WOODS POND SPUR CONCEPTUAL RAIL TRANSLOAD AREA

ARCADIS

FIGURE
1-3

Path: \\arcadis-us.com\app\GIS\Processing_ENV\GE\GE_Housatonic\ArcPro Projects\ROR\Engineering Report\ConceptualDesignRailArea_Reaches5_6.aprx\Fig1-3 WP Spur Transload Area Last Saved By: ksinsabaugh 2/16/2026

Appendix A

Conceptual Design Drawings

CONCEPTUAL DESIGN DRAWINGS

GE-PITTSFIELD/HOUSATONIC RIVER SITE
CONTRACT 20 - RAIL TRANSLOAD AREA CONSTRUCTION
RAIL TRANSLOAD (RT)

LOCATION MAP

DATE ISSUED / DATE REVISED

FEBRUARY 20, 2026

CITY OF PITTSFIELD AND
TOWN OF LENOX, MASSACHUSETTS
BERKSHIRE COUNTY

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

ARCADIS

ARCADIS U.S., INC

INDEX TO DRAWINGS

ABBREVIATIONS

CL	CENTERLINE
CONC	CONCRETE
CP	CONTROL POINT
CY	CUBIC YARDS
Dc	DEGREE OF CURVE
DWG	DRAWING
E	EASTING
Ea	ACTUAL SUPER ELEVATION
EL./ELEV.	ELEVATION
EX./EXIST.	EXISTING
FT	FEET
HP	HIGH POINT
HT	HANDTHROW
IFC	ISSUED FOR CONSTRUCTION
IFT	ISSUED FOR TENDER
INV.	INVERT (PIPE OR DITCH)
K	RATE OF CHANGE
L	LENGTH OF CURVE, VERTICAL
Lc	LENGTH OF CURVE, HORIZONTAL
LF	LINEAR FEET
LH	LEFT HAND
LLT	LAST LONG TIE
MH	MANHOLE
MAX	MAXIMUM
MI/Mi.	MILEAGE
MIN	MINIMUM
MP	MILE POST
MPH	MILES PER HOUR
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
N	NORTHING
No.	NUMBER
N.T.S.	NOT TO SCALE
O/HW OR OHW	OVERHEAD WIRE
PC	POINT OF CURVE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
POE	POINT OF ENDING
PS	POINT OF SWITCH
PT	POINT
PROP./PR.	PROPOSED
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
r	RATE OF CHANGE OF VERTICAL CURVE
R	RADIUS
RH	RIGHT HAND
R/W OR ROW	RIGHT OF WAY
STA.	STATION
SY	SQUARE YARDS
T	TANGENT
TBD	TO BE DETERMINED
TF	TRACK FEET
T/RAIL	TOP OF RAIL
TO	RAILWAY TURNOUT
TYP	TYPICAL
XS	CROSS SECTION
V	VELOCITY

TRACK LEGEND

———950———	5-FT CONTOUR
-·-·-·-·-·-·-·-	EXISTING TRACK
—— - - —— - - —— -	ROW
——— OHW ———	OHW
—·—·—·—·—	EASEMENT
■	100-YEAR FLOODPLAIN EXTENT
✿	EXISTING TREE TO REMAIN
☒	EXISTING TREE TO BE REMOVED
🟦	EDGE OF PROPOSED ROAD/OPERATIONAL SUPPORT AREA
🟧	EXISTING TRACK ALIGNMENT TO BE REUSED
🟥	PROPOSED NEW TRACK ALIGNMENT
🟩	EXISTING TRACK TO BE REMOVED
●	HANDTHROW POINT OF SWITCH
◸	LH TURNOUT
◺	RH TURNOUT
⊠	BUMPING POST

GENERAL NOTES

1. TOPOGRAPHIC AND BASEMAP SURVEY INFORMATION COLLECTED BY C.T. MALE ASSOCIATES ENGINEERING, SURVEYING, ARCHITECTURE, LANDSCAPE ARCHITECTURE & GEOLOGY D.P.C. DURING THE MONTH OF JULY, 2025 AND FOR OVERHEAD WIRES, DURING THE MONTHS OF SEPTEMBER AND OCTOBER, 2025.

2. COORDINATE SYSTEM NSRS11(NAD83/2011) MASSACHUSETTS, MAINLAND ZONE, US FOOT. VERTICAL DATUM NAVD88.

3. 100-YEAR FLOODPLAIN BOUNDARY BASED ON THE FEMA FLOOD INSURANCE RATE MAPS (FIRM). UTILITY DRIVE RAIL TRANSLOAD AREA PROPERTY (966.8 FEET NAVD88 FLOOD ELEVATION) BASED ON FIRM FOR CITY OF PITTSFIELD, MASSACHUSETTS; PANEL 20 OF 20, COMMUNITY-PANEL NUMBER 250037 0020 C; FEBRUARY 19, 1982. WOODS POND SPUR RAIL TRANSLOAD AREA PROPERTY (956.4 FEET NAVD88) BASED ON TOWN OF LENOX, MASSACHUSETTS; PANEL 4 OF 5, COMMUNITY-PANEL NUMBER 2500229 0004 B; JULY 5, 1982.

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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

LEGEND AND ABBREVIATIONS

TRACK

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

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RT-001

STATE	MASSACHUSETTS
COUNTY	BERKSHIRE
CITY	PITTSFIELD
RAILROAD	HOUSATONIC
RAILROAD BRANCH	BERKSHIRE LINE
LENOX ST RAIL CROSSING	526179L

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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE EXISTING AND REMOVAL PLAN

TRACK

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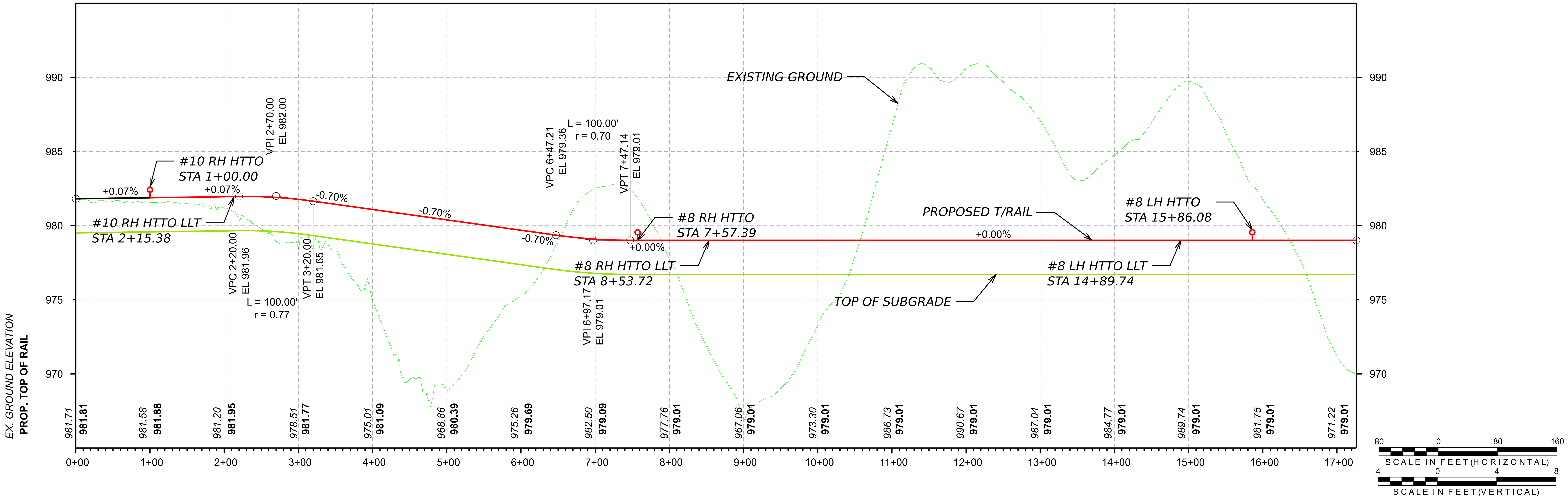
RT-101

STATE	MASSACHUSETTS
COUNTY	BERKSHIRE
CITY	PITTSFIELD
RAILROAD	HOUSATONIC
RAILROAD BRANCH	BERKSHIRE LINE
LENOX ST RAIL CROSSING	526179L

TRANSLOAD TRACK 1 PROFILE



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EX. GROUND ELEVATION	981.71	981.58	981.20	978.51	975.01	968.86	975.26	982.50	977.76	967.06	973.30	986.73	990.67	987.04	984.77	989.74	981.75	971.22
PROP. TOP OF RAIL	981.81	981.88	981.95	981.77	981.09	980.39	979.69	979.09	979.01	979.01	979.01	979.01	979.01	979.01	979.01	979.01	979.01	979.01

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Professional Engineer's Name: **MARK O. GRAVELDING**
Professional Engineer's No.: 42983
State: MA
Date Signed:
Project Mgr.: LP
Designed by: ESB
Drawn by: EJC
Checked by: WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE TRACK PLAN AND PROFILE

TRACK

ARCADIS Project No. 30318691.3000
Date: FEBRUARY 20, 2026

ARCADIS
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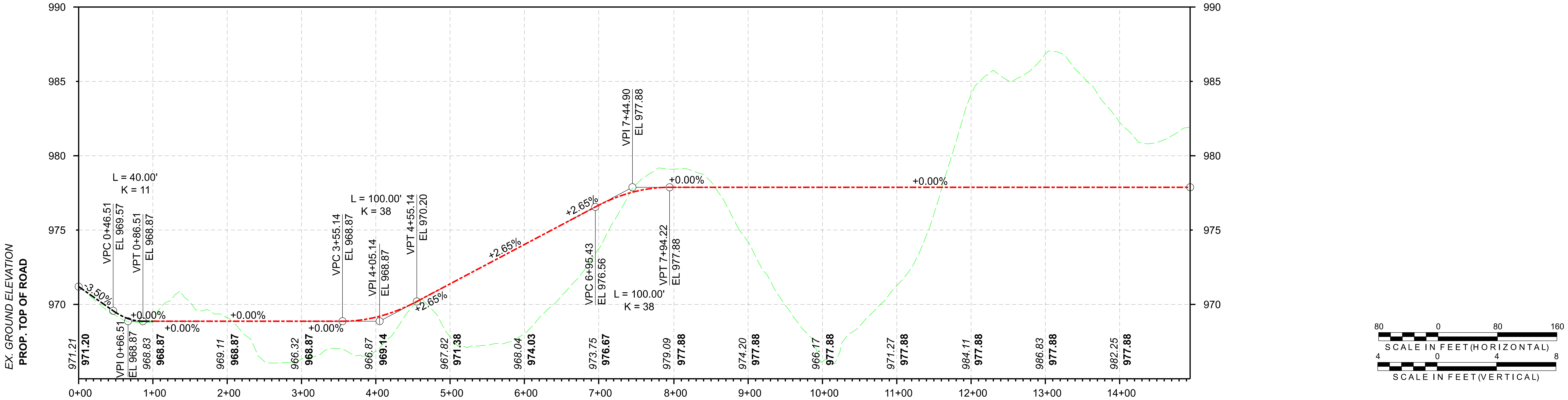
RT-102

STATE	MASSACHUSETTS
COUNTY	BERKSHIRE
CITY	PITTSFIELD
RAILROAD	HOUSATONIC
RAILROAD BRANCH	BERKSHIRE LINE
LENOX ST RAIL CROSSING	526179L

PROPOSED ACCESS ROAD AND OPERATIONAL AREA PROFILE


EX. GROUND ELEVATION
PROP. TOP OF ROAD

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:

USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE ACCESS ROAD PLAN AND PROFILE

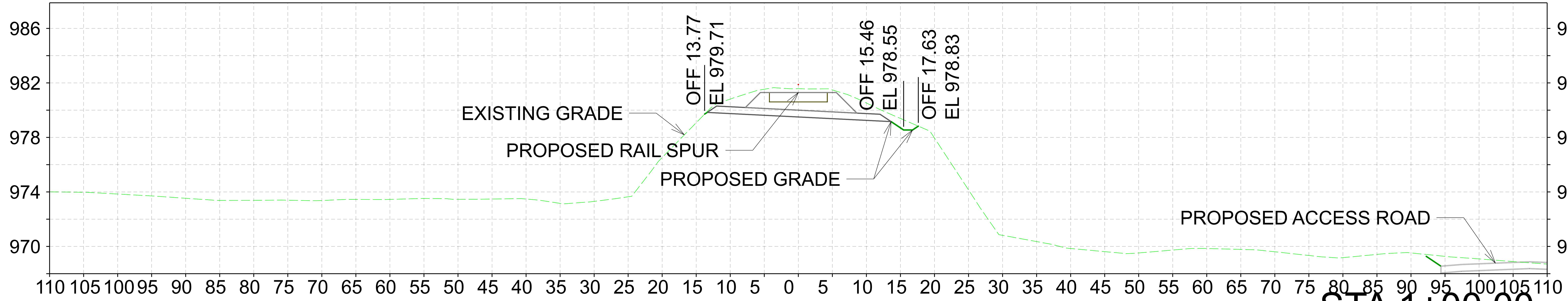
TRACK

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

ARCADIS
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-103



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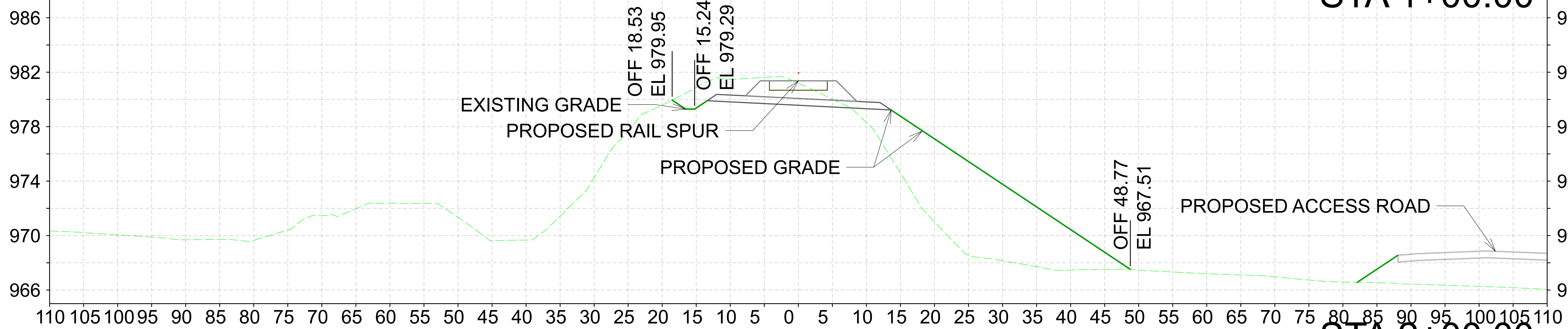

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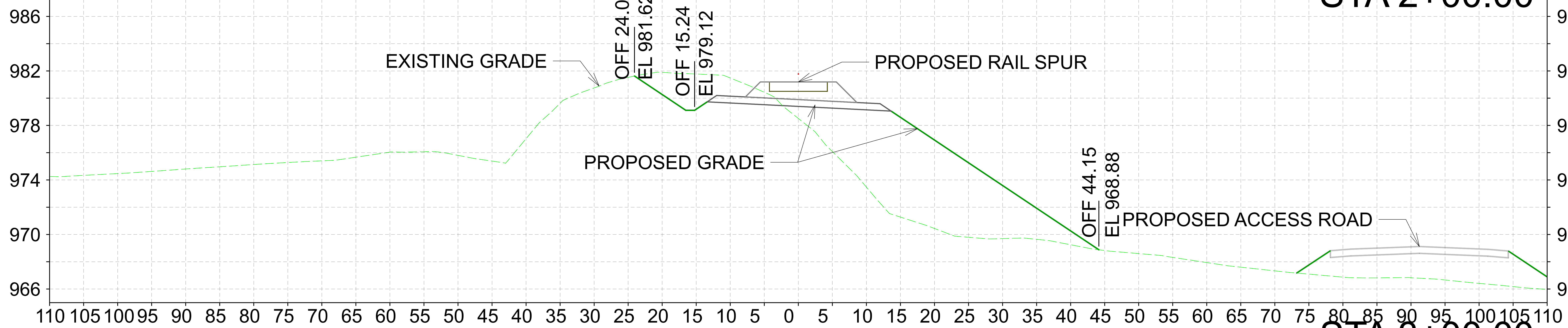

STA 3+00.00

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE CROSS SECTIONS

TRACK

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

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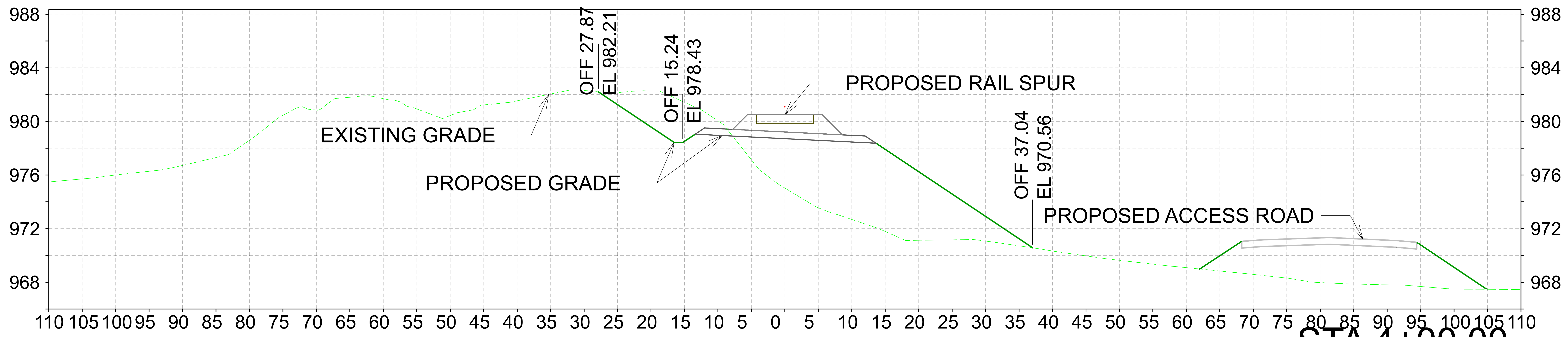
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-104



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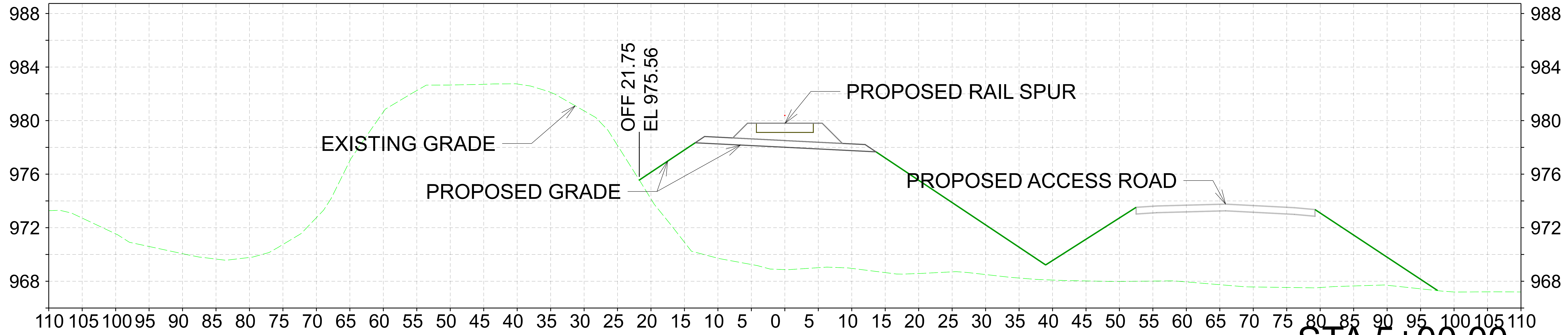

STA 5+00.00

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

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No.	Date	Revisions	By	Ckd
1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE CROSS SECTIONS

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ONE LINCOLN CENTER
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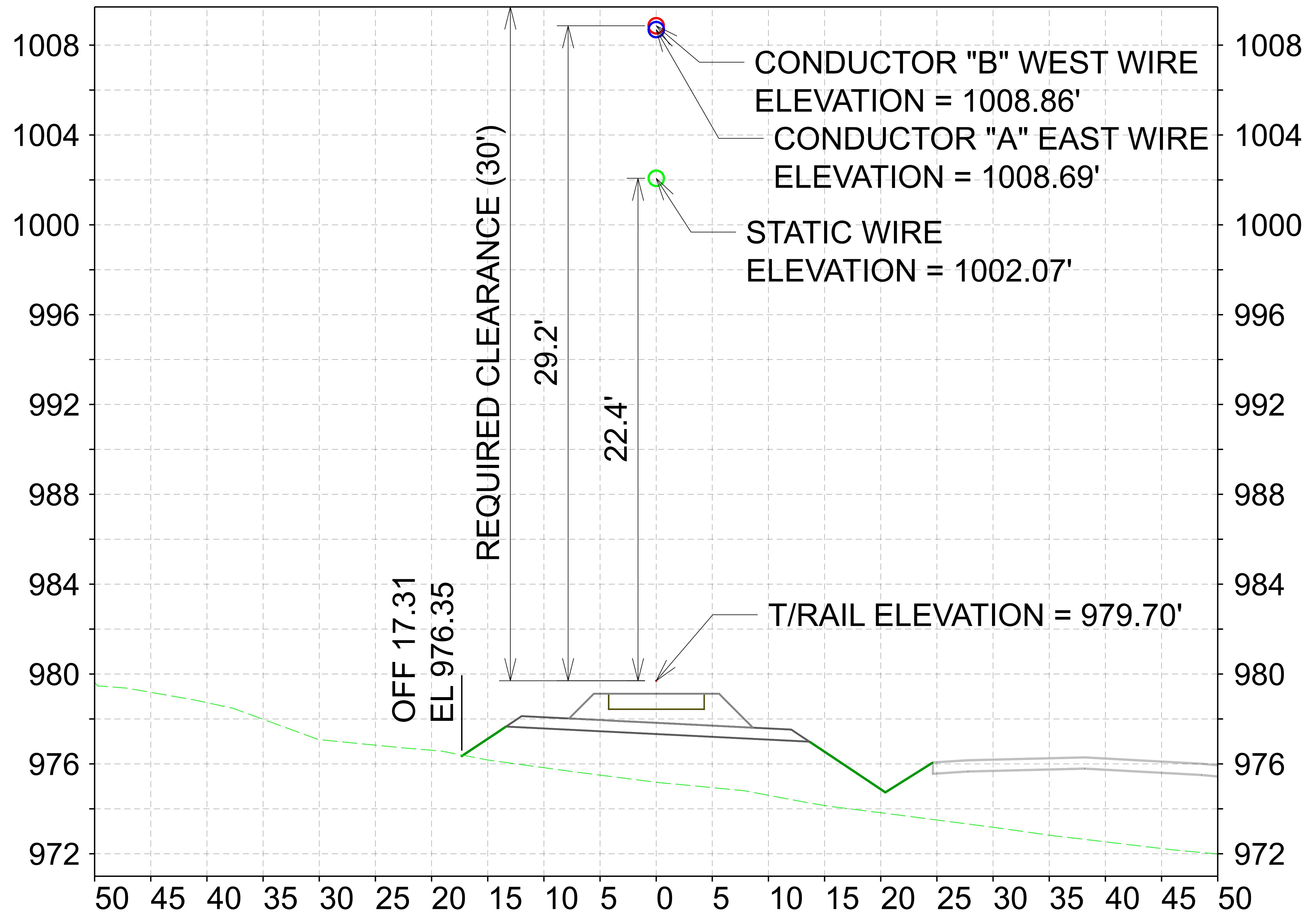
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-105



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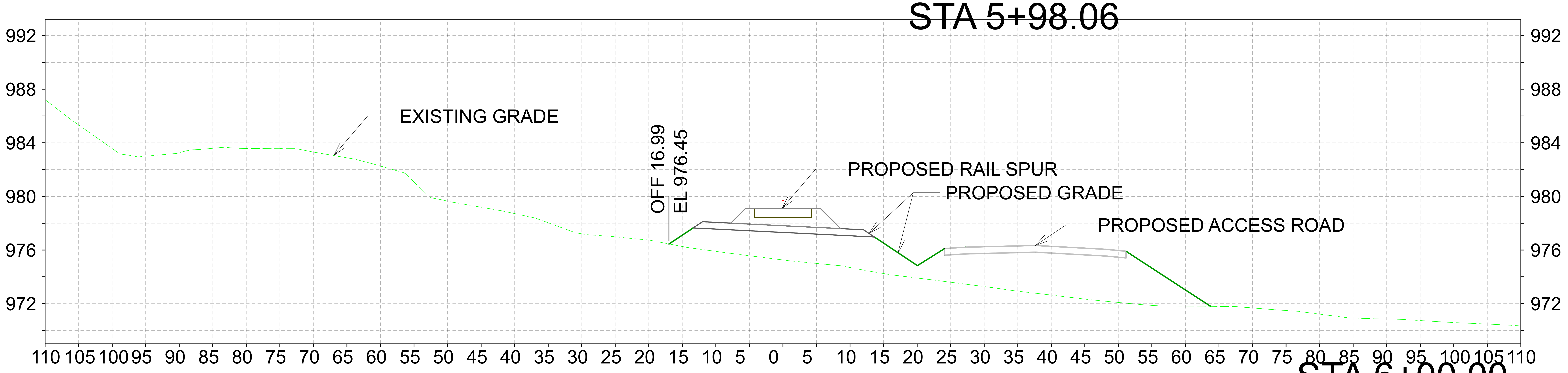

STA 6+00.00

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State MA	Date Signed	Project Mgr. LP
Designed by ESB	Drawn by EJC	Checked by WAJ

ARCADIS

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE ● MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE CROSS SECTIONS

TRACK

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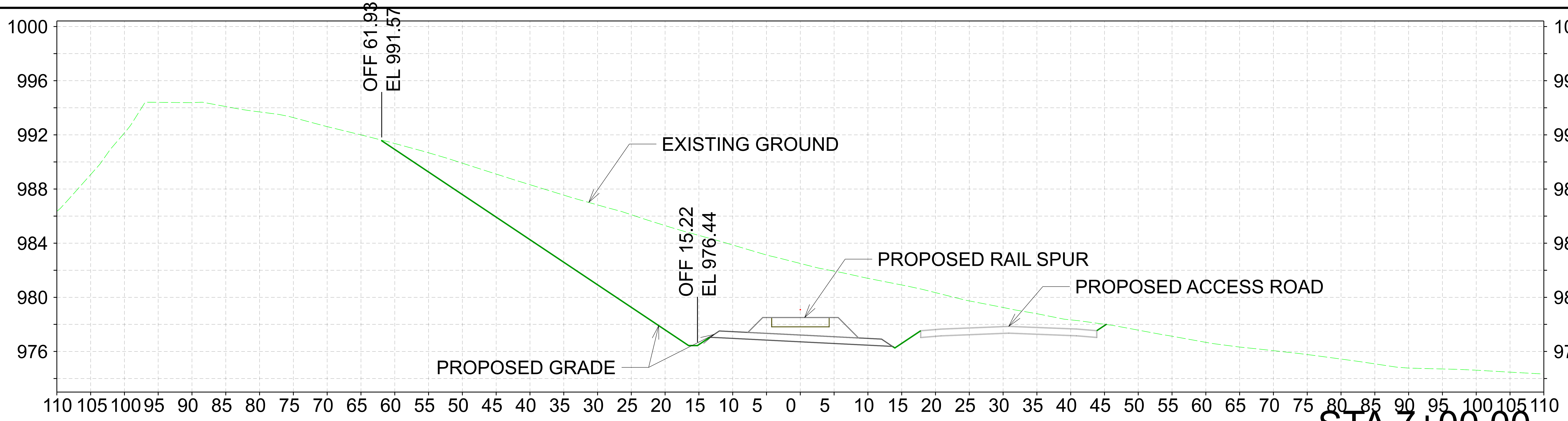
TEL. 315.446.9120

RT-106



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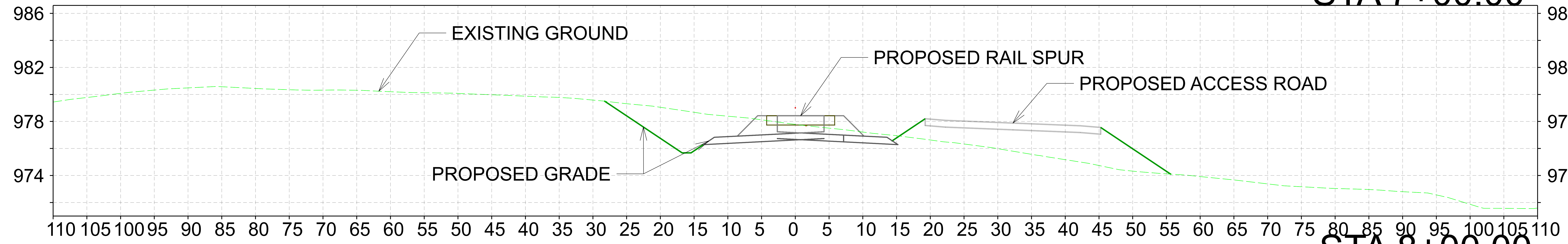

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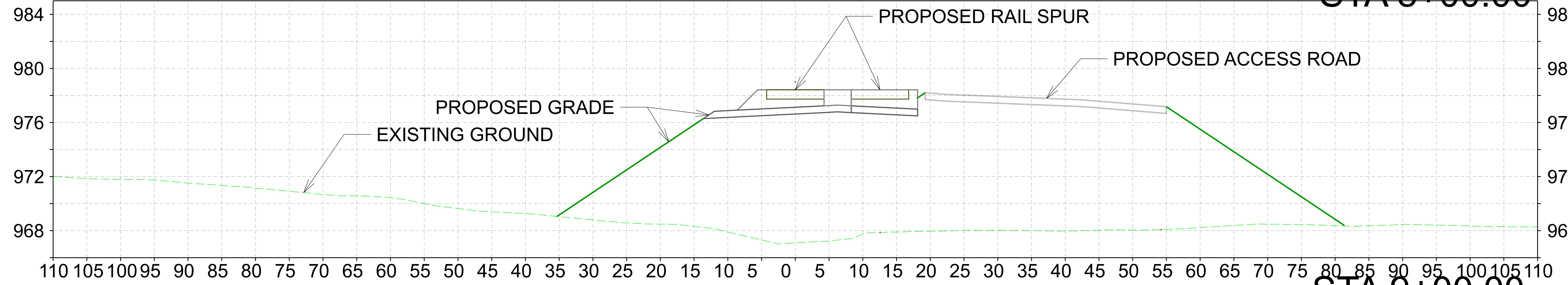

STA 9+00.00

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

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USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	**Drawn by**	**Checked by**
ESB	EJC	WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE ● MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE CROSS SECTIONS

TRACK

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FEBRUARY 20, 2026

ARCADIS
ONE LINCOLN CENTER
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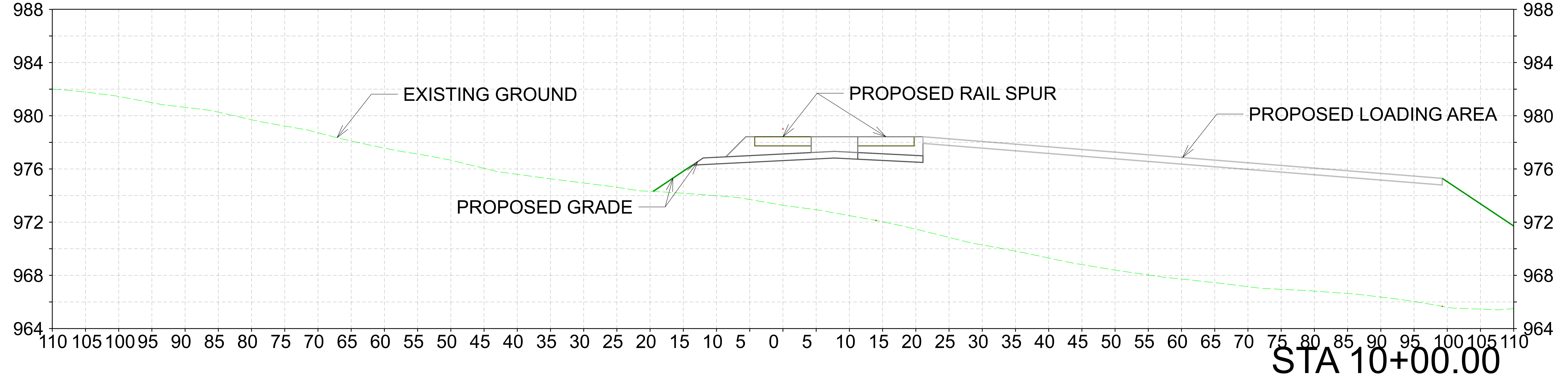
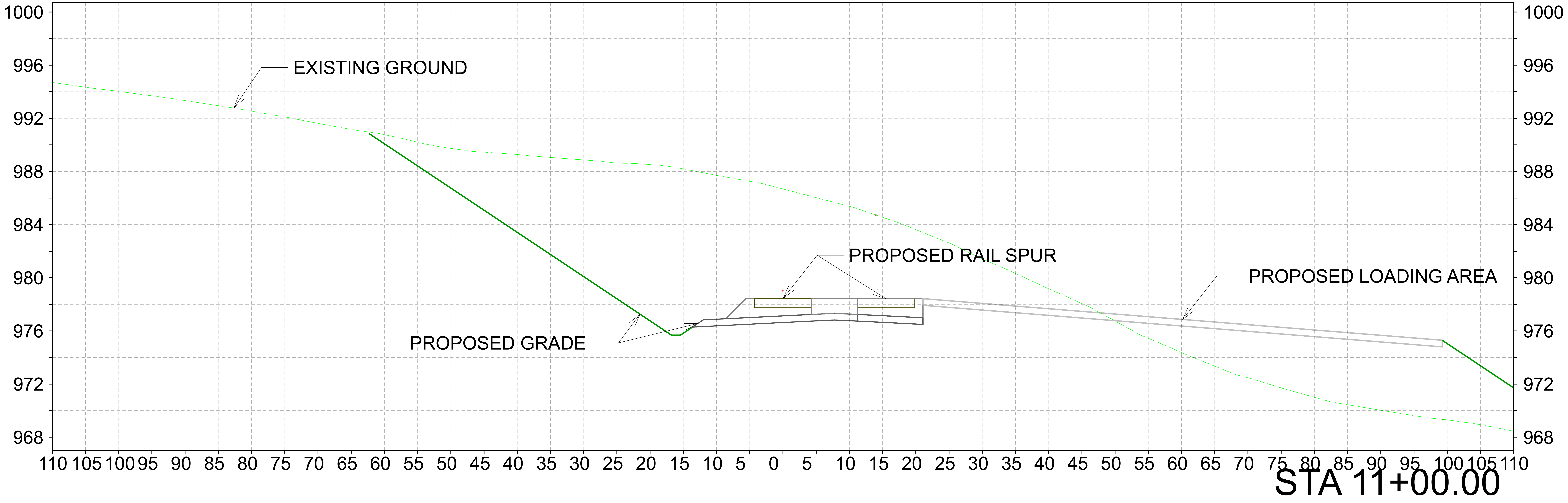
TEL. 315.446.9120

RT-107



STA 10+00.00



STA 11+00.00

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

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No.	Date	Revisions	By	Ckd

Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS

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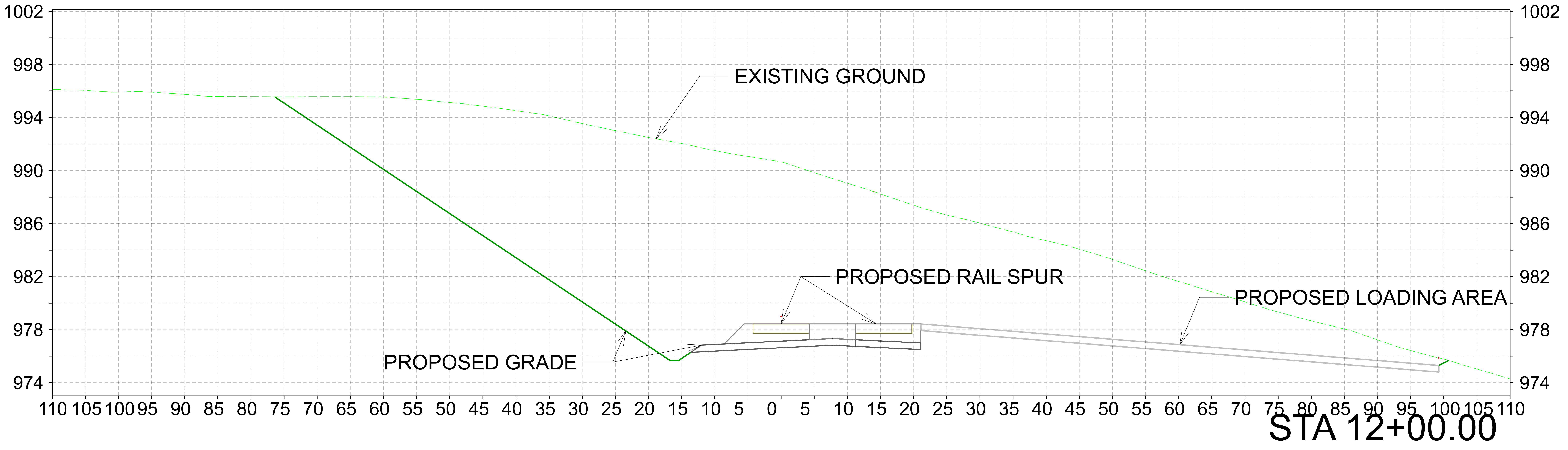
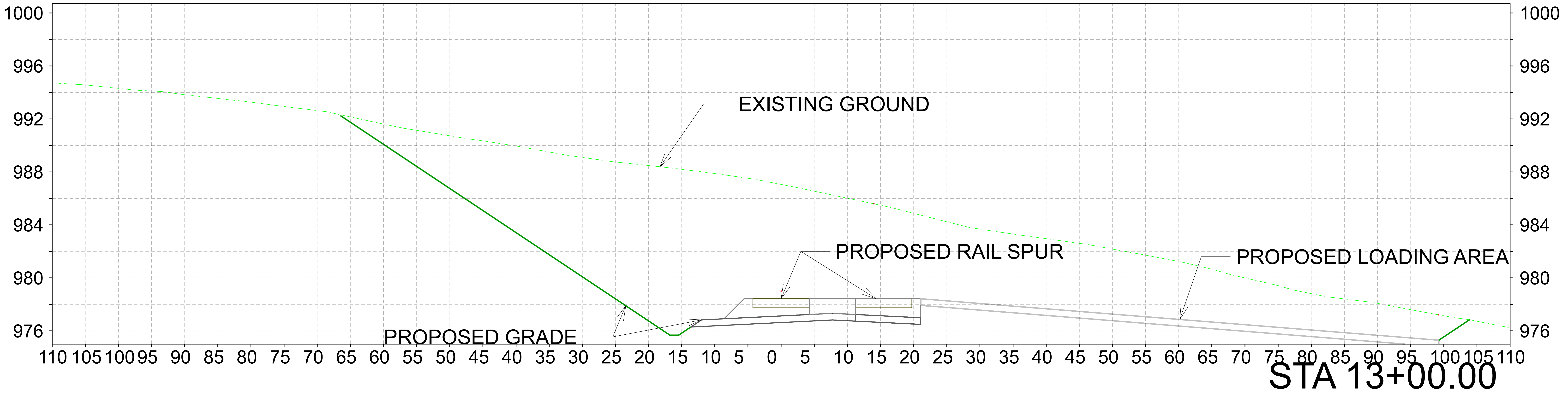
RT-108





NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

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No.	Date	Revisions	By	Ckd
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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	**Drawn by**	**Checked by**
ESB	EJC	WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE CROSS SECTIONS

TRACK

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Date
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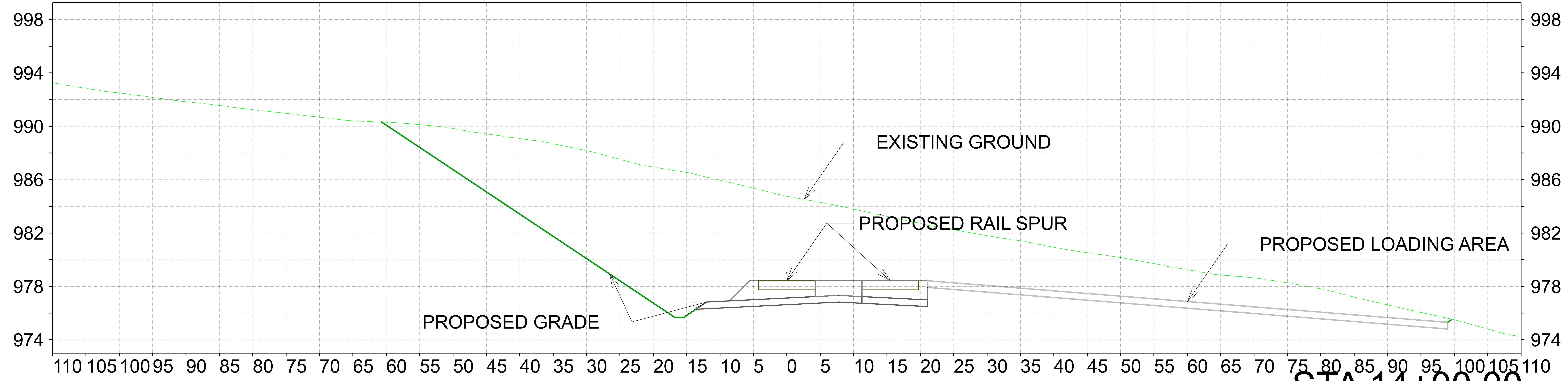
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-109



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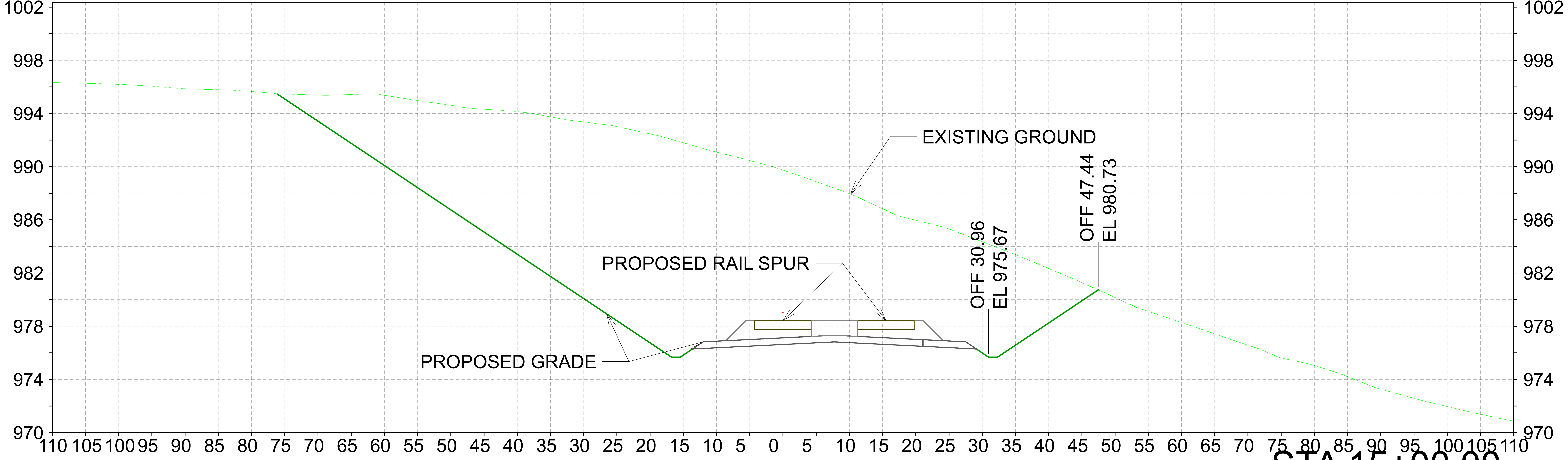


STA 15+00.00

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB
No.	Date	Revisions	By	Ckd

Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE CROSS SECTIONS

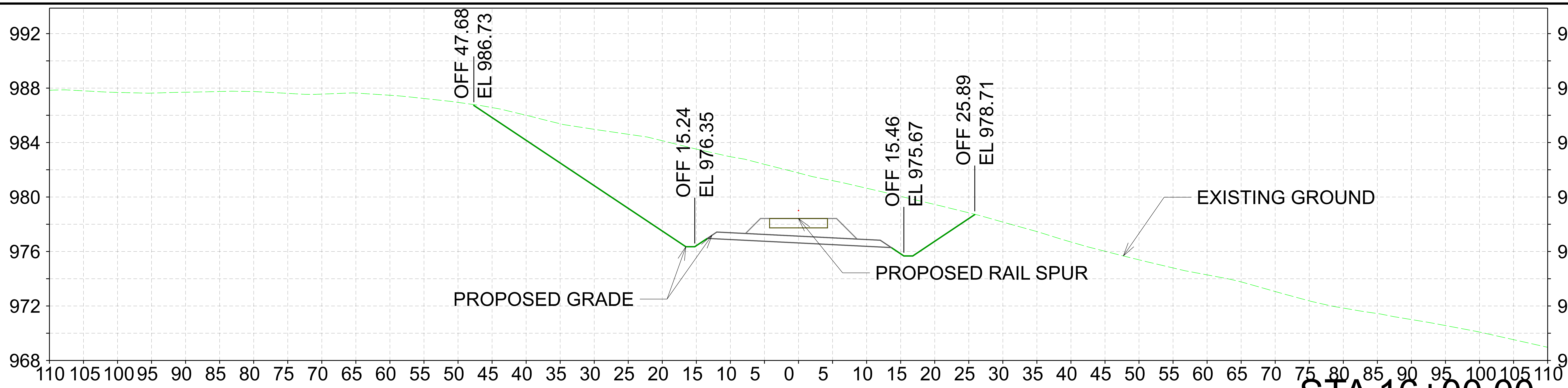
TRACK

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

ARCADIS
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-110



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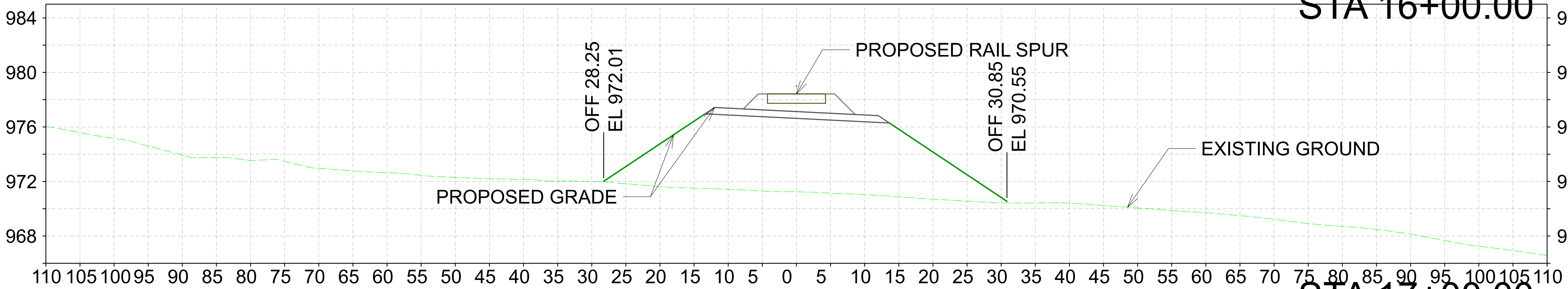

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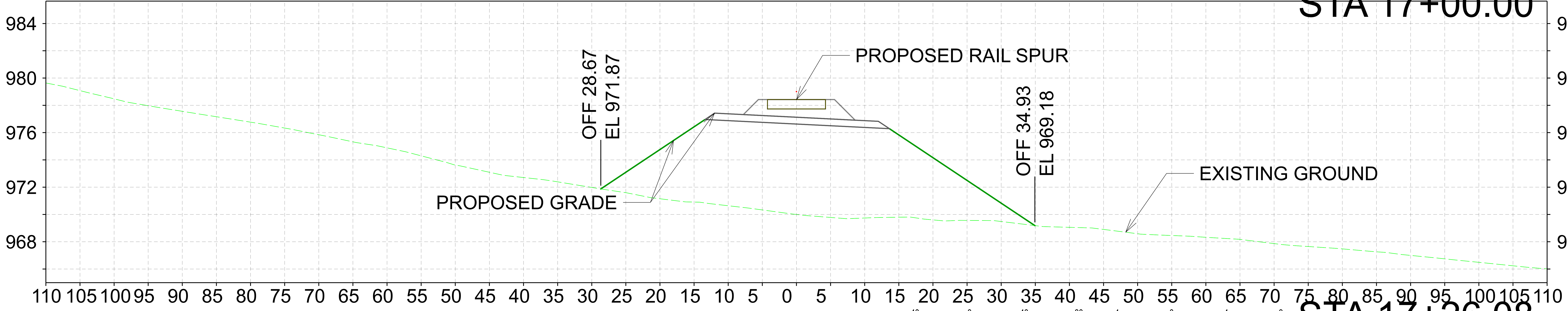

STA 17+26.08

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-102.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

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No.	Date	Revisions	By	Ckd
1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE CROSS SECTIONS

TRACK

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

ARCADIS
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-111

GE-PITTSFIELD/HOUSATONIC RIVER SITE ● MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

WOODS POND SPUR EXISTING AND REMOVAL PLAN

TRACK

RT-201

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

ARCADIS
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

ARCADIS

ARCADIS U.S., INC.

Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

No.	Date	Revisions	By	Ckd
1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

STATE	MASSACHUSETTS
COUNTY	BERKSHIRE
TOWN	LENOX
RAILROAD	HOUSATONIC
RAILROAD BRANCH	BERKSHIRE LINE
LENOX ST RAIL CROSSING	526179L

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:

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No.	Date	Revisions	By	Ckd
1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

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MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

WOODS POND SPUR TRACK PLAN AND PROFILE

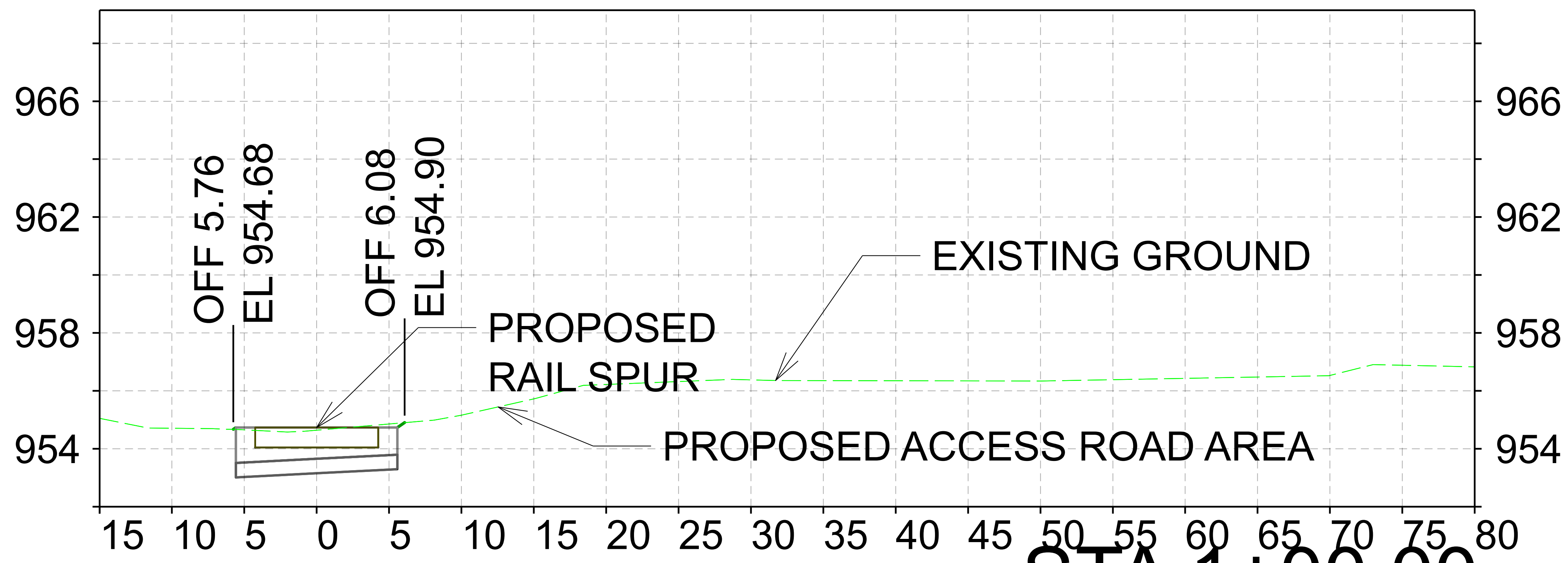
TRACK

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

ARCADIS
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-202



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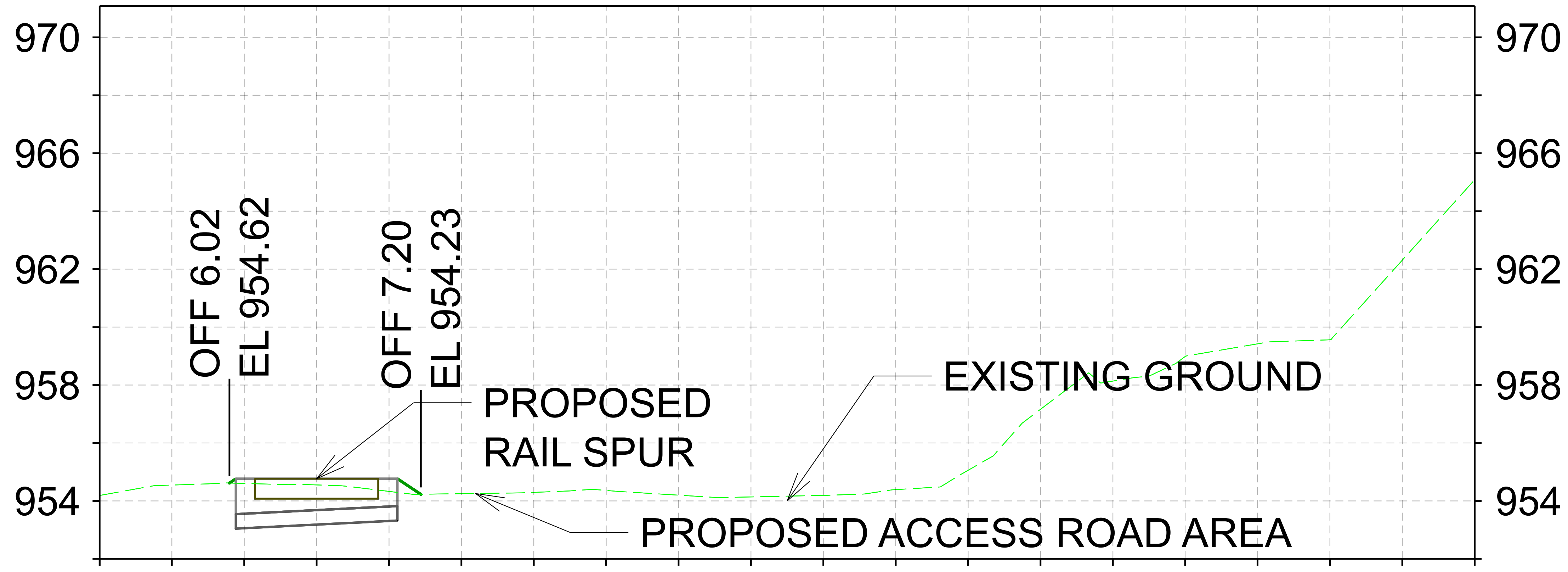

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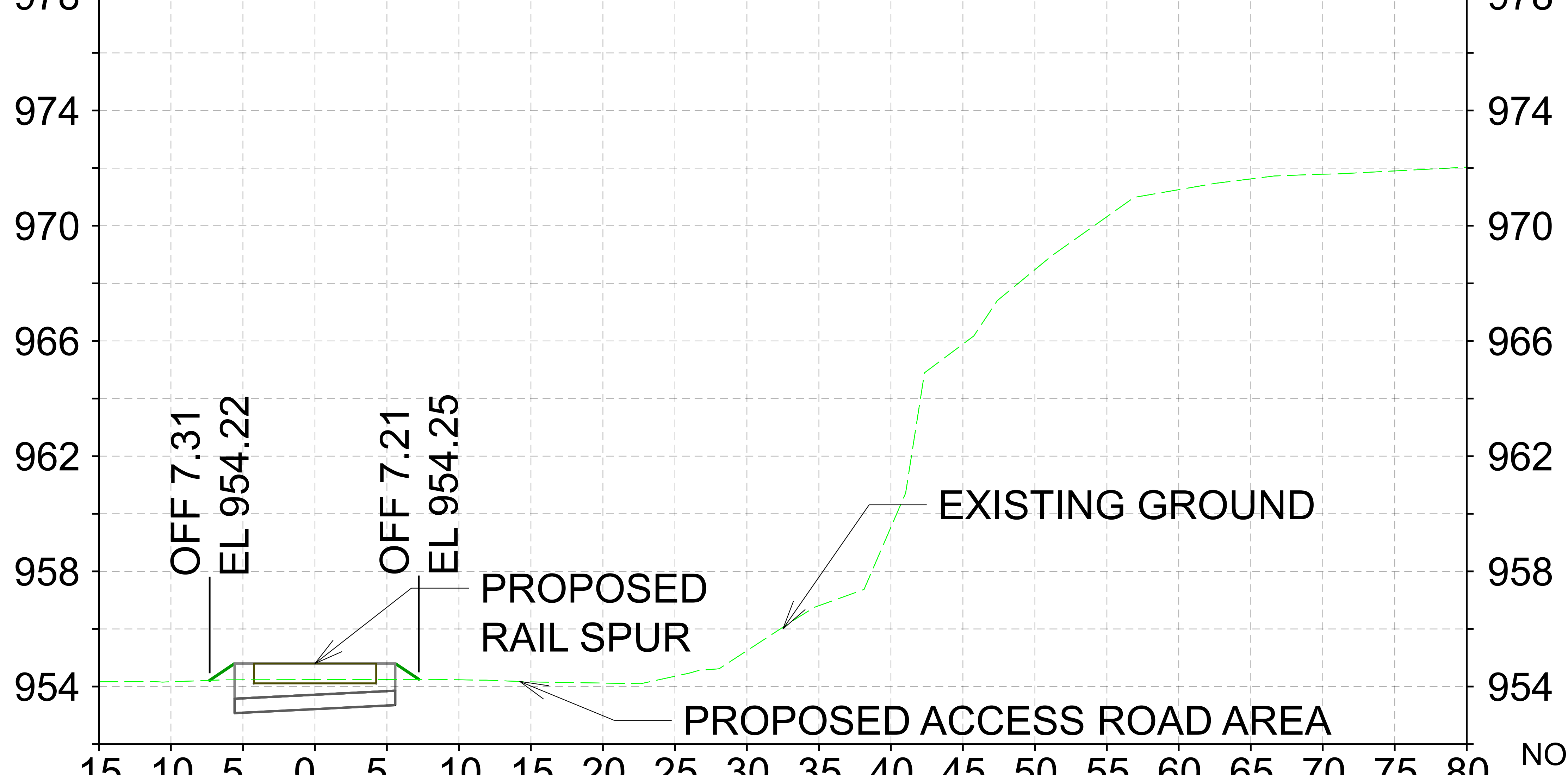

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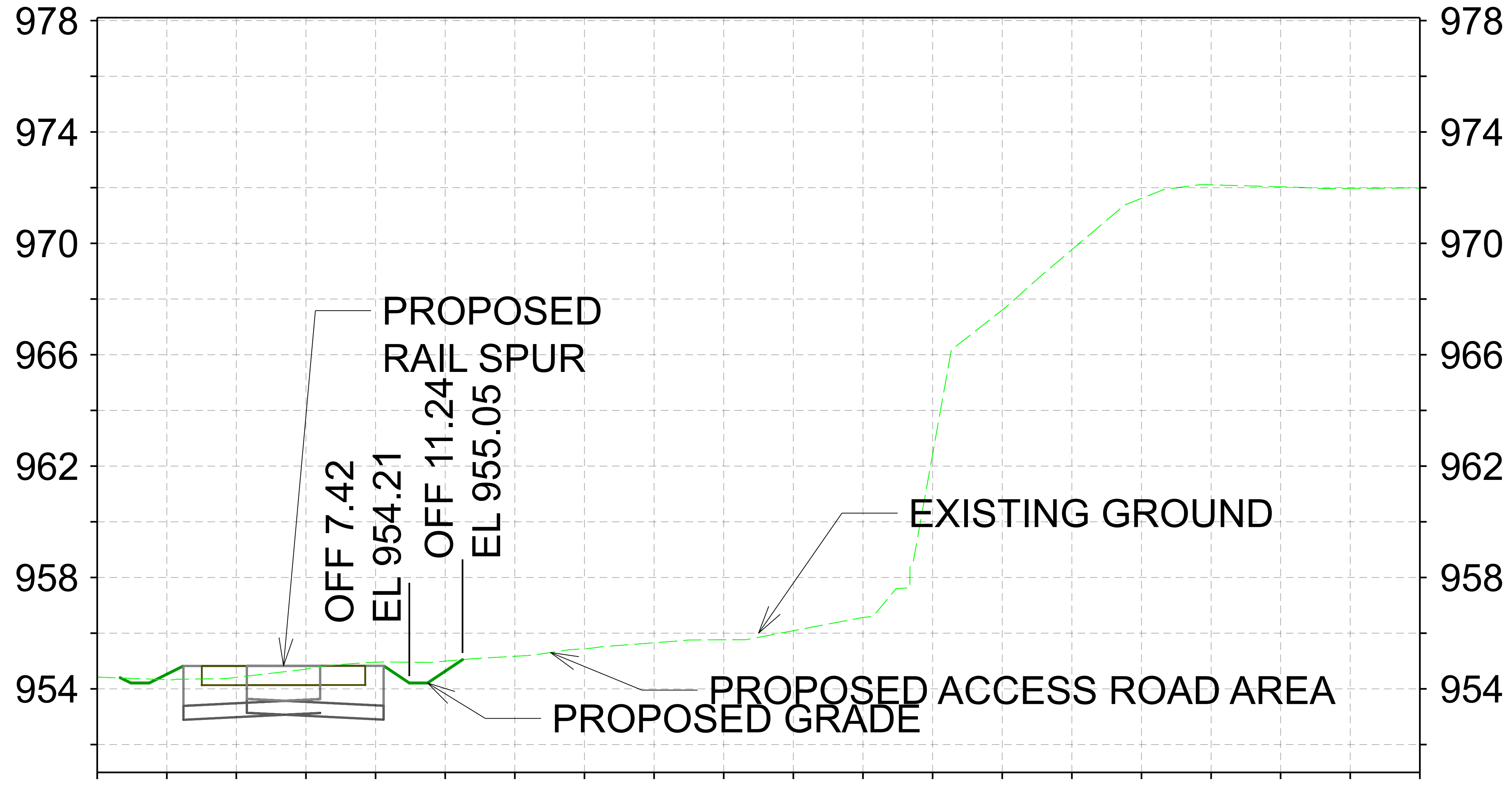

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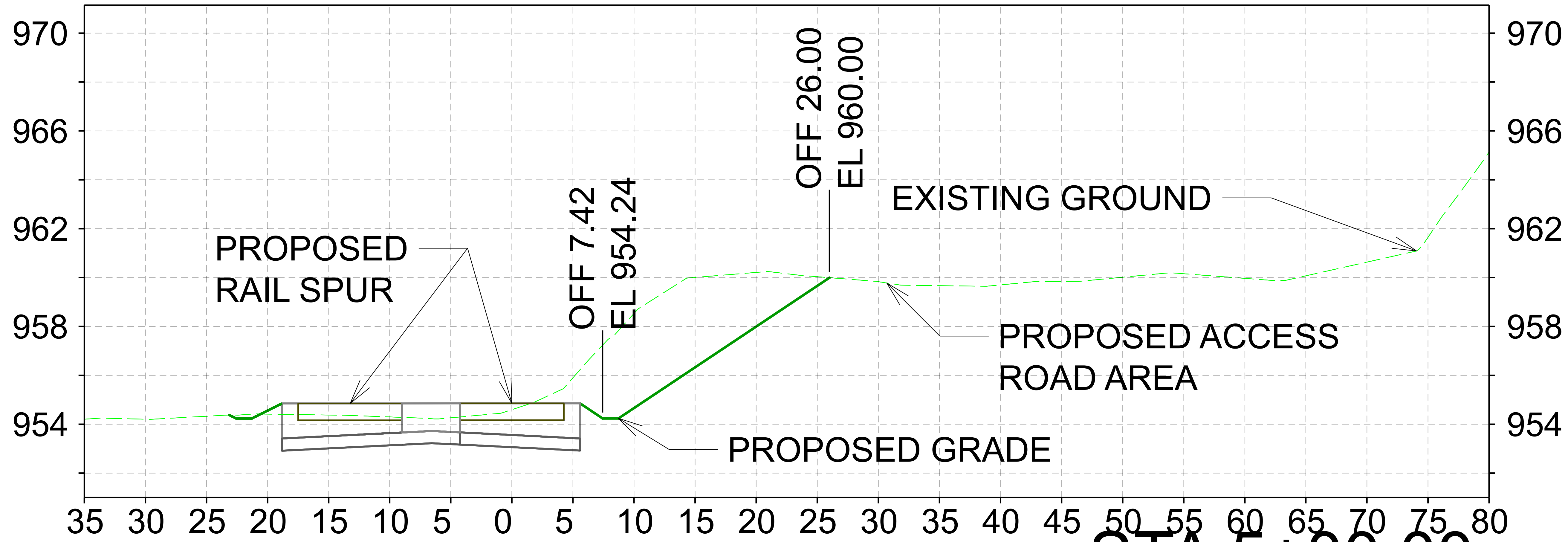

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NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-202.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	Drawn by	Checked by
ESB	EJC	WAJ

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

WOODS POND SPUR CROSS SECTIONS

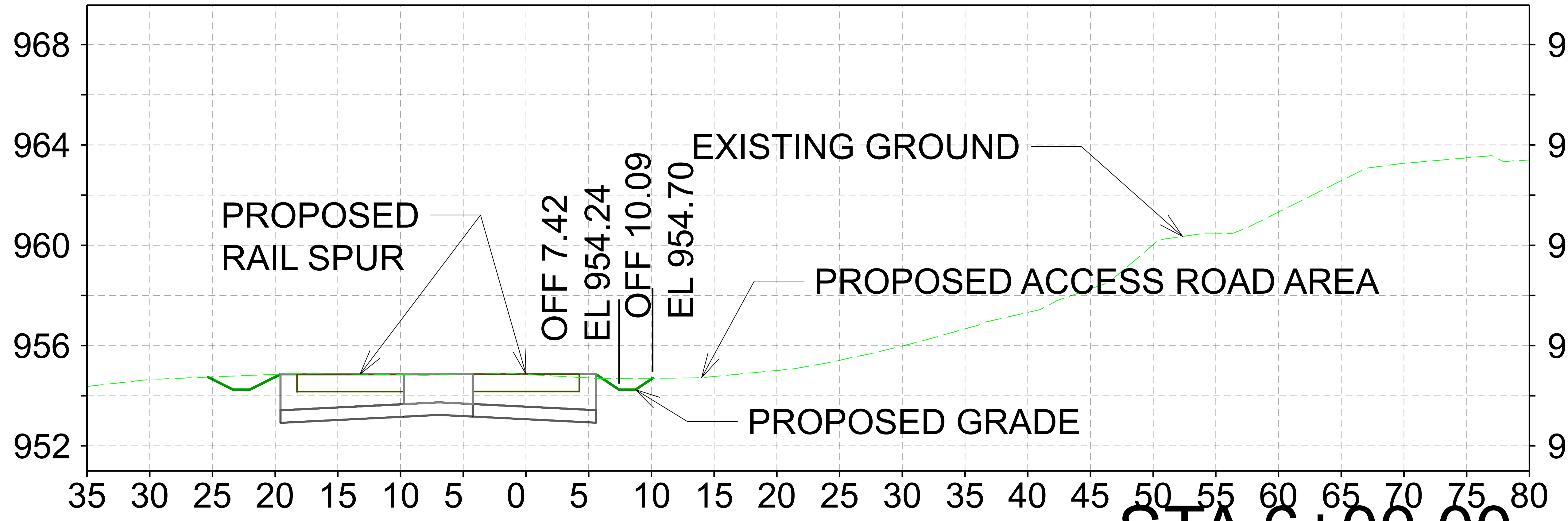
TRACK

ARCADIS Project No.
30318691.3000

Date
FEBRUARY 20, 2026

ARCADIS
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-203



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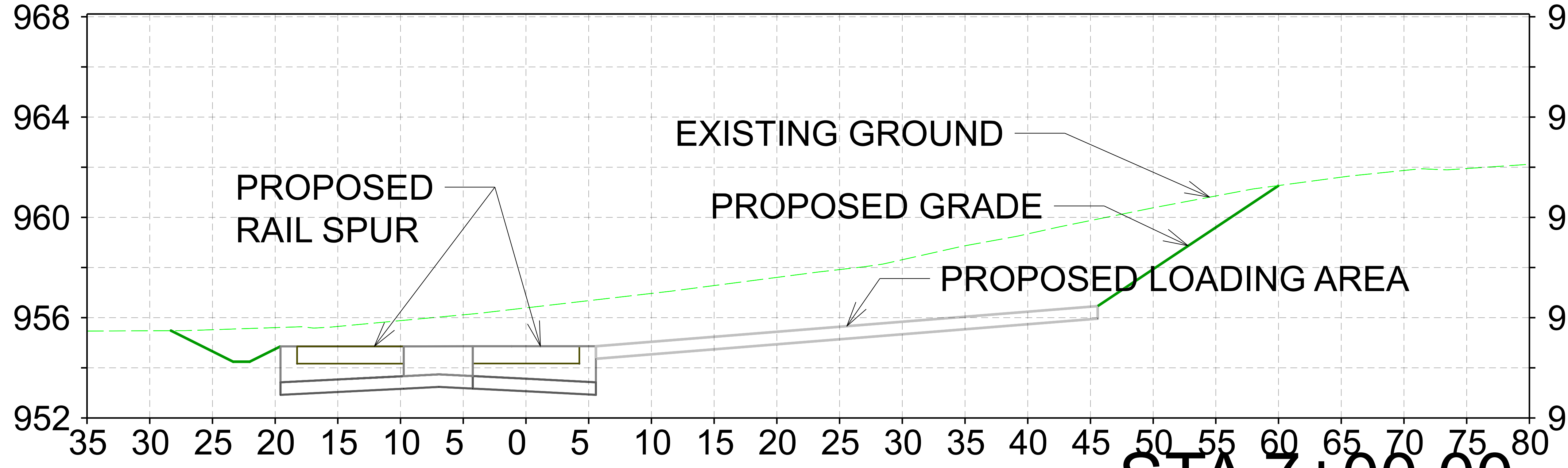

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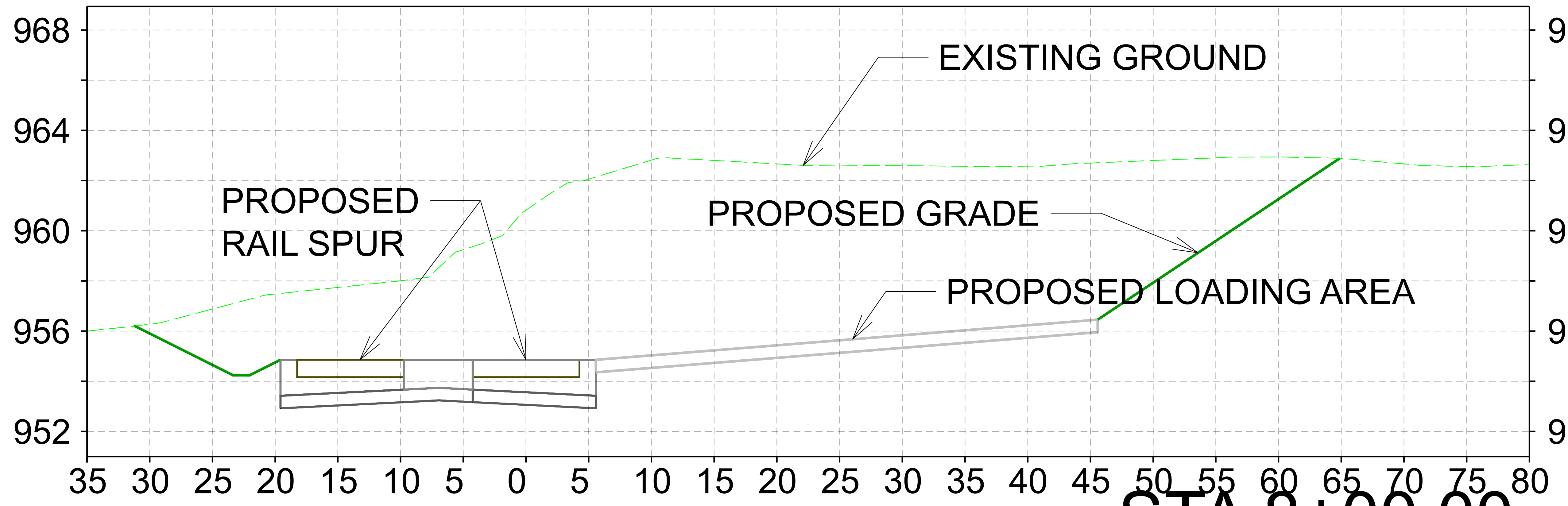

STA 8+00.00

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-202.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

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Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983

State	Date Signed	Project Mgr.
MA		LP
Designed by	**Drawn by**	**Checked by**
ESB	EJC	WAJ

ARCADIS

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE ● MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

WOODS POND SPUR CROSS SECTIONS

TRACK

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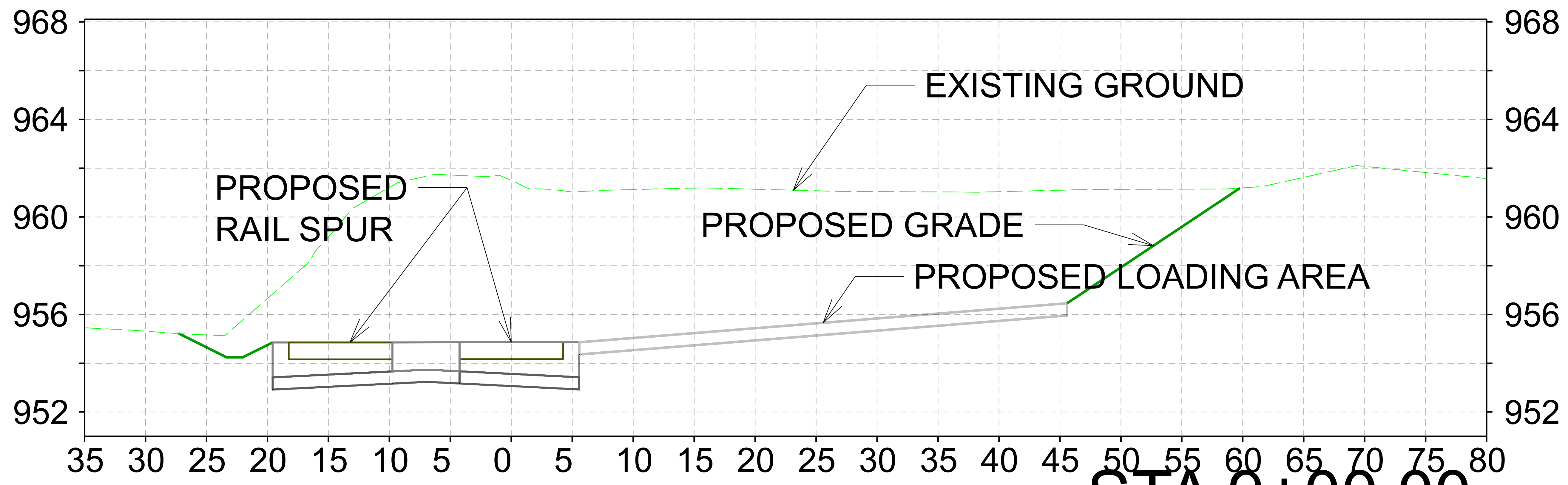
ARCADIS
ONE LINCOLN CENTER
110 WEST FAYETTE STREET
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

RT-204



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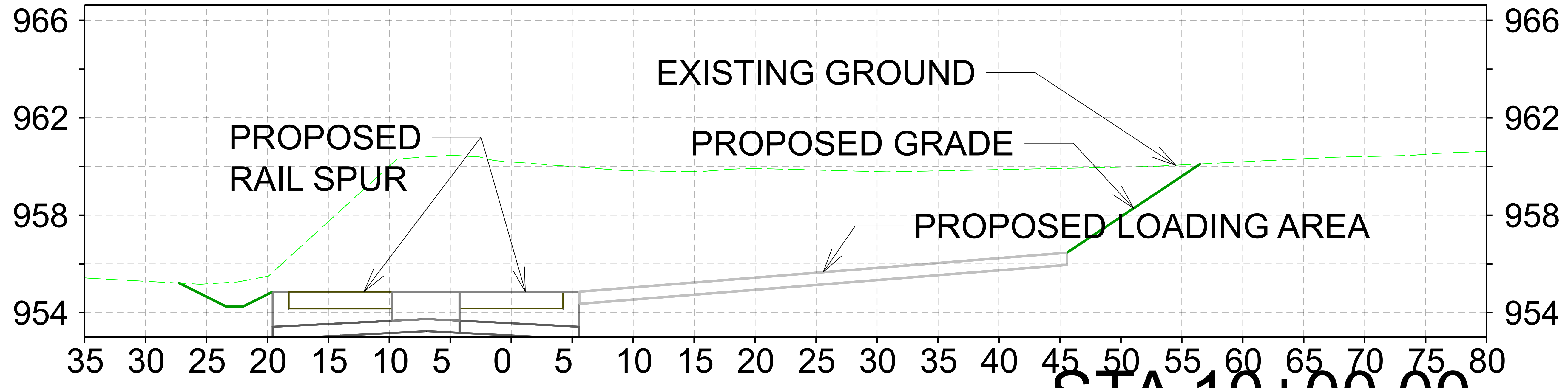

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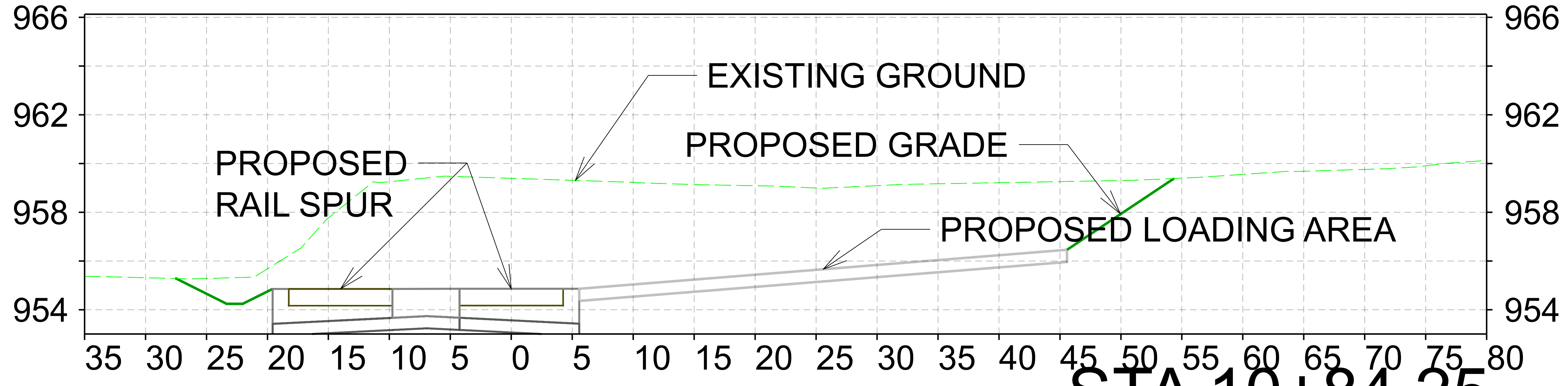

STA 10+84.25

NOTE: STATION REFERENCE RELATIVE TO RAIL SPUR STATIONING SHOWN ON RT-202.
HORIZONTAL SCALE RELATIVE TO PROPOSED TRACK CENTERLINE.

40 0 40 80
SCALE IN FEET (HORIZONTAL)

4 0 4 8
SCALE IN FEET (VERTICAL)

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1	02/20/2026	CONCEPTUAL DESIGN	EJC	ESB

Professional Engineer's Name
MARK O. GRAVELDING
Professional Engineer's No.
42983
State: MA
Date Signed:
Project Mgr.: LP
Designed by: ESB
Drawn by: EJC
Checked by: WAJ

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

WOODS POND SPUR CROSS SECTIONS

TRACK

ARCADIS Project No.
30318691.3000
Date
FEBRUARY 20, 2026

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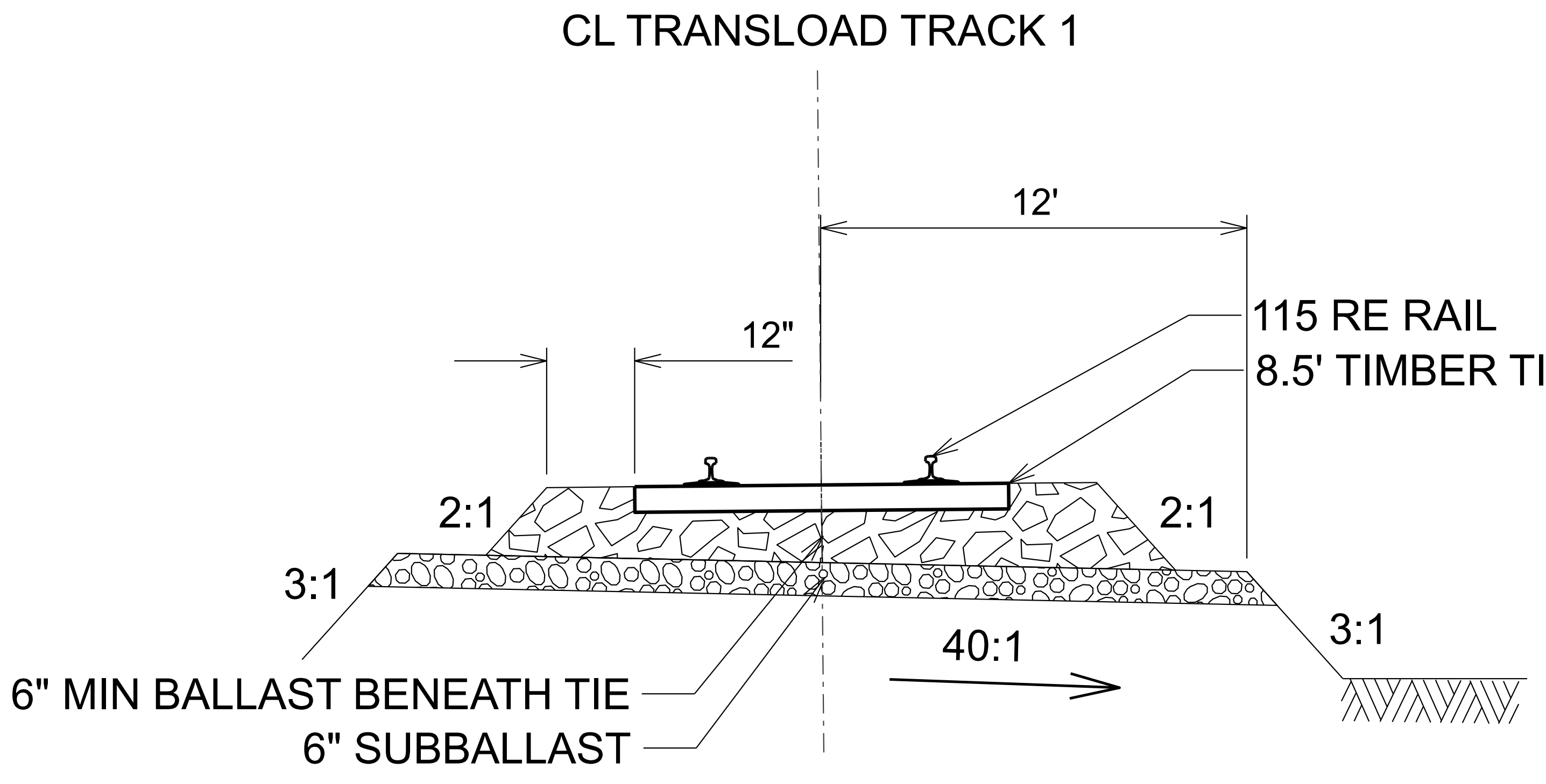
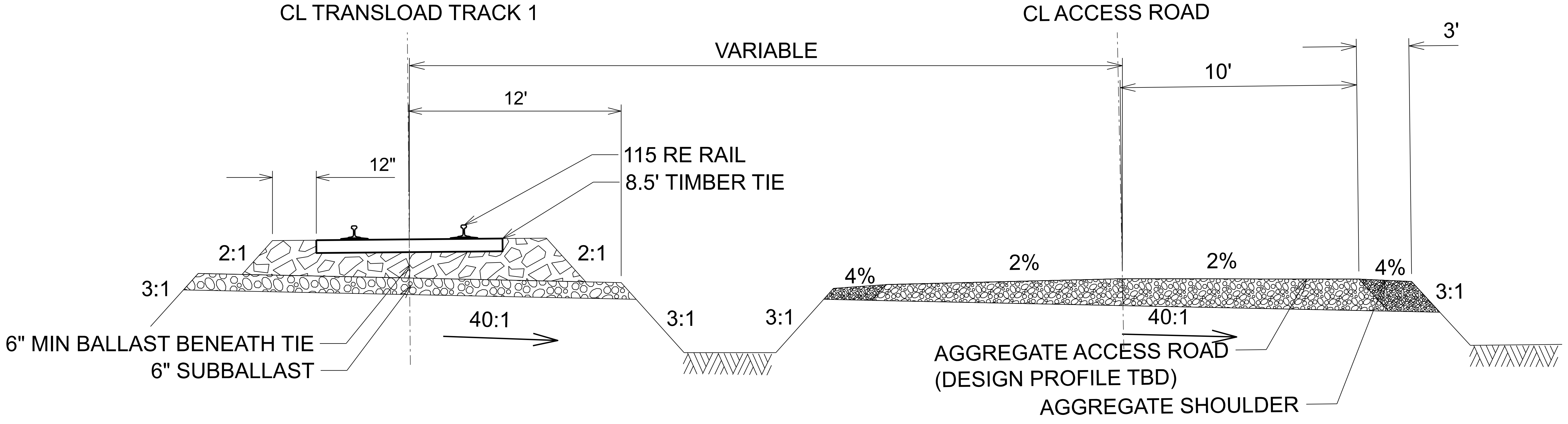
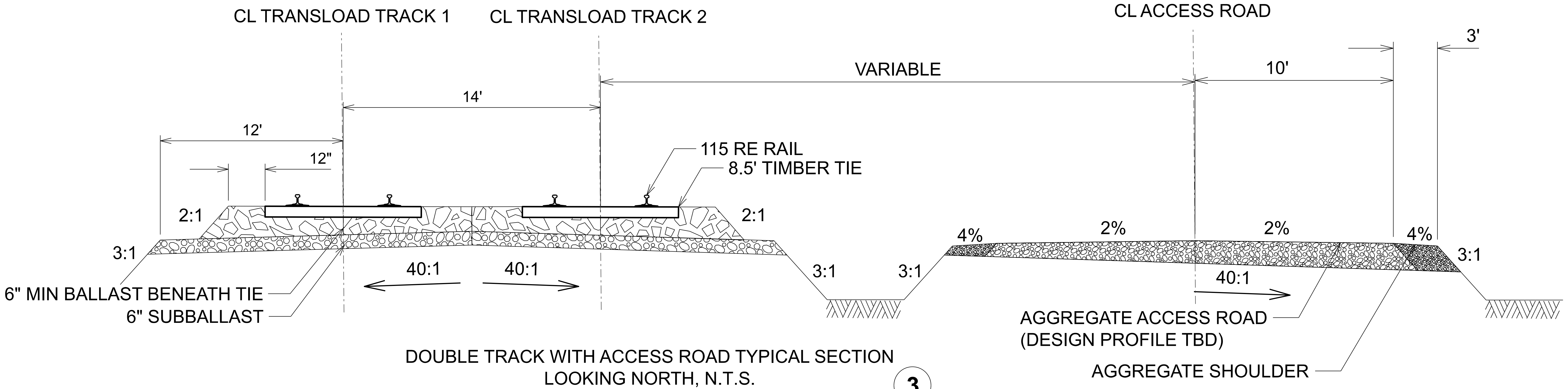
RT-205



SINGLE TRACK TYPICAL SECTION
LOOKING NORTH, N.T.S. ①

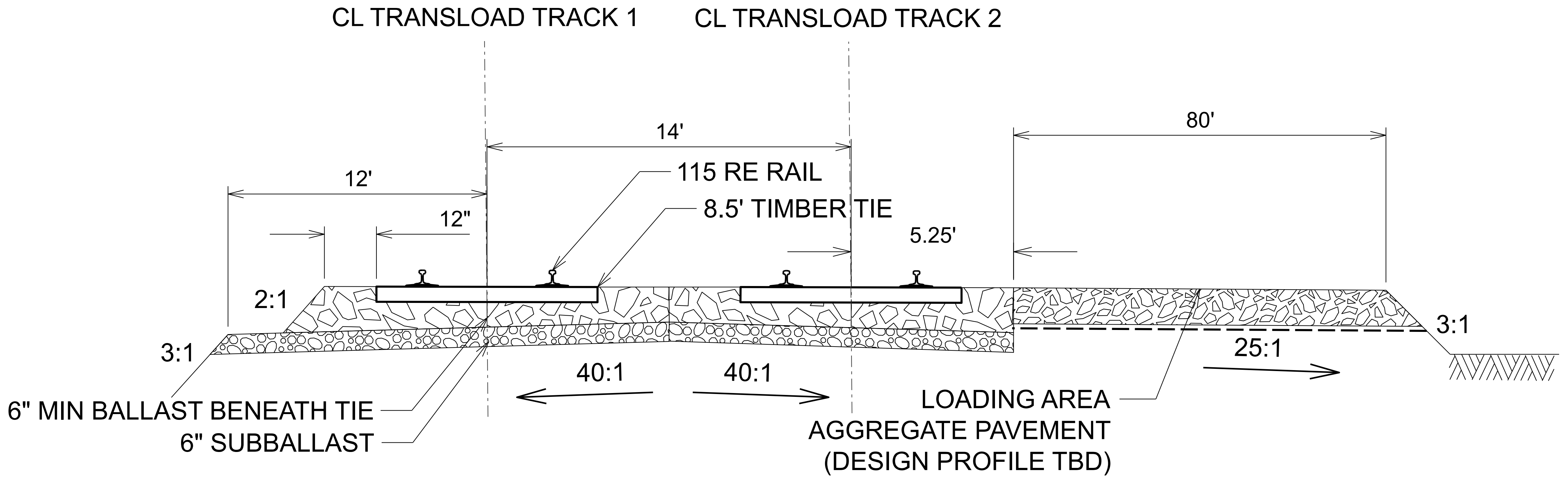


SINGLE TRACK WITH ACCESS ROAD TYPICAL SECTION
LOOKING NORTH, N.T.S. ②



DOUBLE TRACK WITH ACCESS ROAD TYPICAL SECTION
LOOKING NORTH, N.T.S. ③

TRANSLOAD TRACKS COMPONENT DEPTHS	
COMPONENT	**COMPONENT DEPTH (FT)**
SUBBALLAST	0.5
BALLAST	0.5
SLOPE BALLAST	0.11
TIMBER TIE	0.58
12" PLATE 5.5" RAIL BASE	0.06
115 RE RAIL	0.55
TOTAL	2.3



DOUBLE TRACK TYPICAL SECTION
LOOKING NORTH, N.T.S. ④

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Professional Engineer's No.: 42983
State: MA
Date Signed:
Project Mgr.: LP
Designed by: ESB
Drawn by: EJC
Checked by: WAJ

ARCADIS
ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

UTILITY DRIVE TYPICAL SECTIONS

TRACK

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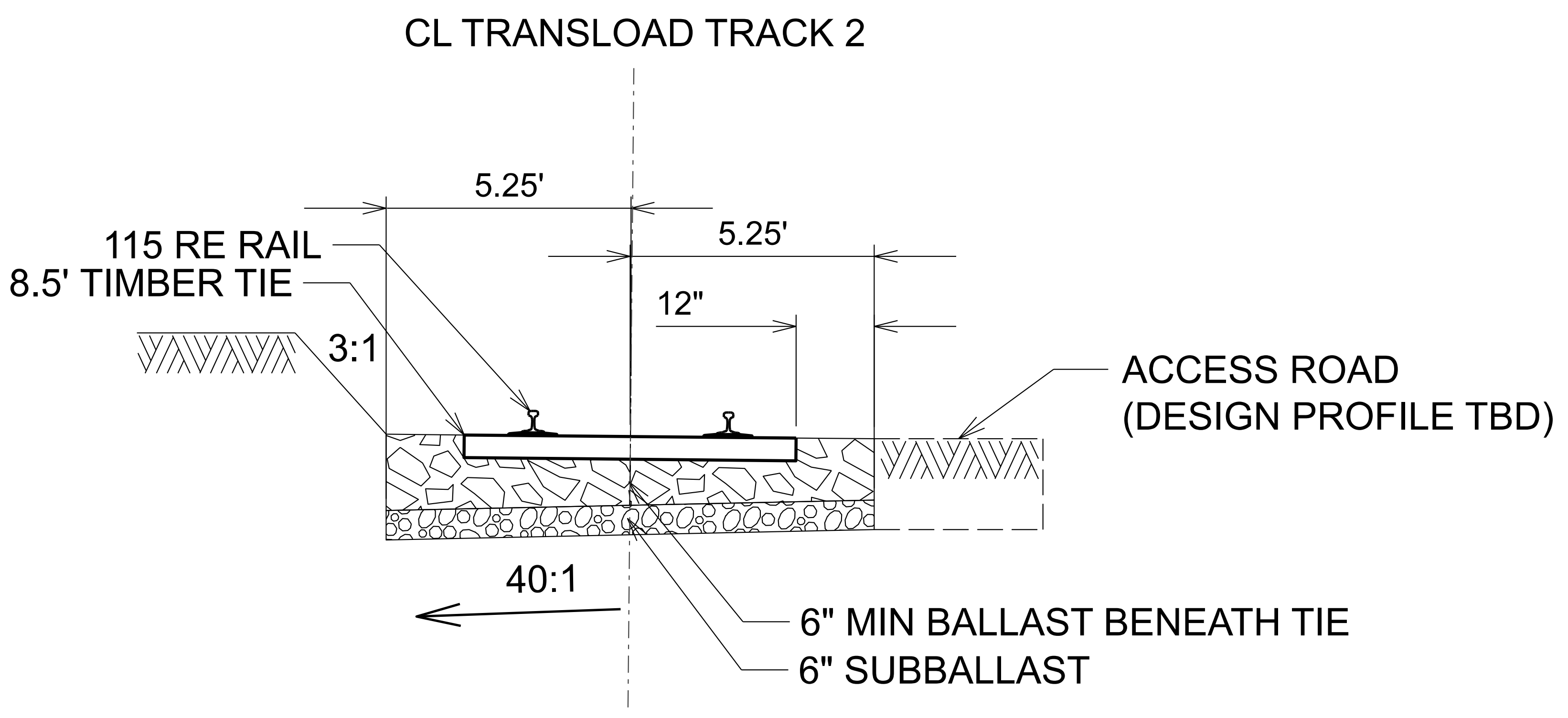
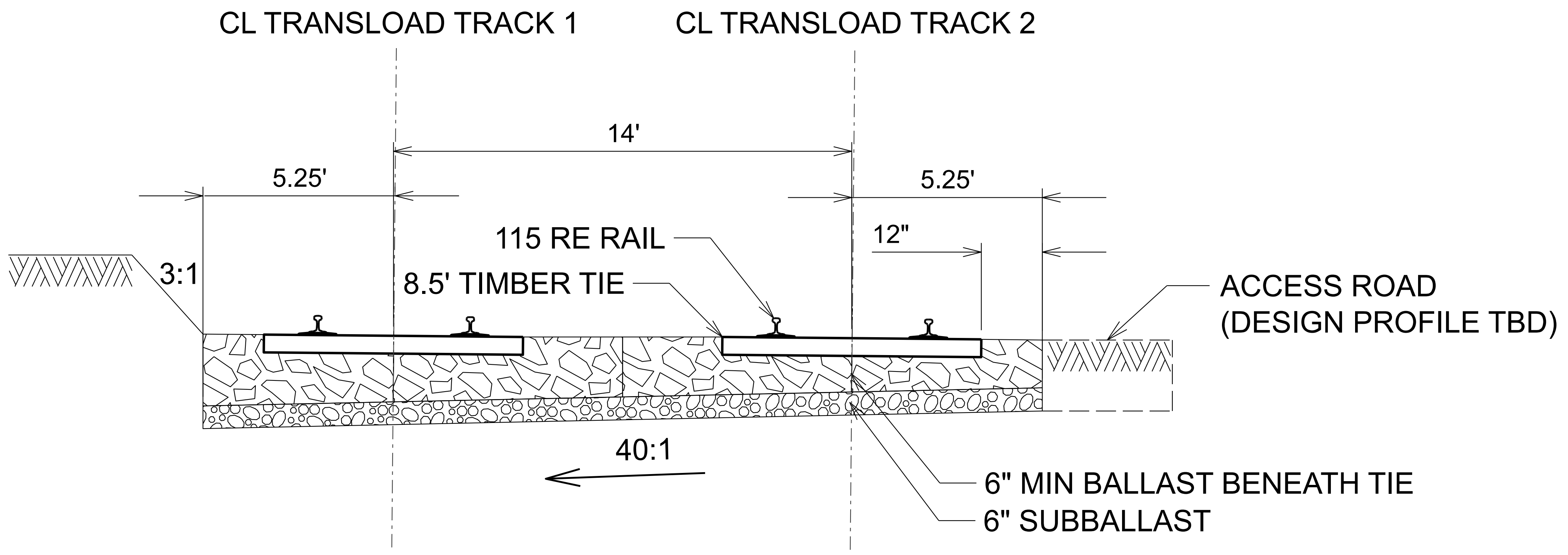
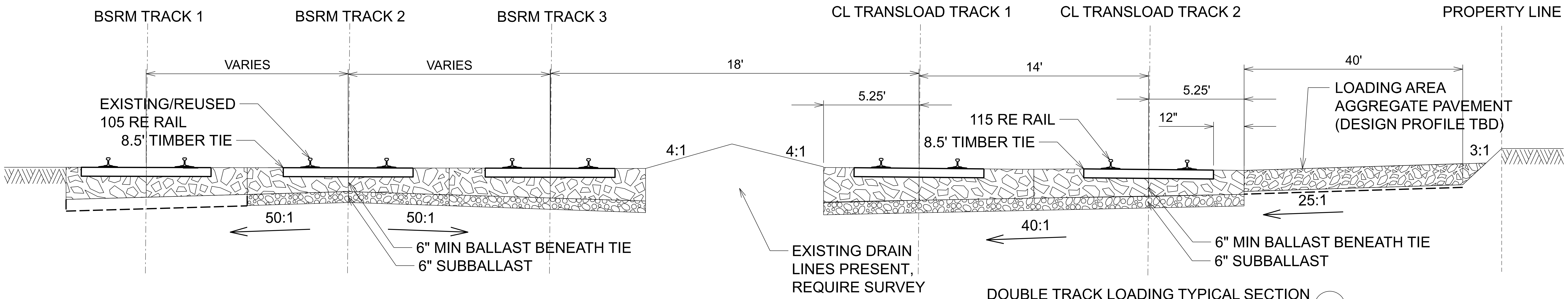


SINGLE TRACK TYPICAL SECTION
LOOKING SOUTH, N.T.S. ①



DOUBLE TRACK TYPICAL SECTION
LOOKING SOUTH, N.T.S. ②



DOUBLE TRACK LOADING TYPICAL SECTION
LOOKING SOUTH, N.T.S. ③

TRANSLOAD TRACKS COMPONENT DEPTHS

COMPONENT	COMPONENT DEPTH (FT)
SUBBALLAST	0.5
BALLAST	0.5
SLOPE BALLAST	0.11
TIMBER TIE	0.58
12" PLATE 5.5" RAIL BASE	0.06
115 RE RAIL	0.55
TOTAL	2.3

BSRM TRACKS COMPONENT DEPTHS

COMPONENT	COMPONENT DEPTH (FT)
SUBBALLAST	0.5
BALLAST	0.5
SLOPE BALLAST	0.11
TIMBER TIE	0.58
12" PLATE 5.125" RAIL BASE	0.06
105 RE RAIL	0.43
TOTAL	2.18

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Checked by: WAJ

ARCADIS U.S., INC.

GE-PITTSFIELD/HOUSATONIC RIVER SITE • MASSACHUSETTS
RAIL TRANSLOAD AREA CONSTRUCTION

WOODS POND SPUR TYPICAL DETAILS

TRACK

ARCADIS Project No.
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FEBRUARY 20, 2026

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RT-502

Appendix B

Geotechnical Evaluation Report for Rail Transload Areas in Reaches 5 and 6

General Electric Company

Geotechnical Evaluation Report for Rail Transload Areas in Reaches 5 and 6

Housatonic River – Rest of River
Pittsfield, Massachusetts

February 2026

Geotechnical Evaluation Report for Transload Areas in Reaches 5 and 6

Housatonic River – Rest of River
Pittsfield, Massachusetts

February 2026

Prepared By:
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Prepared For:
General Electric Company
Pittsfield, Massachusetts

Our Ref:
30318691

Table of Contents

Tables

Attachments

Abbreviations

Arcadis	Arcadis U.S., Inc.
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASTM	American Standard Test Method
bgs	below ground surface
CBR	California Bearing Ratio
EPA	United States Environmental Protection Agency
ksf	kips per square foot
ksi	kips per square inch
ML	Sandy Silt
mm	millimeter
PCB	polychlorinated biphenyl
pcf	pounds per cubic foot
pci	points per cubic inch
PDI	pre-design investigation
Rail Conceptual Design Plan	*Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6*
Rail PDI Work Plan	*Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6*
Remedial Action	Remedial Action
ROR	Rest of River
SM	Silty Sand
SP	Poorly Graded Sand
SPT	Standard Penetration Test
USGS	United States Geological Survey

1 Introduction

Arcadis U.S., Inc. (Arcadis) has prepared this Geotechnical Evaluation Report for the General Electric Company to present the subsurface investigative results and geotechnical evaluations undertaken for the planned rail transload areas in Reaches 5 and 6 located in Pittsfield and Lenox, Massachusetts, respectively. This report is Appendix B to the *Conceptual Design Plan for Rail Transload Areas in Reaches 5 and 6* (Rail Conceptual Design Plan). The planned rail transload areas in Reaches 5 and 6 are as follows:

- Utility Drive rail transload area (in Reach 5, Pittsfield, MA); and
- Woods Pond Spur rail transload area (in Reach 6, Lenox, MA).

This report documents the details of the soil geotechnical pre-design investigation (PDI) work performed and provides the findings and recommendations for geotechnical considerations to incorporate into the engineering design of the Utility Drive and Woods Pond Spur rail transload areas. Work was performed in accordance with the *Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6* (Rail PDI Work Plan) (Arcadis and AECOM 2025), submitted to the United States Environmental Protection Agency (EPA) on May 15, 2025, and the applicable conditions in EPA’s July 24, 2025 conditional approval letter for that work plan.

2 Summary of Pre-Design Investigation Activities

The geotechnical subsurface investigation was performed in general accordance with current American Standard Test Method (ASTM) International standards. This section provides a general description of the completed field exploration and laboratory testing programs.

Note that PDI boring locations were positioned based on the footprint of the rail transload areas proposed in the Rail PDI Work Plan. However, as described in the Rail Conceptual Design Plan, the conceptual design alignment of the rail transload areas has been adjusted, based on coordination with relevant parties, since approval of the Rail PDI Work Plan, and some of the PDI boring locations are not directly within the current conceptual alignment for the rail transload areas. Based on interpretation of the PDI results and the consistency in geotechnical conditions observed throughout each property, the results presented herein are considered applicable to the current conceptual rail transload area alignment. This conclusion is further supported by review of the results collected from previous boring SA-B-04, which was investigated by Anchor QEA in October 2024 at the Utility Drive transload area property. The boring logs and laboratory results for SA-B-04 indicate conditions that are consistent with the results of the PDI borings installed on the other side of the transload area property in October 2025 (Anchor QEA 2026).

2.1 Geotechnical Drilling and Sampling

Drilling activities were performed on October 1 and 2, 2025. Prior to initiating drilling, Ground Penetrating Radar antenna and an electromagnetic pipe locator were used to locate and mark out subsurface utilities. Boring locations were field located using a hand-held global positioning system, and final location coordinates were documented. Full-time drilling oversight, sample collection, and logging services were provided by an Arcadis geotechnical engineer. The drilling work was conducted by Parratt-Wolff, Inc. of East Syracuse, New York.

Four Standard Penetration Test (SPT) borings, consisting of two borings at the Utility Drive rail transload area property (GT-UD-01, GT-UD-02) and two borings at the Woods Pond Spur rail transload area property (GT-WP-01, GT-WP-02), were advanced to depths ranging from 19.7 to 24 feet below ground surface (bgs). The locations of the soil borings are illustrated (by blue dots) on Figures 1-2 and 1-3 in the Rail Conceptual Design Plan. The borings were advanced with an all-terrain vehicle wheeled drill rig using hollow-stem auger drilling techniques per ASTM D6151. SPT testing and soil sample collection were typically completed continuously to the end of the boring. SPT samples were collected using a standard 24-inch long, two-inch outside diameter, split-spoon sampler driven by a 140-pound hammer with a 30-inch drop (per ASTM D1586). The N-values shown on the boring logs represent the number of blows required for one foot of penetration into the soil after an initial six-inch “seating” drive depth.

Selected soil samples from the borings were submitted for laboratory testing. Four bulk samples were collected for compaction and California Bearing Ratio (CBR) testing. Prior to mobilization in the field, cross-sections with proposed cut and fill areas were reviewed to determine where the Proctor and CBR samples were to be collected. One Proctor bulk soil sample was taken at boring GT-UD-02, BS-1 (from 3.0 to 5.5 feet bgs) in materials anticipated to be used as fill. One CBR bulk sample was taken at the ground surface at the Utility Drive rail transload area property (BS-UD-01 from 0 to 3.0 feet bgs) where the ballast and rail fill are anticipated to be bearing. Two CBR bulk samples were collected at the Woods Pond Spur rail transload area property (GT-WP-01, BS-1 from 3.0 to 5.0 feet bgs and GT-WP-02, BS-1 from 0 to 3.0 feet bgs) from the auger cuttings at depths anticipated to be the bearing soils for the proposed rail facilities.

The soil boring logs for the geotechnical investigation, including groundwater elevations, descriptions and classifications of encountered soils, and SPT N-values, are provided in Attachment B-1.

2.2 Laboratory Soil Testing

Select samples were submitted for laboratory analyses to assist in the classification of subsurface strata and for use in establishing engineering properties of the materials encountered. Laboratory testing was performed by GeoTesting Express of Acton, Massachusetts. The following laboratory tests were performed in accordance with the ASTM testing standards:

- Particle Size Sieve Analyses (per ASTM D422) – 15 tests, eight on samples from the Utility Drive rail transload area property and seven on samples from the Woods Pond Spur rail transload area property;
- Moisture Content (per ASTM D2216) – 15 tests, eight on samples from the Utility Drive property and seven on samples from the Woods Pond Spur property;
- Atterberg Limits (per ASTM D4318) – seven tests, six on samples from the Utility Drive property and one on samples from the Woods Pond Spur property;
- Modified Proctor (per ASTM D1557) – one test, on a sample from the Utility Drive property; and
- CBR (per ASTM D1883) – three tests, one on a sample from the Utility Drive property and two on samples from the Woods Pond Spur property.

The laboratory testing records are presented in Attachment B-2.

2.3 Groundwater Measurement

Groundwater levels, based on visual observation of the soil saturation in soil samples and laboratory moisture content testing, were observed in each of the borings advanced at the rail transload area properties. The groundwater levels observed are included on the boring logs in Attachment B-1 and summarized in the following table:

Table 2-1 Groundwater Levels in Borings Advanced at the Rail Transload Area Properties

Boring ID	Depth to Groundwater *(feet bgs)*	Elevation of Groundwater *(feet NAVD88)*
GT-UD-01	10.5	957.3
GT-UD-02	11.7	959.4
GT-WP-01	5.0	953.0
GT-WP-02	6.4	951.6

Note:
NAVD88 = North American Vertical Datum of 1988

Groundwater levels may vary from what was observed during the field exploration, depending on seasonal conditions and/or precipitation amounts.

3 Subsurface Conditions

This section describes the subsurface conditions observed based on the PDI field and laboratory data.

3.1 Overburden Materials

Based on review of the soil borings and laboratory testing results, the overburden soils are described below in general order of occurrence below current grades. This soil profile represents an assessment of the soil conditions in the upper 0 to 24 feet bgs and is based on the available boring and laboratory data as reported herein.

At the Utility Drive rail transload area property:

- Topsoil: A 1- to 2-inch thick topsoil layer was encountered in each boring at the surface.
- Silty Sand (SM)/Sandy Silt (ML): The top layer of the borings ranges from SM to ML, depending on a variability in the silt content. This layer extended from 1 to 2 inches bgs to a termination depth of 20 and 24 feet bgs. This layer was generally described as loose, moist to wet, non-plastic, and brown. A low percentage of gravel is present in boring GT-UD-02 at depths from 0.1 to 4.7 feet bgs. During drilling activities in boring GT-UD-01, at approximately 11.7 to 13.0 feet bgs, the augers were observed to be grinding and assumed to push to the side of an apparent boulder that was encountered. Groundwater was observed at approximately 10.5 and 11.7 feet bgs. Samples from this layer were classified as ML or SM based on the Unified Soil Classification System, with N-values varying from 3 to 20 blows per foot. Atterberg testing confirmed that all samples are non-plastic. The average N-value for SPT samples was approximately 6, indicating an overall loose consistency for this layer. From 13 to 22 feet bgs, N-values indicated a very loose and saturated sand layer (SM/ML).
- A bulk sample of auger cuttings was taken from near ground surface in a location along the proposed spur alignment, boring BS-UD-01, to test for CBR, as it is anticipated to have fill placed on top of it during construction activities. An additional bulk sample was taken from boring GT-UD-02 from auger cuttings representing materials from 3 to 5.5 feet bgs. This sample was tested for Modified Proctor, as it is anticipated to be in an area of cut material to be placed along the spur alignment as fill.

At the Woods Pond Spur rail transload area property:

- Topsoil/Gravel roadway: A 2.5- to 5-inch thick surface layer of topsoil and gravel roadway was encountered in each boring at the ground surface.
- SM: The top layer of the borings is Poorly Graded Sand (SP) with varying amounts of Silt throughout the layer in boring GT-WP-01 and varying gravel layers throughout in boring GT-WP-02. This layer extended from 0.5 feet to the termination depth of 20 feet bgs in GT-WP-01 and approximately eight feet bgs in GT-WP-02. This layer is generally described as medium dense, moist to wet, non-plastic, and brown. Groundwater was encountered at approximately 5 and 6.4 feet bgs. Samples from this layer were classified as SM and SP. The range of N-values was from 5 to 19. The average N-value for this layer from SPT samples was approximately 12, indicating a medium dense consistency for this layer. Atterberg testing confirmed that all samples are non-plastic.
- Gravel layer: In boring GT-WP-02, at 8 to 12 feet bgs and 18 feet to termination depth (20 feet bgs), medium dense layers of Poorly Graded fine Gravel was encountered with varying amounts of sand and silt. From 12 to

18 feet bgs, the SP layer described previously was encountered. This gravel layer is described as moist and grey to brown. The range of N-values was from 18 to 34. The average N-value for this layer from SPT samples was approximately 26, indicating a medium dense consistency for this layer.

- Two bulk samples were taken for CBR testing as all areas are anticipated to be filled to complete the embankment construction. At boring GT-WP-01, a bulk sample was taken from auger cuttings at approximately 3 feet bgs, as it is anticipated this area will be cut approximately 2 to 5 feet bgs for proposed construction. At boring GT-WP-02, a bulk sample was taken from auger cuttings at the ground surface to 2 feet bgs, as it is anticipated this area will be filled from the ground surface for proposed construction.

3.2 Karst and Sinkhole Hazards

Areas around Pittsfield and Lenox are underlain by limestone and subject to sinkholes and are considered as karst landscape. Karst is a terrain or landscape often underlain by limestone or dolomite that has eroded by dissolution and created holes within the bedrock, causing features such as sinkholes, surface deformations, sinking streams, etc. Base on United States Geological Survey (USGS) information (USGS 2025), both the Utility Drive and Woods Pond Spur rail transload area properties are underlain by carbonate rocks at an approximate depth of 50 feet bgs (American Railway Engineering and Maintenance-of-Way Association [AREMA] 2023) and the potential for sinkholes within the properties or development of sinkholes in the future exists. However, the commonality of sinkholes in the area is low and no signs of sinkholes were observed at the ground surface or in the borings (e.g., voids, deformations at surface) during the PDI.

4 Construction Considerations

This section describes the construction considerations recommended based on the PDI field and laboratory data.

4.1 Site and Subgrade Preparation

The construction of the rail transload areas will involve the cutting of existing materials in some locations and adding fill material in other locations to prepare the top of the subgrade surface. In areas where the rail spur track will be constructed, subballast or geogrid will then be installed on top of the subgrade surface to support rail construction. In areas where asphalt or concrete (collectively called hardscape) will be constructed for the loading/unloading areas or access roads, appropriate aggregate for the hardscape will be installed on top of the subgrade surface. Proposed design alignments and cross-sections are presented in the Conceptual Design Drawings included as Appendix A to the Rail Conceptual Design Plan.

At both the Utility Drive and Woods Pond Spur transload areas, in areas not designated for cutting material to achieve the required subgrade elevation, organic material, topsoil, vegetation, construction debris, and any soft or loose surface soils will be removed to prepare the subgrade surface prior to placement of any fill. Following the cuts and/or removal of unsuitable surface materials at the Utility Drive and Woods Pond Spur rail transload areas, and prior to placement of fill materials (e.g., reuse general fill, structural fill, geogrid) to create the top of subgrade surface, the exposed native soil surface will be evaluated by a qualified geotechnical engineer to confirm that the exposed soil subgrade surface is firm, dry, and undisturbed in order to provide for adequate bearing capacity. Consideration will be given to scarifying, moisture conditioning, and compacting the exposed native soil surface to the density and water content appropriate for bearing conditions. Where evidence of weak, unsuitable material exists or water collects at the surface with no drainage or dissipation, the soils will be undercut and replaced with compacted fill. Water will not be allowed to collect in excavations or on prepared subgrades during construction. Positive site drainage will be maintained throughout construction activities. Disturbed subgrade surfaces will be excavated to undisturbed soils.

The subgrade will be proof-rolled with equipment having a minimum gross weight of 20 tons prior to placement of aggregate for hardscape, geogrid underlying the subballast at Woods Pond Spur transload area, or subballast at Utility Drive rail transload area. If the finished subgrade becomes disturbed, frozen, saturated, etc., prior to placement of aggregate for hardscape, geogrid, or subballast, the affected areas will be removed and fill will be placed and recompacted. Final subgrade observations will be made by a geotechnical engineer prior to placing aggregate for hardscape, geogrid, or subballast.

Additional field CBR verification may be required to confirm that native soil meets the required strength standards for the specified rail transload area design conditions. If visibly loose or saturated materials are observed during site preparation activities at either transload area location, those materials will be over-excavated a minimum of two feet and backfilled with structural fill to provide a quality subgrade and uniform bearing conditions.

The following subsections describe the specific site and subgrade preparation activities at each rail transload area.

4.1.1 Utility Drive Rail Transload Area

At the Utility Drive rail transload area property, it is anticipated that substantial cut and fill efforts will be required for construction of the rail transload area. In areas around boring GT-UD-01 (elevation of 967.8 feet) on the southern portion of the transload area property, it is anticipated that up to approximately 15 feet of fill will be placed on the existing ground surface to prepare the top of the subgrade surface. On the northern end of the proposed alignment, it is anticipated that up to 14 feet of material will need to be cut to prepare the top of the subgrade surface. The anticipated cut and fill activities to achieve the proposed alignment are to be in primarily sandy soils and will be excavated and backfilled at a 2H(horizontal):1V(vertical) slope or flatter up to 20 feet in height. As noted above, cuts are anticipated to be less than 14 feet; however, if cuts extend beyond 20 feet, the recommended slope will be re-evaluated.

Based on CBR laboratory testing results, it is anticipated that over-excavation will be required on the northern end of the Utility Drive rail transload area. Although the PDI borings installed in October 2025 are not in line with the proposed alignment, previous borings installed by others indicate similar loose sand materials in other parts of the property near boring GT-UD-02. CBR results under 5% indicate poor and unsuitable materials for load bearing. The material collected for CBR at the Utility Drive rail transload area property resulted in a CBR of 0 for 85% compaction, 1 for 90% compaction, and 2 for 95% compaction. According to AREMA (2023) guidance, the existing subgrade must meet a minimum CBR of 6 to be suitable for proposed subballast. The Utility Drive CBR results thus indicate that the material tested does not have an adequate bearing ratio for rail design and will need to be removed during site preparation prior to subgrade construction. The CBR results also indicate the material on the Utility Drive rail transload area property does not have an adequate bearing ratio for the loading/unloading area or access roads. Thus, the existing material in the northern end of the Utility Drive rail transload area will be overcut until loose soils are no longer observed. This cut material will be either temporarily stockpiled for reuse during restoration or used as general fill in accordance with Section 4.3.1.

The loose sandy soils anticipated in the cut areas at the Utility Drive rail transload area property may be unsuitable to support transload facilities due to their vulnerability to liquefaction under loading. Thus, these soils will be over-excavated a minimum of two feet and backfilled with structural fill to provide a quality subgrade and uniform bearing conditions. In fill areas, general fill will be placed as needed up to two feet below the elevation of the proposed bottom of the subballast or aggregate for hardscape, followed by placement of two feet of structural fill up to the elevation of the bottom of the subballast or aggregate for hardscape. (Geogrid is not currently anticipated for the Utility Drive rail transload area.) See Section 4.3 for placement and compaction requirements of fill materials.

4.1.2 Woods Pond Spur Rail Transload Area

For the Woods Pond Spur rail transload area property, it is anticipated that relatively minimal cut and fill efforts will be required for construction of the rail transload area. Around the area of boring GT-WP-01 on the southern end of the property, it is anticipated that up to approximately five feet of material will need to be cut to prepare the top of subgrade surface. At boring GT-WP-02 on the northern end of the property, it is anticipated this area will be regraded and possibly filled, slightly, to prepare the subgrade surface. It is anticipated that any cut materials will be used as fill in areas currently lower than the design elevations, reused for fill in other areas at the property outside of the footprint of the rail transload area, or, if they are to be removed from the property, characterized as necessary for transport and disposal (e.g. at the UDF) or for transport and reuse elsewhere.

Based on available information collected during the PDI, the existing ground materials at the top of subgrade are mixed, with some areas anticipated to be suitable for construction of the rail transload area on the existing subgrade and others needing improvement before construction of the transload area. Laboratory CBR values observed during the PDI range between 4.8 (at GT-WP-02) and 13 (at GT-WP-01) at 95% compaction at the two boring locations at the Woods Pond Spur transload area property. As noted above, the existing subgrade must meet a minimum CBR of 6 to be suitable for proposed aggregate for hardscape or subballast. The CBR results thus indicate that the tested material in some areas of the rail transload area near GT-WP-02 will need to be removed or improved. Where fill is needed to construct the designed infrastructure, general fill will be placed as needed up to the elevation of the bottom of the subballast or aggregate for hardscape. Along the spur alignment for the two rail spurs to be used for the ROR RA, a geogrid will be placed at the top of subgrade and before placement of the subballast to homogenize the bearing surface and create a subgrade with a soil CBR above 6 as required by the AREMA guidance for minimal additional subballast. Since the storage tracks to be constructed for the property owner, the Berkshire Scenic Railway Museum, will be along a similar alignment as currently used by the owner, no additional ground improvement of the subgrade (e.g., geogrid, structural fill) is anticipated to prepare the subsurface for those storage tracks. See Section 4.3 for placement and compaction requirements of fill materials. For the loading/unloading area and access road areas, the existing material or general fill is determined to have sufficient bearing capacity, and neither geogrid nor structural fill will be used for construction of those items.

The sample at GT-WP-01 with a CBR of 13 was from soil between three to five feet bgs and is of acceptable strength, so no additional ground improvement of the subgrade (e.g., geogrid, structural fill) is anticipated in the northern portion of the property.

4.2 Groundwater Considerations

Based on the PDI data summarized in Section 2.3, it is anticipated that perched groundwater could be encountered during construction for the Utility Drive rail transload area. However, it is not anticipated groundwater will be encountered during construction activities for the Woods Pond Spur rail transload area.

The depth and amount of groundwater to be encountered during construction activities at the Utility Drive property will depend on weather conditions, time of year, and the depths of cut required by the final design. Groundwater levels will be controlled during temporary excavations, if needed. If excessive groundwater seepage is encountered during construction, work will be stopped to evaluate additional dewatering measures that might be needed. Undercuts near and below groundwater in granular soil could cause a heave and/or swell condition. This material will be removed and replaced with fill, as needed, as discussed in Section 4.3.

4.3 Fill Materials and Placement

The fill materials and placement requirements discussed in this section are to prepare the subsurface for both the Utility Drive and Woods Pond Spur rail transload areas. Because the Woods Pond Spur rail transload area will not be removed after use for the ROR RA, the portion of that area where PCB-containing materials will be handled (i.e., the loading/unloading area) will first be covered with a demarcation layer and a minimum of six inches of imported clean fill and/or hardscape (i.e., concrete) so that all such loading and unloading operations are conducted on the top of that new clean layer. This imported clean fill and/or hardscape will be included in the design thickness of the loading/unloading area, which will be determined during development of the final design.

4.3.1 General Fill

General fill will consist of clean common earth fill, free from excessive moisture, organic material, coatings, sharp angular stones, unsatisfactory fills, and other deleterious materials. It will conform to the Soil Classification Groups of Well-Graded Gravel, Poorly Graded fine Gravel, Silty Gravel, Well-Graded Sand, SP, and SM (as determined by ASTM D2487), or a combination of these groups, with no stones larger than two inches in diameter, no more than 35% fines (passing the No. 200 sieve), and a Plasticity Index less than 10. Based on laboratory testing, it appears the on-site materials meet this requirement and may be used as general fill. Cut materials will be evaluated for water content and dried out if needed. Excavated materials, however, are not suitable for use as structural fill and will not be used for such fill.

4.3.2 Structural Fill

The structural fill will comply with Section M1.02.0 – Granular Fill found in MassDOT Standard Specifications for Highways and Bridges (2020) and will be placed over the approved subgrade. Material for structural fill will generally consist of clean gravely sand or sandy gravel, well graded, within the following limits:

Table 4-1 Structural Fill

Sieve Size	% Passing
1.5 inches	100
¾ inch	70-100
3/8 inch	50-85
No. 4	40-75
No. 40	10-40
No. 200	< 8%

4.3.3 Compaction

Re-use fill and borrowed fill will be placed in horizontal, successive, uniform layers having a maximum uncompacted (loose) lift thickness of eight inches. This thickness specification will be used in all areas when/if the large vibratory compactor is used to compact the fill. In restricted areas where smaller, hand-guided equipment is used to densify the soil, a lift thickness of four inches of uncompacted fill will be regarded as the maximum allowed. The first lift will be placed over a proof-rolled and accepted surface. Each lift will be uniformly and evenly blade-mixed during spreading to ensure uniformity of the material in each layer. If the work deteriorates prior to placement of the next lift, the layer will be recompacted and reshaped accordingly. The finished surface will be properly graded to a relatively smooth surface with no sharp or protruding objects.

Each lift will be compacted with a minimum of four coverages of the equipment described above. The minimum % compaction requirements are as follows:

- General Fill: 92% of maximum dry density per ASTM D1557; and
- Structural Fill: 95% of maximum dry density per ASTM D1557.

All fill material will be maintained, placed, and compacted at ±3% of the optimum moisture content to attain the required degree of compaction. Compacted fill placement will be conducted under the observation of a geotechnical engineer.

4.3.4 Quality Control of Backfill Materials

Successive lifts of compacted fill will not be placed until the layer under construction has been compacted to the required density, as measured by a geotechnical engineer or qualified soils technician working under the direction of a geotechnical engineer. Density testing will be performed using a nuclear density gauge, or equivalent, at a frequency of one test per 50 linear feet per soil lift area to help verify level of compaction in accordance with ASTM D6938. Any soft, yielding, organic, deleterious fill materials, or otherwise unacceptable areas, detected during compaction efforts will be over-excavated and replaced.

4.3.5 Acceptance of Backfill Materials

Any material used for fill will be observed and approved for use by a geotechnical engineer prior to use on the project site. Geotechnical testing, consisting of sieve analysis, moisture content, and Atterberg limits, will be performed and the results will be submitted to the geotechnical engineer prior to approval of backfill material. Sieve analysis will be performed in accordance with ASTM D6913, moisture content testing will be performed in accordance with ASTM D2216, and Atterberg limits testing will be performed in accordance with ASTM D4318. Modified Proctor testing, in accordance with ASTM D1557, will also be required of backfill material. At the direction of the geotechnical engineer, soil samples will be taken from the excavation area periodically during construction and subjected to Modified Proctor (ASTM D1557) testing to confirm compaction.

4.3.6 Temporary Excavations

Temporary excavations will be required during the earthwork for the Utility Drive rail transload area. The contractor will be responsible for designing and constructing stable temporary excavations and will shore, slope, or bench the sides of the excavation, as required, to maintain stable excavation sides and bottom. All excavations will comply with applicable local, state, and federal safety regulations and current Occupational Safety and Health Administration Excavation and Trenching Safety Standards.

5 Rail Transload Area Design

5.1 Rail Design

In rail spur track areas, prior to placement of subballast, the subgrade surface will be prepared as described in Section 4 of this report (i.e., by using structural fill at the Utility Drive rail transload area and existing material or geogrid at the Woods Pond Spur rail transload area).

Working grades during active construction activities will be sloped to reduce the potential for subgrade softening, ponding water, and disturbances. Final grades and embankment surfaces for the rail design will be sloped to drain away from the track centerline to prevent ponding of water. Care will be taken to manage surface water by installing typical control devices (e.g., surface ditches) to promote drainage away from the existing and proposed track. Per Chapter 1 of the AREMA (2023) guidelines, slopes will be a minimum of 2%, and ditch inverts will extend at least six inches below the bottom of the subballast.

Subdrain trenches, if needed, will be at least 12 inches wide and extend a minimum of three feet below the bottom of the subballast. The subgrade prepared for the subballast will be installed at a 2% slope to promote water drainage to the ditches or trenches. The subdrain trench will be placed a minimum of five feet laterally from the end of the rail ties. The need for subdrain trenches will be determined during development of the final design.

5.2 Loading/Unloading Areas

In loading/unloading areas, prior to placement of aggregate for hardscape, the subgrade surface will be prepared as described in Section 4 of this report (i.e., by using structural fill at the Utility Drive rail transload area and existing materials at the Woods Pond Spur rail transload area).

Based on the equipment weight and movement anticipated for loading/unloading operations at both rail transload areas, the loading/unloading area is anticipated to consist of a concrete pad. The concrete pad for both rail transload areas will generally consist of unreinforced concrete slab. Under these assumed conditions, a modulus of subgrade reaction of 150 pounds per cubic inch (pci) will be used for the design of concrete slabs placed on properly compacted fill. All concrete floor slabs constructed at grade will be designed as freely floating (if feasible) to minimize random cracking of the slab. Design details (e,g., thickness, reinforcement [if any]) for each transload area will be developed for the final design. The design of the concrete pad will account for substantial loading from a mobile crane or forklift to be used to transfer containers between rail and trucks, truck movement, and storage of containers.

For seismic design considerations, both rail transload areas are considered to have a Seismic Site Coefficient Class E soil profile, per the site class definitions provided by Table 20.3-1 of Chapter 20 of Minimum Design Loads for Buildings and Other Structures (ASCE 2010). These profiles will be considered during development of the final design details for the loading/unloading areas.

5.2.1 Utility Drive Rail Transload Area

Based on the soil boring information collected during the PDI, the concrete pad anticipated for the loading/unloading area at the Utility Drive transload area will be constructed on two feet of the recommended structural fill used to prepare the subgrade surface. An evaluation of the allowable bearing capacity was conducted for the Utility Drive rail transload area based on existing conditions and assuming use of structural fill and that the concrete pad will be constructed on the ground surface. The net allowable bearing capacity for design of the proposed loading/unloading area at this transload area is 19 kips per square foot (ksf). Concrete pad settlement under this allowable bearing pressure is estimated to be 1.5 inches. A typical range for a concrete slab settlement is 1 to 2 inches. Thus, the conceptual evaluation indicates that the bearing capacity for the Utility Drive rail transload area is acceptable.

5.2.2 Woods Pond Spur Rail Transload Area

Based on the soil boring information collected during the PDI, the concrete pad anticipated for the loading/unloading area at Woods Pons Spur transload area will be constructed on the existing soil. As noted above, because the Woods Pond Spur rail transload area will not be removed after use for the ROR RA, the portion of that area where PCB-containing materials will be handled (i.e., the loading/unloading area) will first be covered with a demarcation layer and a minimum of six inches of imported clean fill and/or hardscape (i.e., concrete), with the thicknesses to be determined in the final design of this rail transload area.

An evaluation of the allowable bearing capacities was conducted for the Woods Pond Spur rail transload area based on existing conditions and assuming that the concrete pad will be constructed on the ground surface. The net allowable bearing capacity for design of the proposed loading/unloading area at this rail transload area ranges from 6.8 ksf (for the container storage area and transload maintenance area) to 9.7 ksf (for the equipment movement area), resulting in approximate concrete slab settlement of 1.1 inches to 0.82 inches, respectively. As noted above, a typical range for a concrete slab settlement is 1 to 2 inches. Thus, this conceptual evaluation indicates that the bearing capacity for the Woods Pond Spur rail transload area is acceptable.

5.3 Access Roads

Based on the soil boring information collected during the PDI at both rail transload areas, the soils for the access roads at pavement subgrade depths are anticipated to consist mainly of sandy soils at both areas, with structural fill placed and compacted at the Utility Drive transload area. CBR testing was performed on three soil samples compacted to varying densities – one from the Utility Drive transload area property (GT-UD-01) and two from the Woods Pond Spur transload area property (GT-WP-01 and -02). The results, along with calculated values for subgrade resilient modulus, for each density are provided in Table 5-1 below. Subgrade resilient modulus is used to characterize the stiffness and strength of the underlying soils, which in turn can be used to determine how the subgrade will deform under repeated traffic loads for asphalt design. This information will be used during development of the final design of the access roads to determine appropriate details (e.g., material type, thicknesses) for the access road asphalt or concrete. The subgrade at the access roads will be compacted to a density of at least 95% maximum dry density, as determined by ASTM 1557 (Modified Proctor).

Table 5-1 CBR and Subgrade Resilient Modulus Values

Sample ID	Density	Moisture Content (%)	% of Maximum Dry Density (ASTM 1557)	CBR	Subgrade Resilient Modulus (ksi)
GT-UD-01 BS-1	114.1 pcf	13.1	85%	0	0
			90%	1	1.4
			95%	2	2.8
GT-WP-01 BS-1	114.1 pcf	13.1	85%	1	1.3
			90%	3	4.0
			95%	13	18.5
GT-WP-02 BS-1	114.1 pcf	13.1	85%	0	0
			90%	1	1.4
			95%	5	7.1

Note:
ksi = kips per square inch

Access road design details (e.g., component layers and thicknesses) for each rail transload area will be determined in the final design of these transload areas.

6 References

AREMA. 2023. *Chapter 1: Railway Industry Development and Overview*. In *Manual for Railway Engineering* (p. 1-2). Lanham, MD: AREMA.

Anchor QEA. 2026. *Supplemental Data Collection Summary Report for Reach 5A*. Prepared for General Electric Company, Pittsfield, Massachusetts. February 4.

Arcadis and AECOM. 2025. *Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6*. Prepared for General Electric Company, Pittsfield, Massachusetts. May 15.

ASCE. 2010. Table 20.3-1: Site Classification for Seismic Design. In Minimum Design Loads or Buildings and Other Structures (ASCE/SEI 7-10). Reston, VA.

USGS. 2025. *Karst in the United States.* December 2. http://pubs.usgs.gov/of/2014/1156/

Attachment B-1

Boring Logs

BORING NO. GT-UD-01

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION UTILITY DRIVE PITTSFIELD, MA

DATE STARTED 10/1/25 **COMPLETED** 10/1/25

GROUND ELEVATION 967.847 ft - **HOLE SIZE** 6" -

DRILLING CONTRACTOR Parratt Wolff, Inc

NORTHING 2979646.55 ft **EASTING** 184949.393 ft

DRILLING METHOD Hollow Stem Auger

GROUNDWATER AT TIME OF DRILLING Depth +/- 10.50 ft / Elev 957.35 ft ▽

LOGGED BY KYLE WARREN **CHECKED BY** OWEN POTTS

GROUNDWATER AFTER DRILLING ---

SAMPLING METHODS Hollow Stem Auger

WEATHER

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						
0.2						TOPSOIL 967.7
	SS 1	42	2-2-2-3 (4)	ML		(ML) SANDY SILT, FEW GRAVEL, ORGANICS PRESENT, LOOSE, MOIST, NON PLASTIC, BROWN
2.5	SS 2	67	3-2-4-5 (6)			GRADES TO LIGHT BROWN TO BROWN
5.0	SS 3	67	2-4-4-5 (8)			GRADES TO REDDISH BROWN TO BROWN, MOTTLED
7.5	SS 4	83	5-5-6-5 (11)			GRADES TO FEW SILT, MEDIUM DENSE, NON PLASTIC, REDDISH BROWN TO GREY
8.0						959.8
	SS 5	58	3-2-2-3 (4)	SP-SM		(SP-SM) POORLY GRADED SAND, TRACE SILT, VERY LOOSE, MOIST, NON PLASTIC, BROWN AND GREY
10.0						957.8

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BORING NO. GT-UD-01

PAGE 2 OF 2

CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION UTILITY DRIVE PITTSFIELD, MA

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		
10.0	SS 6	75	3-2-3-26 (5)	SM		(SM) FINE SILTY SAND, LOOSE, WET, NON PLASTIC, BROWN ▽	12.0	955.8
	SS 7	100	50/2"	SM		(SM) SILTY FINE SAND, VERY DENSE, WET, NON PLASTIC, BOULDER	12.2	955.6
12.5						POSSIBLE BOULDER TO 11.7'-13', AUGERS GRINDING, ASSUMED TO PUSH TO SIDE OF BOULDER	14.0	953.8
15.0	SS 8	46	6-3-4-8 (7)	SM		(SM) SILTY SAND, SOME GRAVEL (ANGULAR BOULDER PIECES), LOOSE, WET, SATURATED, NON PLASTIC, BROWN AND WHITE	16.0	951.8
17.5	SS 9	58	10-12-8-17 (20)			GRADES TO LITTLE GRAVEL, MEDIUM DENSE AUGERS GRINDING AT 17.5' BGS		
	SS 10	29	16-9-20-50/3"					

Borehole terminated at 19.7 ft BGS.

NOTES:
1. All Elevations in NAVD88
2. All Easting and Northing are in NAD83, Massachusetts Mainland Zone

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BORING NO. GT-UD-02

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION UTILITY DRIVE PITTSFIELD, MA

DATE STARTED 10/1/25 **COMPLETED** 10/1/25

GROUND ELEVATION 971.128 ft - **HOLE SIZE** 6" -

DRILLING CONTRACTOR Parratt Wolff, Inc

NORTHING 2980204.753 ft **EASTING** 184977.734 ft

DRILLING METHOD Hollow Stem Auger

GROUNDWATER AT TIME OF DRILLING Depth +/- 11.70 ft / Elev 959.43 ft ▽

LOGGED BY KYLE WARREN **CHECKED BY** OWEN POTTS

GROUNDWATER AFTER DRILLING ---

SAMPLING METHODS Hollow Stem Auger

WEATHER

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION	
0.0						0.1	TOPSOIL	971.0
	SS 1	67	2-2-1-2 (3)	SM			(SM) POORLY GRADED FINE SILTY SAND, TRACE GRAVEL, VERY LOOSE, MOIST, NON PLASTIC, ORGANICS PRESENT ON TOP, BROWN	
							GRADES TO, FEW GRAVEL, LOOSE	
2.5	SS 2	75	2-2-6-5 (8)				BULK SAMPLE (BS-1) TAKEN FROM CUTTINGS 3.0-5.5' BGS	
						4.7		966.4
				SP			(SP) POORLY GRADED FINE SAND, SOME SILT, LOOSE, MOIST, NON PLASTIC, ORGANICS, DARK BROWN	
5.0	SS 3	92	2-4-4-7 (8)			5.1		966.0
				SM			(SM) SILTY SAND, LOOSE, MOIST, NON PLASTIC, MOTTLED, LIGHT BROWN TO GREENISH BROWN	
							GRADES TO MEDIUM DENSE	
7.5	SS 4	92	7-6-5-5 (11)					
							GRADES TO LOOSE	
	SS 5	83	4-3-3-5 (6)					
10.0								

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BORING NO. GT-UD-02

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION UTILITY DRIVE PITTSFIELD, MA

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
10.0	SS 6	71	3-4-3-4 (7)	SM		(SM) SILTY SAND, LOOSE, MOIST, NON PLASTIC, MOTTLED, REDDISH BROWN ▽ WET @11.7' BGS
12.5	SS 7	67	3-3-3-2 (6)			GRADES TO TRACE CLAY, WET, SATURATED
15.0	SS 8	83	1-1-2-2 (3)			GRADES TO FINE SAND, VERY LOOSE
17.5	SS 9	83	2-2-1-2 (3)			
	SS 10	67	1-1-1-1 (2)			GRADES TO NO MOTTLING
20.0	SS 11	71	1-1			

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION UTILITY DRIVE PITTSFIELD, MA

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
						(SM) SILTY SAND, LOOSE, MOIST, NON PLASTIC, MOTTLED, REDDISH BROWN
22.5	SS 12	75	3-2-2-4 (4)	SM		
						24.0 947.1

Borehole terminated at 24.0 ft BGS.

NOTES:

1. All Elevations in NAVD88
2. All Easting and Northing are in NAD83, Massachusetts Mainland Zone

BORING NO. GT-WP-01

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION [illegible] PITTSFIELD, MA

DATE STARTED 10/1/25 **COMPLETED** 10/1/25

GROUND ELEVATION 958.005 ft - **HOLE SIZE** 6" -

DRILLING CONTRACTOR Parratt Wolff, Inc

NORTHING 2957935.544 ft **EASTING** 184825.111 ft

DRILLING METHOD Hollow Stem Auger

GROUNDWATER AT TIME OF DRILLING Depth +/- 6.40 ft / Elev 951.61 ft ∇

LOGGED BY KYLE WARREN **CHECKED BY** OWEN POTTS

GROUNDWATER AFTER DRILLING ---

SAMPLING METHODS Hollow Stem Auger

WEATHER

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0.0						TOPSOIL AND GRAVEL	
0.5							957.5
	SS 1	67	3-8-11-13 (19)	SM		(SM) (FILL) SILTY FINE SAND, LITTLE ANGULAR GRAVEL, TRACE CLAY, ORGANICS, MEDIUM DENSE, MOIST, NON PLASTIC, BROWN	
						GRADES TO FINE TO MEDIUM SAND	
2.5	SS 2	92	7-7-8-8 (15)			BULK SAMPLE (BS-1) TAKEN FROM CUTTINGS 3.0-5.5' BGS	
						GRADES TO NO GRAVEL PRESENT, LESS SILT WITH DEPTH, MOTTLED, BROWN TO DARK GREY	
5.0	SS 3	83	4-4-5-6 (9)			GRADES TO MEDIUM DENSE, WET	
						∇	
7.5	SS 4	58	5-5-5-6 (10)			GRADES TO SATURATED, LOOSE, BROWN TO DARK BROWN	
	SS 5	58	4-4-4-7 (8)				
10.0							948.0

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION WOODS POND PITTSFIELD, MA UTILITY DRIVE PITTSFIELD, MA

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION	
10.0	SS 6	63	3-2-5-2 (7)	SW	⁘		(SW) WELL GRADED FINE TO COARSE SAND, FEW SILT, LOOSE, SATURATED, NON PLASTIC, BROWN AND DARK BROWN	
						12.0		946.0
12.5	SS 7	67	4-6-7-8 (13)	SP	⁘		(SP) POORLY GRADED FINE SAND, TRACE SILT, MEDIUM DENSE, WET, NON PLASTIC, BROWN TO DARK BROWN	
							GRADES TO COARSER SAND, SAND BINDING AUGERS DURING DRILLING	
15.0	SS 8	117	4-6-6-5 (12)					
							GRADES TO TRACE GRAVEL, LOOSE	
17.5	SS 9	83	3-2-3-4 (5)					
							GRADES TO LITTLE SILT, MEDIUM DENSE	
	SS 10	100	4-7-9-5 (16)					
20.0						20.0		938.0

Borehole terminated at 20.0 ft BGS.

NOTES:
1. All Elevations in NAVD88
2. All Easting and Northing are in NAD83, Massachusetts Mainland Zone

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION UTILITY DRIVE PITTSFIELD, MA WOODS POND PITTSFIELD, MA

DATE STARTED 10/2/25 **COMPLETED** 10/2/25

GROUND ELEVATION 958.005 ft - **HOLE SIZE** 6" -

DRILLING CONTRACTOR Parratt Wolff, Inc

NORTHING 2958292.561 ft **EASTING** 184939.921 ft

DRILLING METHOD Hollow Stem Auger

GROUNDWATER AT TIME OF DRILLING Depth +/- 5.00 ft / Elev 953.01 ft ∇

LOGGED BY KYLE WARREN **CHECKED BY** OWEN POTTS

GROUNDWATER AFTER DRILLING ---

SAMPLING METHODS Hollow Stem Auger

WEATHER

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0.0						0.2 GRAVEL ROADWAY	957.8
	SS 1	29	6-5-6-5 (11)	SP		(SP) POORLY GRADED FINE SAND, SOME ANGULAR GRAVEL, LITTLE SILT, ORGANICS, MEDIUM DENSE, MOIST, NON PLASTIC, DARK BROWN TO LIGHT BROWN AUGERS GRINDING 1-2' BGS, BULK SAMPLE (BS-1) TAKEN AT GROUND SURFACE TO 2' BGS GRADES TO FEW SILT, TRACE GRAVEL, LIGHT BROWN TO BROWN	
2.5	SS 2	58	4-5-7-7 (12)				
	SS 3	8	7-7-6-4 (13)			GRADES TO WET ∇	
5.0							
						6.0	952.0
	SS 4	33	4-6-8-7 (14)	SM		(SM) SILTY FINE SAND, FEW GRAVEL, MEDIUM DENSE, WET, NON PLASTIC, DARK BROWN TO LIGHT BROWN	
7.5							
						8.0	950.0
	SS 5	58	7-16-12-12 (28)	GP		(GP) POORLY GRADED GRAVEL, SOME SAND, LITTLE SILT, MEDIUM DENSE, WET, NON PLASTIC, BROWN TO WHITE GREY, NOTE: LARGE GRAVEL, 1-2", AND FINE GRAVEL PRESENT	
10.0						10.0	948.0

(Continued Next Page)

BORING NO. GT-WP-02

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ARCADIS

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CLIENT GENERAL ELECTRIC COMPANY

PROJECT NAME HOUSATONIC REST OF RIVER - PDI

PROJECT NUMBER 30177139.0003

PROJECT LOCATION WOODS POND PITTSFIELD, MA UTILITY DRIVE PITTSFIELD, MA

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
10.0	SS 6	25	16-9-9-8 (18)	GP		(GP) POORLY GRADED FINE GRAVEL, SOME SAND, LITTLE SILT, MEDIUM DENSE, NON PLASTIC, BROWN TO GREY	
					12.0		946.0
12.5	SS 7	33	8-3-3-5 (6)	SP		(SP) POORLY GRADED SAND, SOME GRAVEL, FEW SILT, LOOSE, NON PLASTIC, BROWN TO GREY	
15.0	SS 8	50	15-9-6-10 (15)			GRADES TO MEDIUM DENSE, 1.0' DIAMETER ROCKS/GRAVEL PRESENT AUGER GRINDING 15-17' BGS	
17.5	SS 9	67	7-11-7-7 (18)			GRADES TO FINE GRAVEL	
					18.0		940.0
	SS 10	58	23-16-18-24 (34)	GP-GM		(GP-GM) SILTY FINE TO COARSE GRAVEL, SOME LITTLE TO FINE SAND, DENSE, NON PLASTIC, BROWN TO GREY	
20.0					20.0		938.0

Borehole terminated at 20.0 ft BGS.

NOTES:

1. All Elevations in NAVD88
2. All Easting and Northing are in NAD83, Massachusetts Mainland Zone

Anchor QEA

1201 3rd Avenue Suite 2600 Seattle, WA 98101
Phone: (206) 287-9130

Geotechnical Log - Borehole

SA-B-04

UTM	: 18T	**Drill Rig**	: CME-45 - Hollow Stem Auger	**Job Number**	: 240469-05.01
Latitude	: 42.41425	**Driller Supplier**	: Parratt-Wolff	**Client**	: General Electric
Longitude	: -73.24331	**Logged By**	: Kelly Thigpen	**Project**	: Housatonic Reach 5A
Ground Elevation	: 993.7 (Ft)	**Reviewed By**	: Kelly Thigpen	**Location**	: 300 Pomeroy Ave, Pittsfield, MA 01201, USA
Total Depth	: 50 Ft BGL	**Date**	: 10/03/2024	**Loc Comment**	:

Depth (ft)	Elevation (ft)	Sample ID	Sampler Type	Blow Counts	Recovery	SPT>Blows	Graphic Log	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
0.0	993.7	R5A-SA-B-04-0-2	☒	1, 2, 4, 4	24 "	6		Poorly Graded Sand with Silt - (SP-SM): dry, loose, black, fine to medium sand.	%200
	990.0								
5.0		R5A-SA-B-04-5-7	☒	2, 2, 4, 3	24 "	6			
	985.0								
10.0		R5A-SA-B-04-10-12	☒	2, 2, 2, 2	24 "	4 ●			%M
								Silty Sand - (SM): slightly moist, loose, brown, fine sand.	
	980.0								
15.0		R5A-SA-B-04-15-17	☒	1, 2, 1, 1	24 "	3			%200
	975.0								
20.0		R5A-SA-B-04-20-22	☒	1, 2, 2, 2	24 "	4			
	970.0								
25.0		R5A-SA-B-04-25-27	☒	3, 2, 3, 3	10 "	5			
	965.0							Poorly Graded Sand - (SP): slightly moist, medium dense, brown, fine sand.	
30.0		R5A-SA-B-04-30-32	☒	4, 5, 6, 5	14 "	11			
	960.0								
35.0		R5A-SA-B-04-35-37	☒	4, 4, 5, 6	8 "	9			
	955.0								

SPT>Blows scale: 10 20 30 40 50 60 70 80 90 100; PL, MC, LL: 10 20 30 40 50 60 70 80 90 100

ANCHOR QEA

1201 Third Avenue
Suite 2600 Seattle, WA 98101

- ▼ SPT N-Value
- ● Moisture Content (%)
- ■ Atterberg Limits
- ⍂ Shelby Tube
- ☒ Split Spoon/Grab
- ⧓ Modified California Sample

Notes:
%M= Percent Moisture Content, SG= Specific Gravity, ATT= Atterberg Limits, GSD= Grain Size Distribution, OC= Organic Content, %200= Percent Passing #200 Sieve, BD= Bulk Density, CU= Consolidated Undrained Triaxial

Geotechnical Log - Borehole

SA-B-04

UTM	: 18T	**Drill Rig**	: CME-45 - Hollow Stem Auger	**Job Number**	: 240469-05.01
Latitude	: 42.41425	**Driller Supplier**	: Parratt-Wolff	**Client**	: General Electric
Longitude	: -73.24331	**Logged By**	: Kelly Thigpen	**Project**	: Housatonic Reach 5A
Ground Elevation	: 993.7 (Ft)	**Reviewed By**	: Kelly Thigpen	**Location**	: 300 Pomeroy Ave, Pittsfield, MA 01201, USA
Total Depth	: 50 Ft BGL	**Date**	: 10/03/2024	**Loc Comment**	:

Depth (ft)	Elevation (ft)	Sample ID	Sampler Type	Blow Counts	Recovery	SPT>Blows	Graphic Log	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
		R5A-SA-B-04-40-42	☒	5, 5, 8, 7	7 "	13		Poorly Graded Sand - (SP): slightly moist, medium dense, brown, fine sand. (continued)	
	950.0								
45.0		R5A-SA-B-04-45-47	☒	1, 3, 4, 6	24 "	7			
	945.0	R5A-SA-B-04-48-50	☒	12, 12, 9, 14	24 "	21		Poorly Graded Sand with Silt - (SP-SM): wet, medium dense, brown, fine sand.	
								SA-B-04 Terminated at 50 Ft	

SPT>Blows scale: 10 20 30 40 50 60 70 80 90 100
PL MC LL: 10 20 30 40 50 60 70 80 90 100

1201 Third Avenue
Suite 2600 Seattle, WA 98101

- ▼ SPT N-Value
- ● Moisture Content (%)
- ■ Atterberg Limits
- ▨ Shelby Tube
- ☒ Split Spoon/Grab
- ⧓ Modified California Sample

Notes:
%M= Percent Moisture Content, SG= Specific Gravity, ATT= Atterberg Limits, GSD= Grain Size Distribution, OC= Organic Content, %200= Percent Passing #200 Sieve, BD= Bulk Density, CU= Consolidated Undrained Triaxial

Attachment B-2

Geotechnical Laboratory Test Results

GeoTesting
EXPRESS
A Sercel Business

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Transmittal

TO:

Kyle Warren
ARCADIS U.S., Inc.
110 West Fayette St, Suite 300
Syracuse, NY 13214-0066

DATE: 12/8/2025	GTX NO: 321976
RE: ARC31156 GE Housatonic ROR	

COPIES	DATE	DESCRIPTION
	12/8/2025	**Nov 2025 Laboratory Test Report**

REMARKS:

SIGNED:

Dave Norton, Assistant Laboratory Manager

APPROVED BY: Ayushi Kale

Ayushi Kale, Laboratory Manager

GeoTesting EXPRESS
A Sercel Business

Boston
New York
Atlanta
Chicago
Los Angeles
Houston
www.geotesting.com

December 8, 2025

Kyle Warren
ARCADIS U.S., Inc.
110 West Fayette St, Suite 300
Syracuse, NY 13214-0066

RE: ARC31156 GE Housatonic ROR, Pittsfield & Lennox MA (GTX-321976)

Dear Kyle:

Enclosed are the test results you requested for the above referenced project. GeoTesting Express, LLC (GTX) received 19 samples from you on 10/8/2025. These samples were labeled as follows:

Boring Number	Sample Number	Depth
BS-UD-01	BS-1	0-3
GT-UD-01	S-10	18-20
GT-UD-01	S-2	2-4
GT-UD-01	S-5	8-10
GT-UD-01	S-8	14-16
GT-UD-02	BS-1	3-5.5
GT-UD-02	S-10	18-20
GT-UD-02	S-2	2-4
GT-UD-02	S-4	6-8
GT-UD-02	S-7	12-14
GT-WP-01	BS-1	3-5
GT-WP-01	S-10	18-20
GT-WP-01	S-3	4-6
GT-WP-01	S-6	10-12
GT-WP-02	BS-1	0-2
GT-WP-02	S-10	18-20
GT-WP-02	S-2	2-4
GT-WP-02	S-4	6-8
GT-WP-02	S-7	12-14

GTX performed the following tests on these samples:

15 ASTM D2216 - Moisture Content
7 ASTM D4318 - Atterberg Limits
15 ASTM D6913 - Sieve Analysis
1 ASTM D1557 - Modified Proctor (Method A or B)

3 ASTM D1883 - California Bearing Ratio (3 points)

The results presented in this report apply only to the items tested. This report shall not be reproduced except in full, without written approval from GeoTesting Express. The remainder of these samples will be retained for a period of sixty (60) days and will then be discarded unless otherwise notified by you. Please call me if you have any questions or require additional information. Thank you for allowing GeoTesting Express the opportunity of providing you with testing services. We look forward to working with you again in the future.

Respectfully yours,

Dave Norton
Assistant Laboratory Manager

Boston
New York
Atlanta
Chicago
Los Angeles
Houston
www.geotesting.com

Geotechnical Test Report **12/8/2025**

GTX-321976

ARC31156 GE Housatonic ROR

Pittsfield & Lennox MA

Client Project No.: 30177139.0003

Prepared for:

ARCADIS U.S., Inc.

GeoTesting EXPRESS
A Sercel Business

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	---	Sample Type:	---	Tested By:	ajl
Sample ID:	---	Test Date:	10/14/25	Checked By:	jsc
Depth :	---	Test Id:	838552		

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content,%
GT-UD-01	S- 2	2-4	Moist, dark yellowish brown sandy silt	12.9
GT-UD-01	S- 5	8-10	Moist, grayish brown sand with silt	6.2
GT-UD-01	S- 8	14-16	Moist, light brown silty sand with gravel	14.3
GT-UD-01	S- 10	18-20	Moist, light olive brown silty sand with gravel	14.1
GT-UD-02	S- 2	2-4	Moist, dark reddish brown silty sand	16.1
GT-UD-02	S- 4	6-8	Moist, light brown silty sand	15.7
GT-UD-02	S- 7	12-14	Moist, grayish brown silty sand	39.5
GT-UD-02	S- 10	18-20	Moist, dark olive brown silty sand	34.5

Notes: Temperature of Drying : 110º Celsius

printed 10/22/2025 10:24:06 AM

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	---	Sample Type:	---	Tested By:	ajl
Sample ID:	---	Test Date:	10/14/25	Checked By:	jsc
Depth :	---	Test Id:	838559		

Moisture Content of Soil and Rock - ASTM D2216

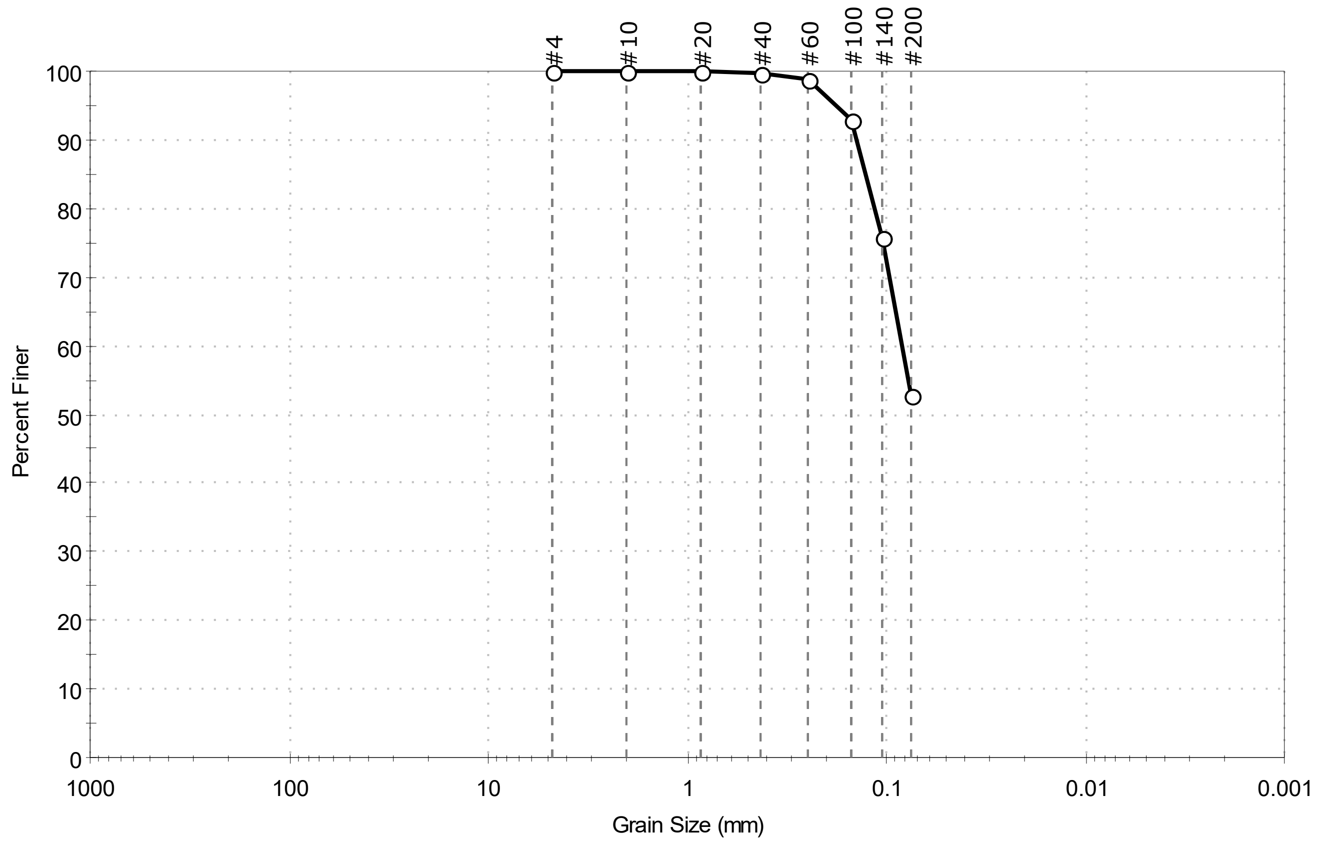
Boring ID	Sample ID	Depth	Description	Moisture Content,%
GT-WP-01	S- 3	4-6	Moist, light brown silty sand	19.2
GT-WP-01	S- 6	10-12	Moist, brown sand with silt	26.5
GT-WP-01	S- 10	18-20	Moist, grayish brown silty sand	20.4
GT-WP-02	S- 2	2-4	Moist, light brown sand with silt	3.8
GT-WP-02	S- 4	6-8	Moist, brownish gray silty sand	17.3
GT-WP-02	S- 7	12-14	Moist, light brown sand with silt and gravel	13.0
GT-WP-02	S- 10	18-20	Moist, light brown silty gravel	15.1

Notes: Temperature of Drying : 110º Celsius

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-01	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-2	Test Date:	10/15/25	Checked By:	jsc
Depth :	2-4	Test Id:	838568		

Test Comment: ---
Visual Description: Moist, dark yellowish brown sandy silt
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	47.3	52.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	93		
#140	0.11	76		
#200	0.075	53		

Coefficients

D_{85} =0.1277 mm	D_{30} =N/A
D_{60} =0.0836 mm	D_{15} =N/A
D_{50} =N/A	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM	Sandy SILT (ML)
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

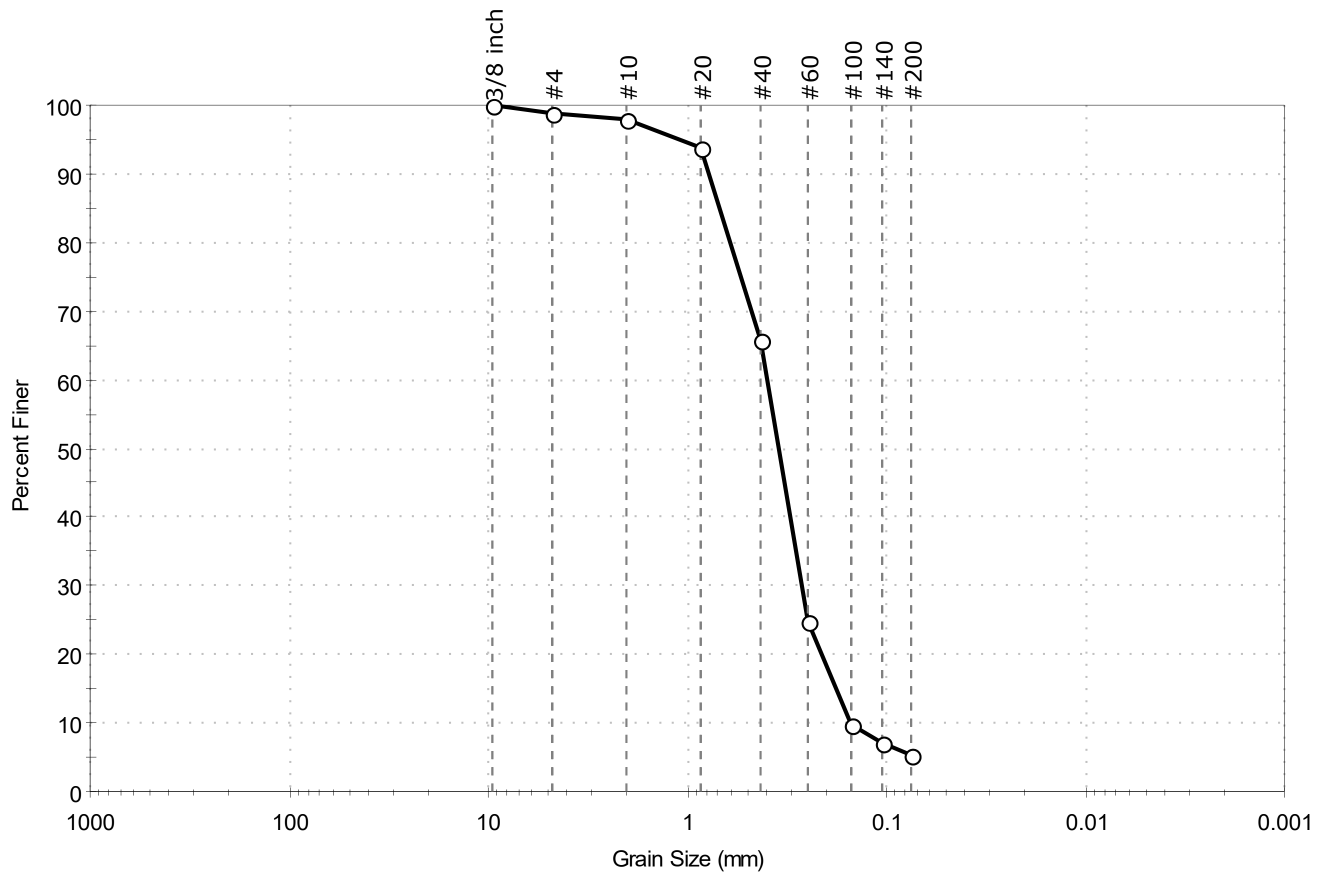
Sand/Gravel Hardness : ---

printed 10/22/2025 10:21:08 AM

GeoTesting EXPRESS
A Sercel Business

Client: ARCADIS U.S., Inc.
Project: ARC31156 GE Housatonic ROR
Location:
Project No: GTX-321976
Boring ID: GT-UD-01
Sample Type: Jar
Tested By: ajl
Sample ID: S-5
Test Date: 10/15/25
Checked By: jsc
Depth : 8-10
Test Id: 838569
Test Comment: ---
Visual Description: Moist, grayish brown sand with silt
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.1	93.6	5.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/8 inch	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	94		
#40	0.42	66		
#60	0.25	25		
#100	0.15	10		
#140	0.11	7		
#200	0.075	5.3		

Coefficients

D_{85} =0.6839 mm	D_{30} =0.2671 mm
D_{60} =0.3941 mm	D_{15} =0.1789 mm
D_{50} =0.3461 mm	D_{10} =0.1511 mm
C_u =2.608	C_c =1.198

Classification

ASTM	Poorly graded SAND with Silt (SP-SM)
AASHTO	Fine Sand (A-3 (1))

Sample/Test Description

Sand/Gravel Particle Shape : ---

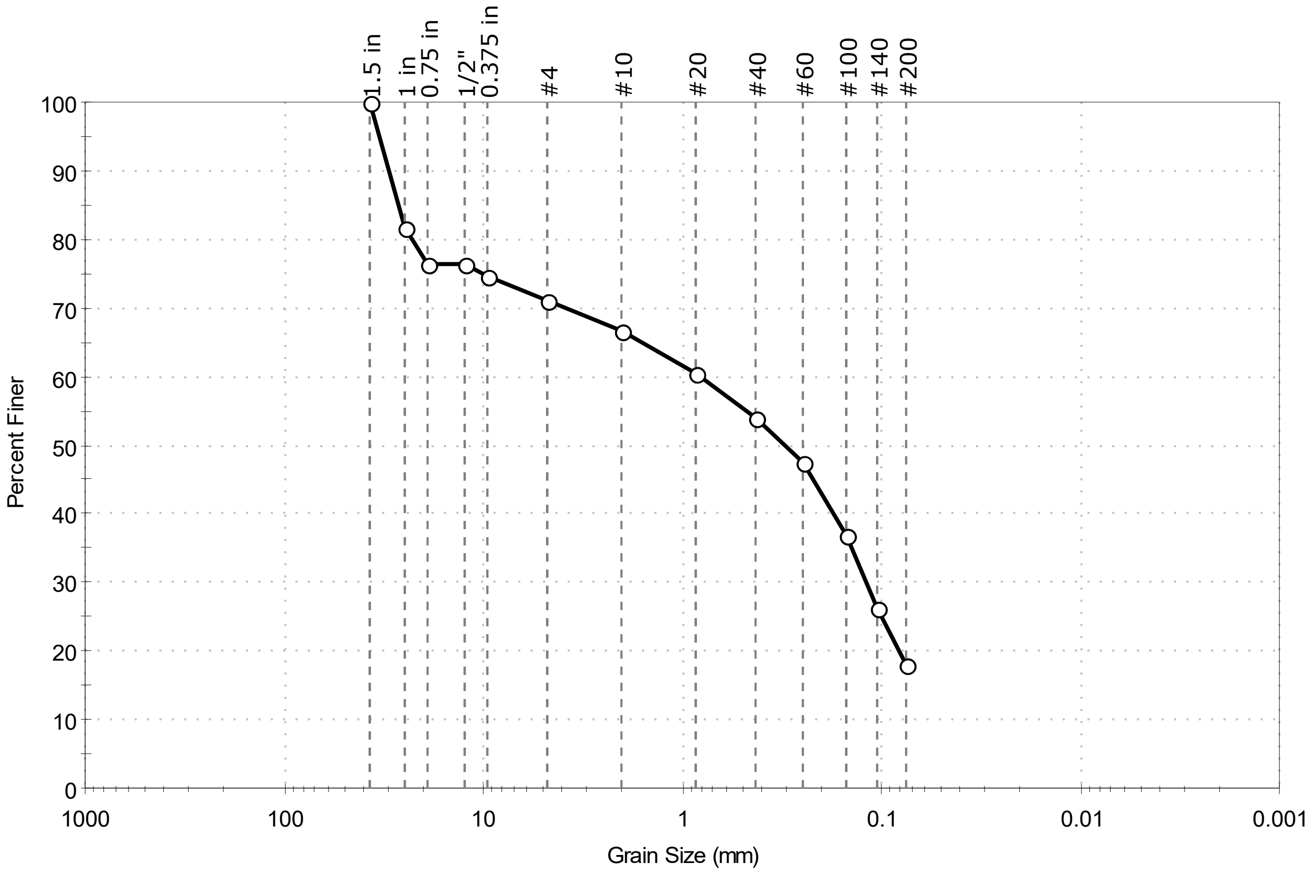
Sand/Gravel Hardness : ---

printed 10/22/2025 10:21:09 AM

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-01	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-8	Test Date:	10/15/25	Checked By:	jsc
Depth :	14-16	Test Id:	838570		

Test Comment: ---
Visual Description: Moist, light brown silty sand with gravel
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	28.8	53.3	17.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	82		
0.75 in	19.00	76		
1/2"	12.50	76		
0.375 in	9.50	75		
#4	4.75	71		
#10	2.00	67		
#20	0.85	61		
#40	0.42	54		
#60	0.25	47		
#100	0.15	37		
#140	0.11	26		
#200	0.075	18		

Coefficients

D_{85} =26.9453 mm
D_{30} =0.1202 mm
D_{60} =0.8040 mm
D_{15} =N/A
D_{50} =0.3070 mm
D_{10} =N/A
C_u =N/A
C_c =N/A

Classification

ASTM Silty SAND with Gravel (SM)

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

printed 10/22/2025 10:21:10 AM

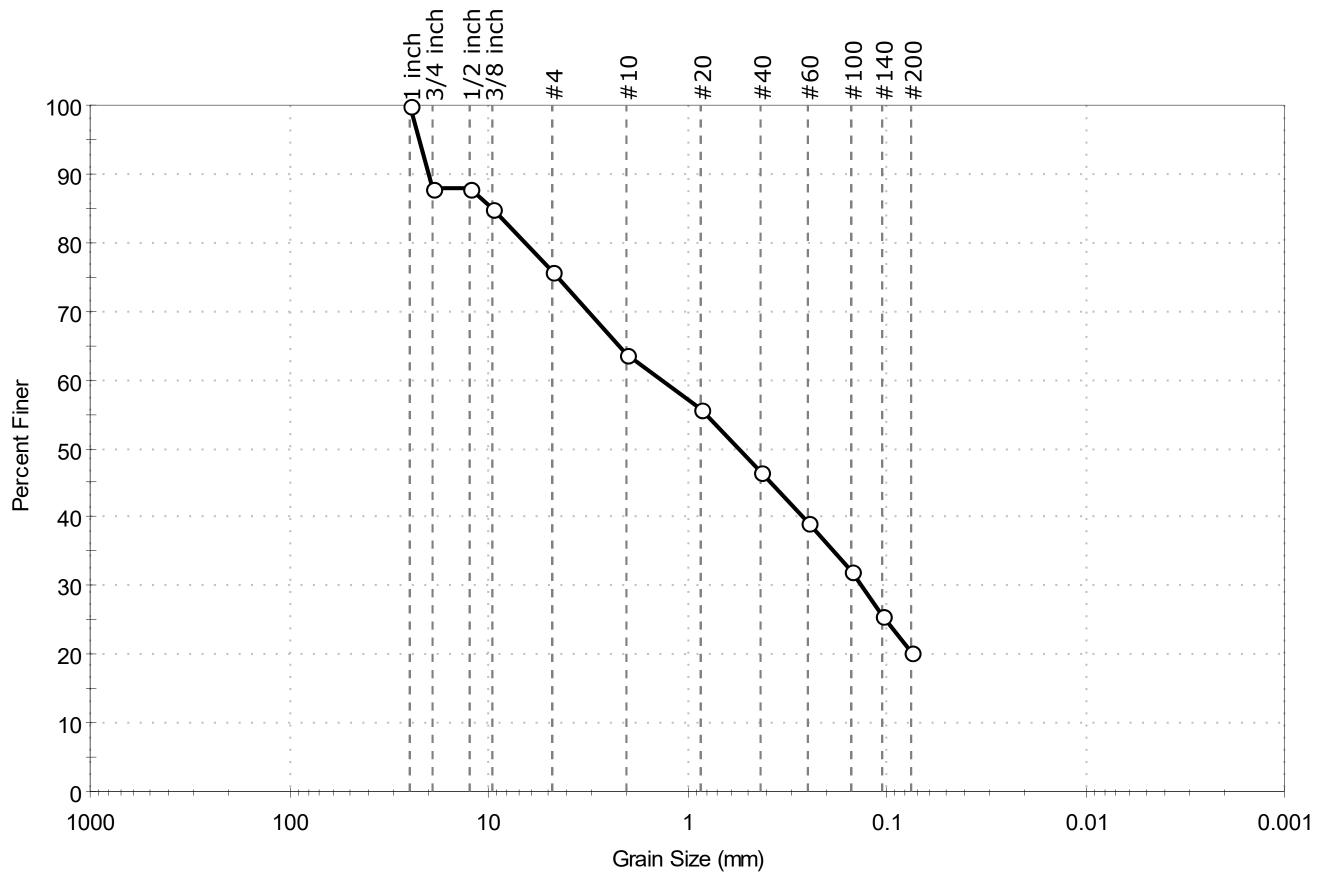
GeoTesting EXPRESS
A Sercel Business

Client: ARCADIS U.S., Inc.
Project: ARC31156 GE Housatonic ROR
Location:
Project No: GTX-321976

Boring ID: GT-UD-01
Sample Type: Jar
Tested By: ajl
Sample ID: S-10
Test Date: 10/15/25
Checked By: jsc
Depth : 18-20
Test Id: 838571

Test Comment: ---
Visual Description: Moist, light olive brown silty sand with gravel
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	24.3	55.4	20.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 inch	25.00	100		
3/4 inch	19.00	88		
1/2 inch	12.50	88		
3/8 inch	9.50	85		
#4	4.75	76		
#10	2.00	64		
#20	0.85	56		
#40	0.42	47		
#60	0.25	39		
#100	0.15	32		
#140	0.11	26		
#200	0.075	20		

Coefficients

D_{85} =9.5840 mm
D_{30} =0.1338 mm
D_{60} =1.3502 mm
D_{15} =N/A
D_{50} =0.5476 mm
D_{10} =N/A
C_u =N/A
C_c =N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

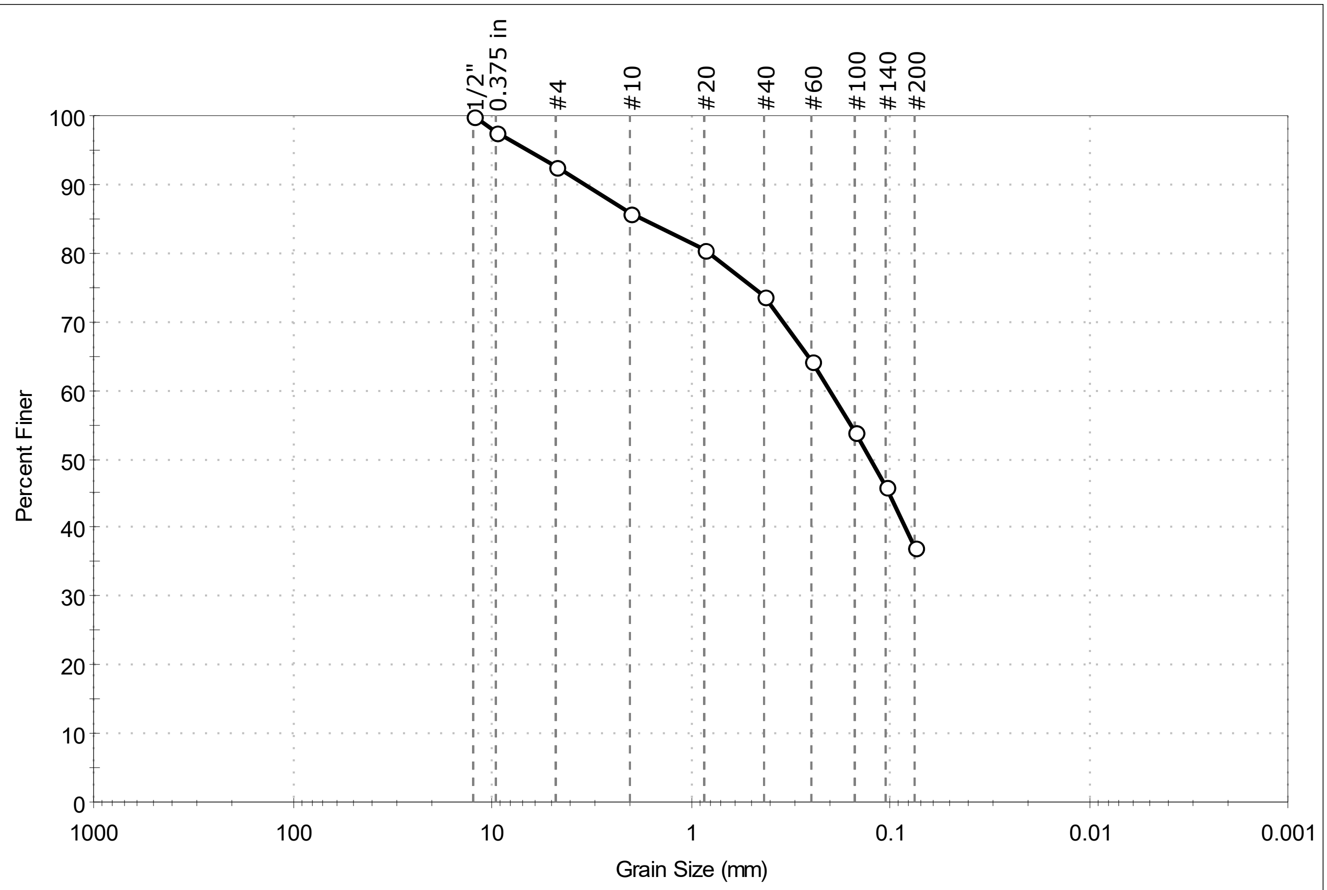
Sand/Gravel Hardness : HARD

printed 10/22/2025 10:21:10 AM

Client:	ARCADIS U.S., Inc.			
Project:	ARC31156 GE Housatonic ROR			
Location:			Project No:	GTX-321976
Boring ID:	GT-UD-02	Sample Type: Jar	Tested By:	ajl
Sample ID:	S-2	Test Date: 10/16/25	Checked By:	jsc
Depth :	2-4	Test Id: 838572		

Test Comment: ---
Visual Description: Moist, dark reddish brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	7.4	55.5	37.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1/2"	12.50	100		
0.375 in	9.50	98		
#4	4.75	93		
#10	2.00	86		
#20	0.85	81		
#40	0.42	74		
#60	0.25	64		
#100	0.15	54		
#140	0.11	46		
#200	0.075	37		

Coefficients

D_{85} =1.7565 mm	D_{30} =N/A
D_{60} =0.2023 mm	D_{15} =N/A
D_{50} =0.1265 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM	Silty SAND (SM)
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

printed 10/22/2025 10:21:11 AM

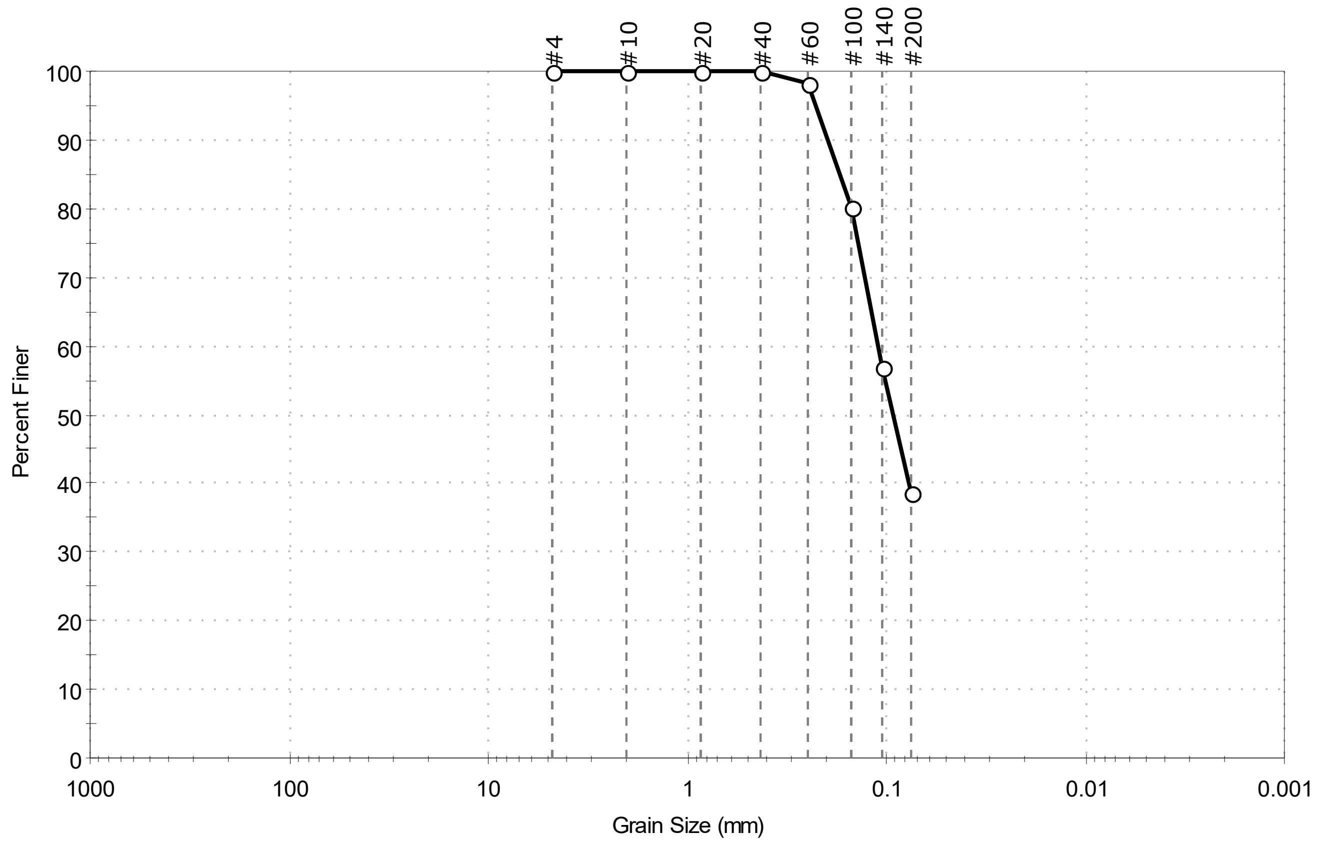
Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-4	Test Date:	10/15/25	Checked By:	jsc
Depth :	6-8	Test Id:	838573		

Test Comment: ---

Visual Description: Moist, light brown silty sand

Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	61.5	38.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	98		
#100	0.15	80		
#140	0.11	57		
#200	0.075	39		

Coefficients

D_{85} =0.1723 mm	D_{30} =N/A
D_{60} =0.1110 mm	D_{15} =N/A
D_{50} =0.0930 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM	Silty SAND (SM)
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

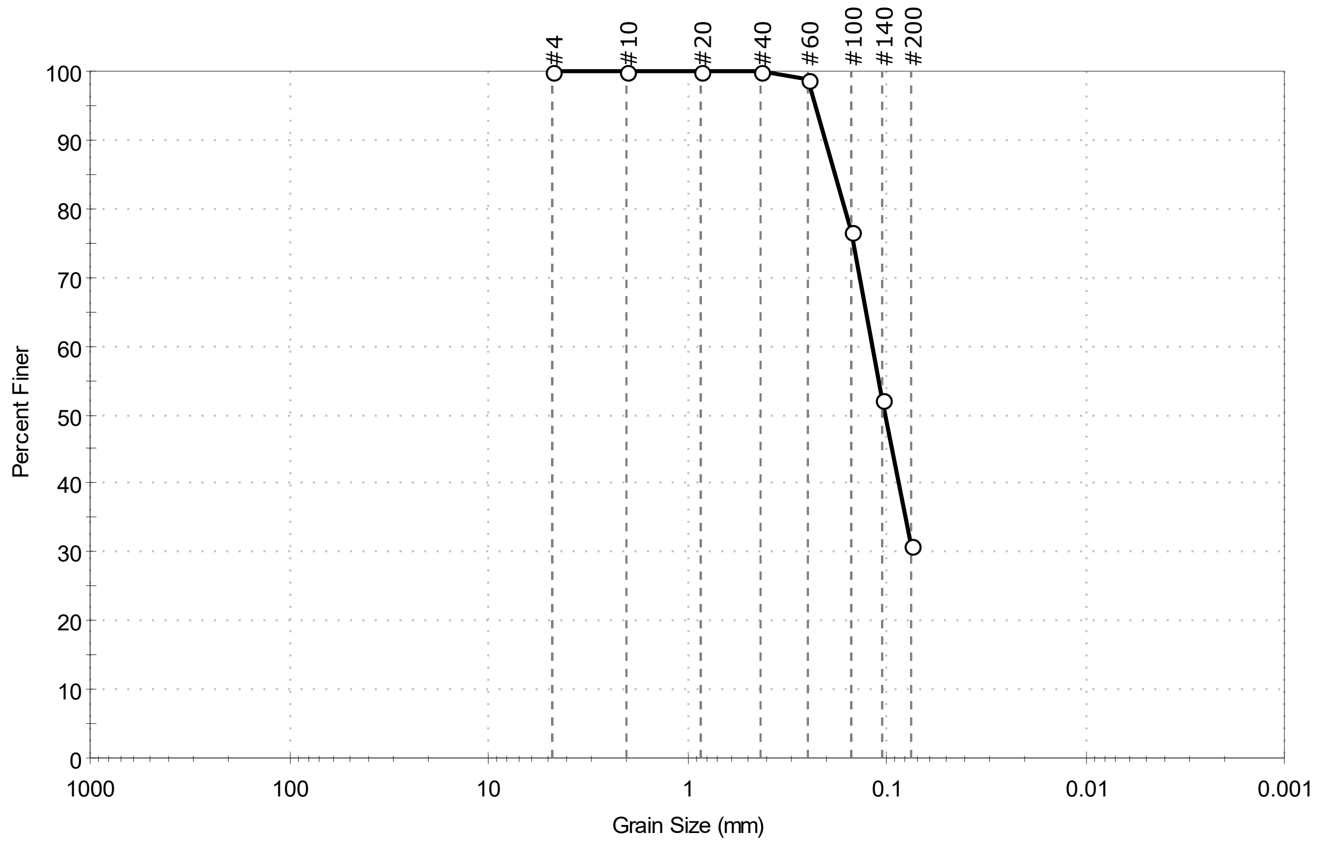
Sand/Gravel Hardness : ---

printed 10/22/2025 10:21:12 AM

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-7	Test Date:	10/17/25	Checked By:	jsc
Depth :	12-14	Test Id:	838574		

Test Comment: ---
Visual Description: Moist, grayish brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	69.0	31.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	77		
#140	0.11	52		
#200	0.075	31		

Coefficients

D_{85} =0.1816 mm	D_{30} =N/A
D_{60} =0.1184 mm	D_{15} =N/A
D_{50} =0.1023 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM	Silty SAND (SM)
AASHTO	Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

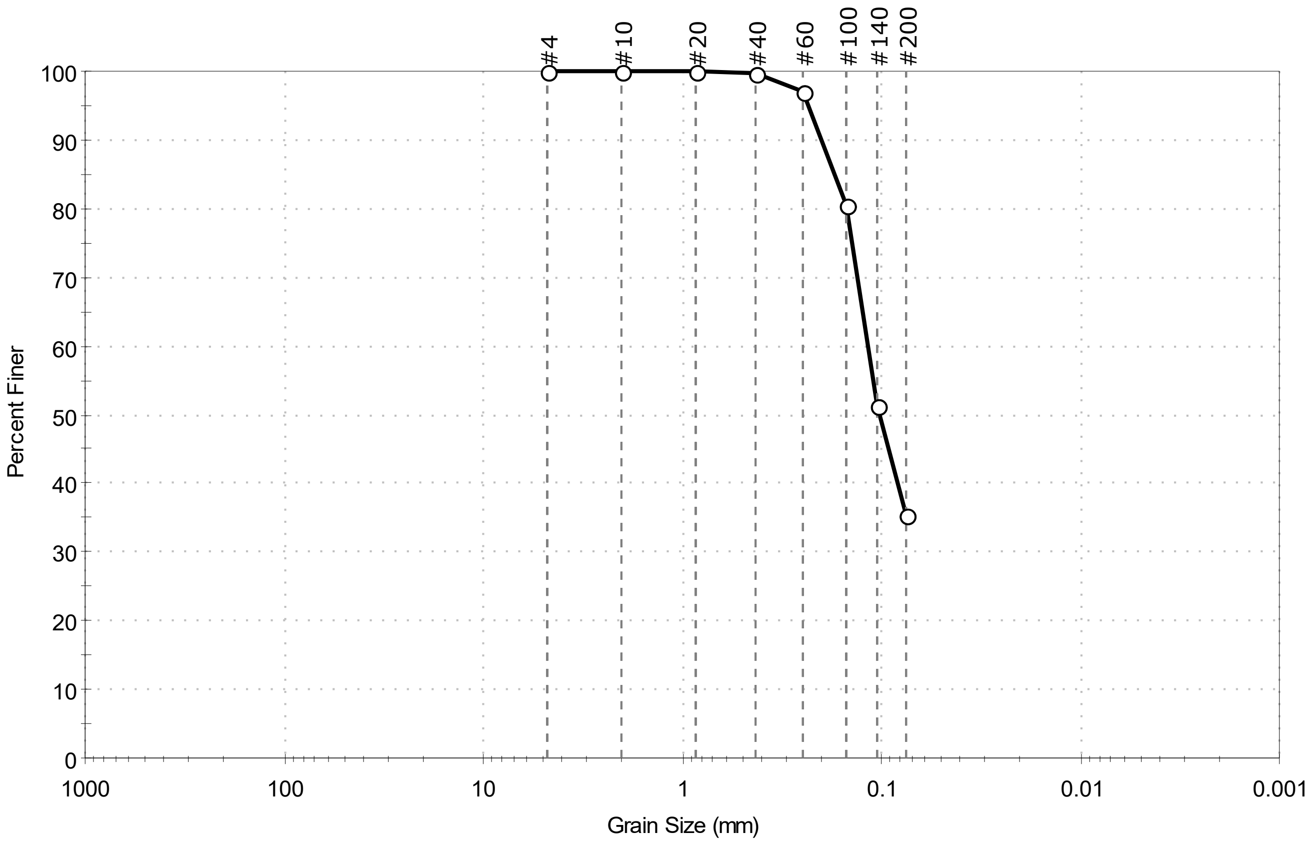
printed 10/22/2025 10:21:13 AM

Client:	ARCADIS U.S., Inc.		
Project:	ARC31156 GE Housatonic ROR		
Location:		Project No:	GTX-321976

Boring ID:	GT-UD-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-10	Test Date:	10/16/25	Checked By:	jsc
Depth :	18-20	Test Id:	838575		

Test Comment: ---
Visual Description: Moist, dark olive brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	64.5	35.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	97		
#100	0.15	80		
#140	0.11	51		
#200	0.075	36		

Coefficients

D_{85} =0.1725 mm	D_{30} =N/A
D_{60} =0.1174 mm	D_{15} =N/A
D_{50} =0.1028 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

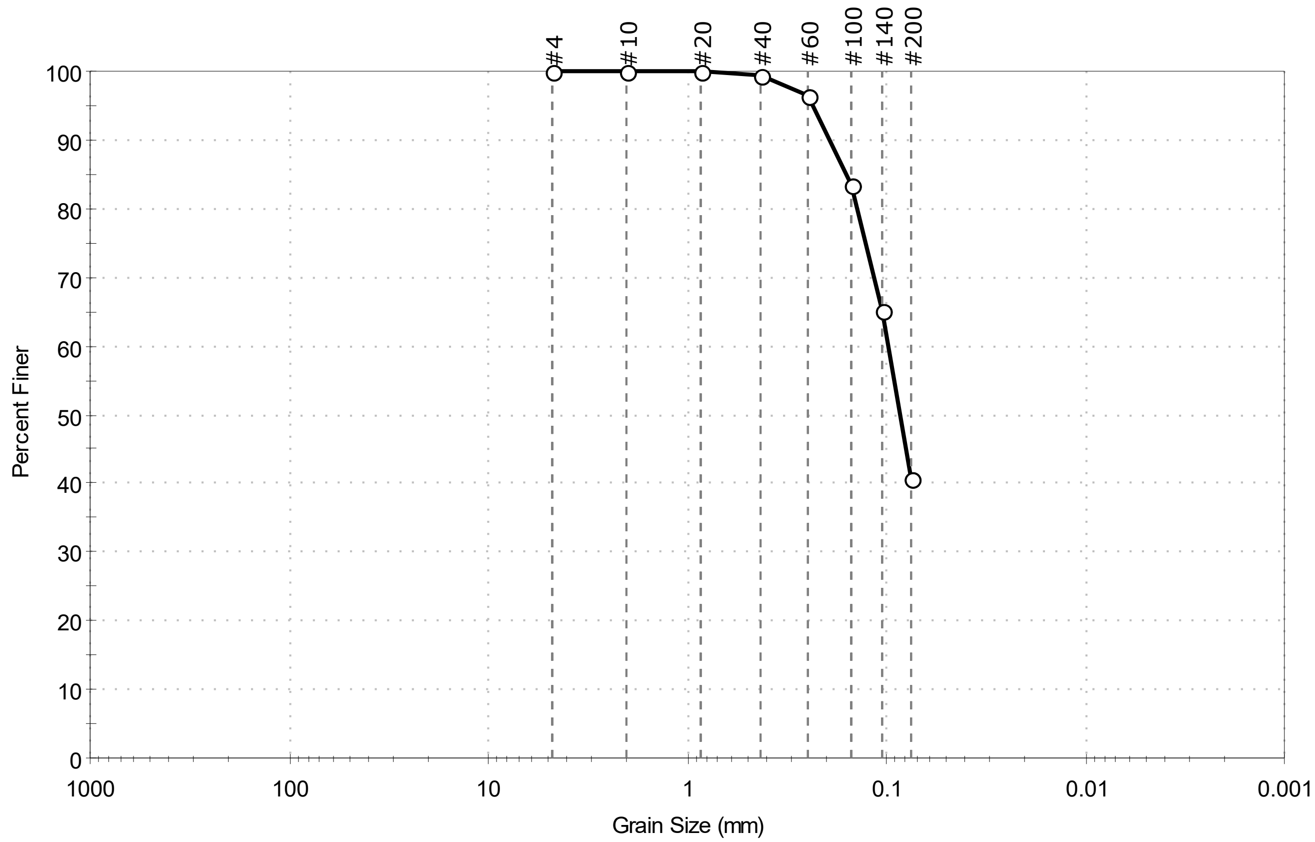
Sand/Gravel Hardness : ---

Client: ARCADIS U.S., Inc.
Project: ARC31156 GE Housatonic ROR
Location:
Project No: GTX-321976

Boring ID:	GT-WP-01	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-3	Test Date:	10/15/25	Checked By:	jsc
Depth :	4-6	Test Id:	838576		

Test Comment: ---
Visual Description: Moist, light brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	59.4	40.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	99		
#60	0.25	96		
#100	0.15	83		
#140	0.11	65		
#200	0.075	41		

Coefficients

D_{85} =0.1598 mm
D_{30} =N/A
D_{60} =0.0986 mm
D_{15} =N/A
D_{50} =0.0856 mm
D_{10} =N/A
C_u =N/A
C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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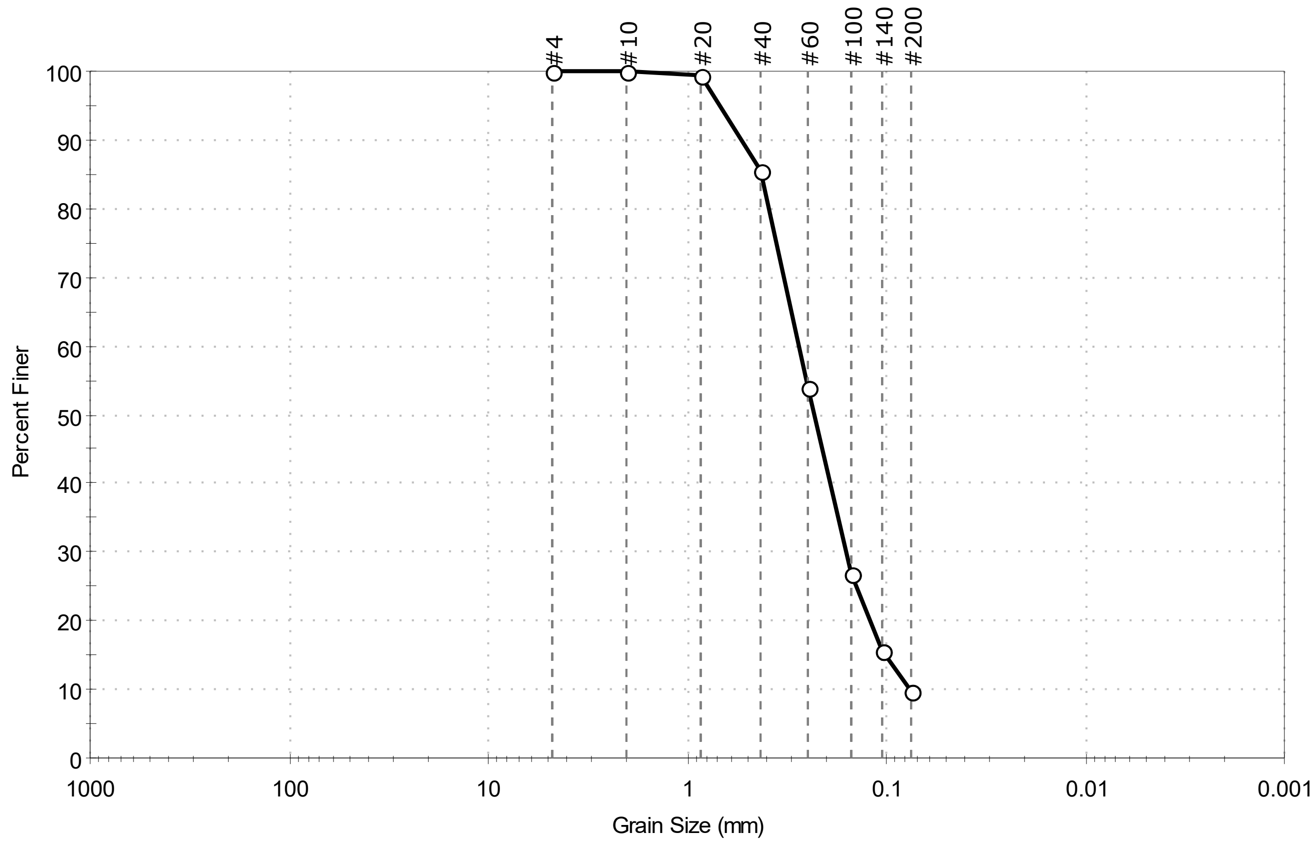
Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-WP-01	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-6	Test Date:	10/15/25	Checked By:	jsc
Depth :	10-12	Test Id:	838577		

Test Comment: ---
Visual Description: Moist, brown sand with silt
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	90.2	9.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	99		
#40	0.42	86		
#60	0.25	54		
#100	0.15	27		
#140	0.11	16		
#200	0.075	9.8		

Coefficients

D_{85} =0.4209 mm	D_{30} =0.1590 mm
D_{60} =0.2764 mm	D_{15} =0.1026 mm
D_{50} =0.2318 mm	D_{10} =0.0759 mm
C_u =3.642	C_c =1.205

Classification

ASTM	N/A
AASHTO	Fine Sand (A-3 (1))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

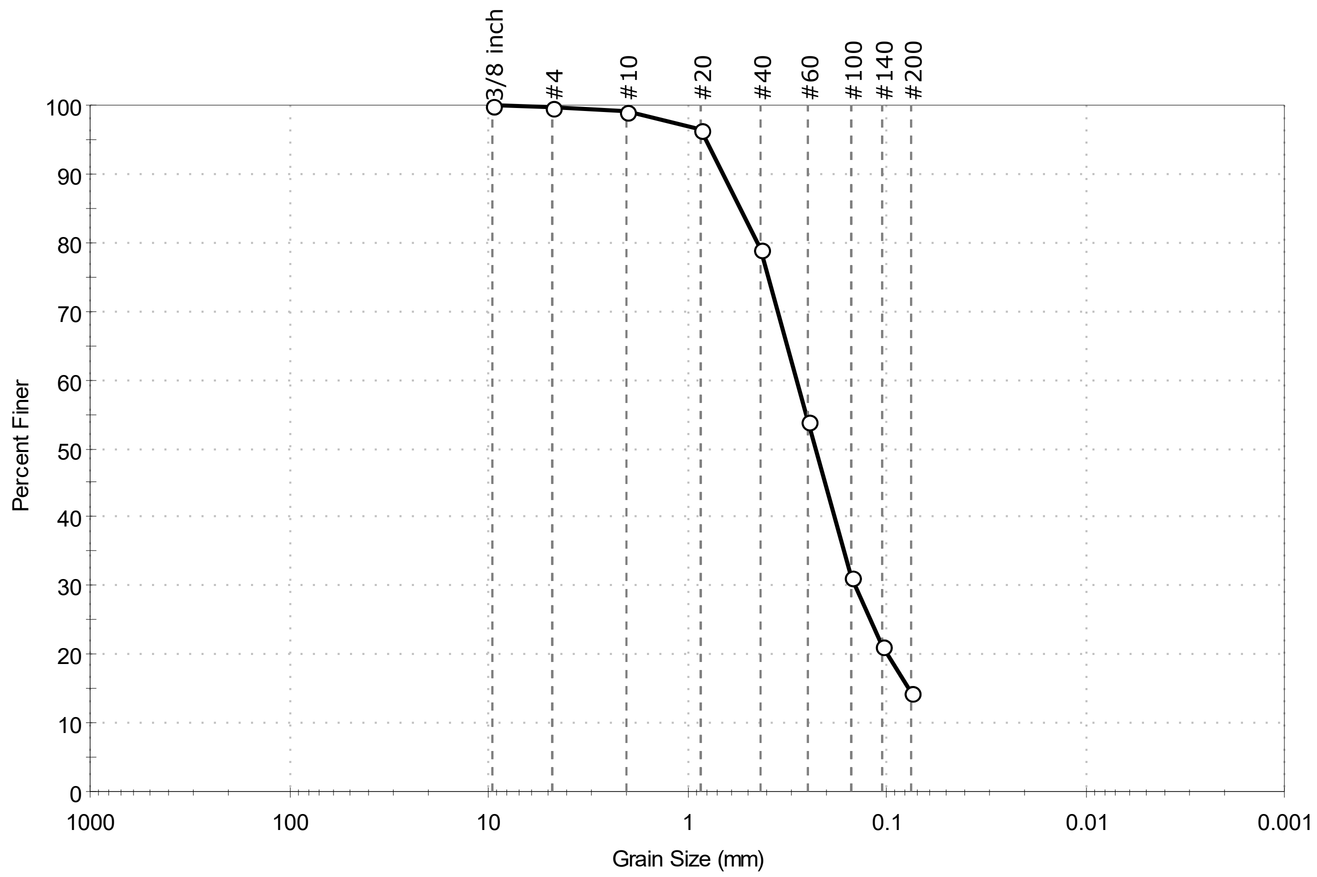
printed 10/22/2025 10:21:14 AM

Client: ARCADIS U.S., Inc.
Project: ARC31156 GE Housatonic ROR
Location:
Project No: GTX-321976

Boring ID: GT-WP-01
Sample ID: S-10
Depth : 18-20
Sample Type: Jar
Test Date: 10/15/25
Test Id: 838578
Tested By: ajl
Checked By: jsc

Test Comment: ---
Visual Description: Moist, grayish brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.2	85.4	14.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/8 inch	9.50	100		
#4	4.75	100		
#10	2.00	99		
#20	0.85	96		
#40	0.42	79		
#60	0.25	54		
#100	0.15	31		
#140	0.11	21		
#200	0.075	14		

Coefficients

D_{85} =0.5404 mm
D_{30} =0.1434 mm
D_{60} =0.2845 mm
D_{15} =0.0773 mm
D_{50} =0.2289 mm
D_{10} =N/A
C_u =N/A
C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

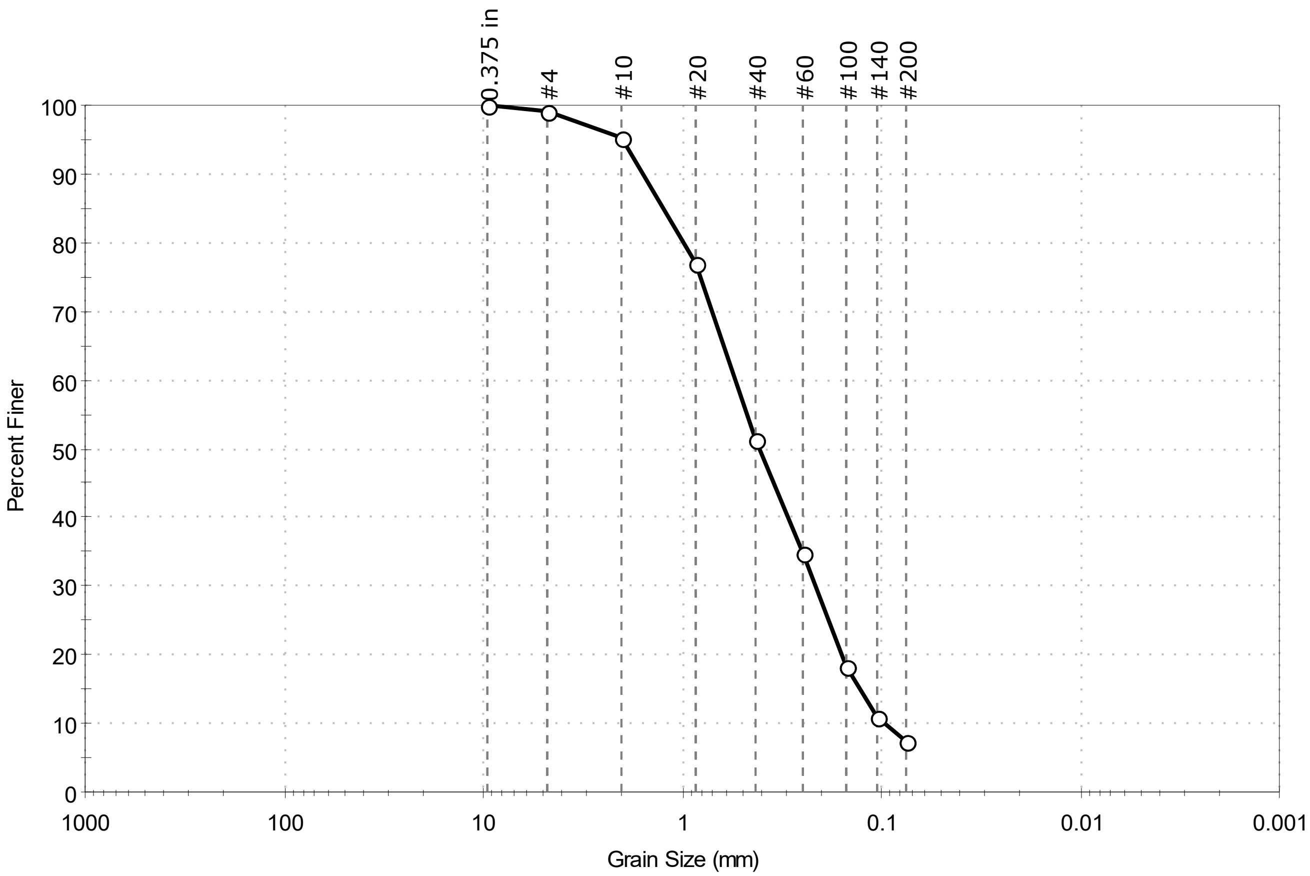
Sand/Gravel Hardness : ---

printed 10/22/2025 10:21:15 AM

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-WP-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-2	Test Date:	10/16/25	Checked By:	jsc
Depth :	2-4	Test Id:	838567		

Test Comment: ---
Visual Description: Moist, light brown sand with silt
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.0	91.6	7.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	95		
#20	0.85	77		
#40	0.42	51		
#60	0.25	35		
#100	0.15	18		
#140	0.11	11		
#200	0.075	7.4		

Coefficients

D_{85} =1.2350 mm	D_{30} =0.2160 mm
D_{60} =0.5371 mm	D_{15} =0.1288 mm
D_{50} =0.4078 mm	D_{10} =0.0976 mm
C_u =5.503	C_c =0.890

Classification

ASTM	N/A
AASHTO	Fine Sand (A-3 (1))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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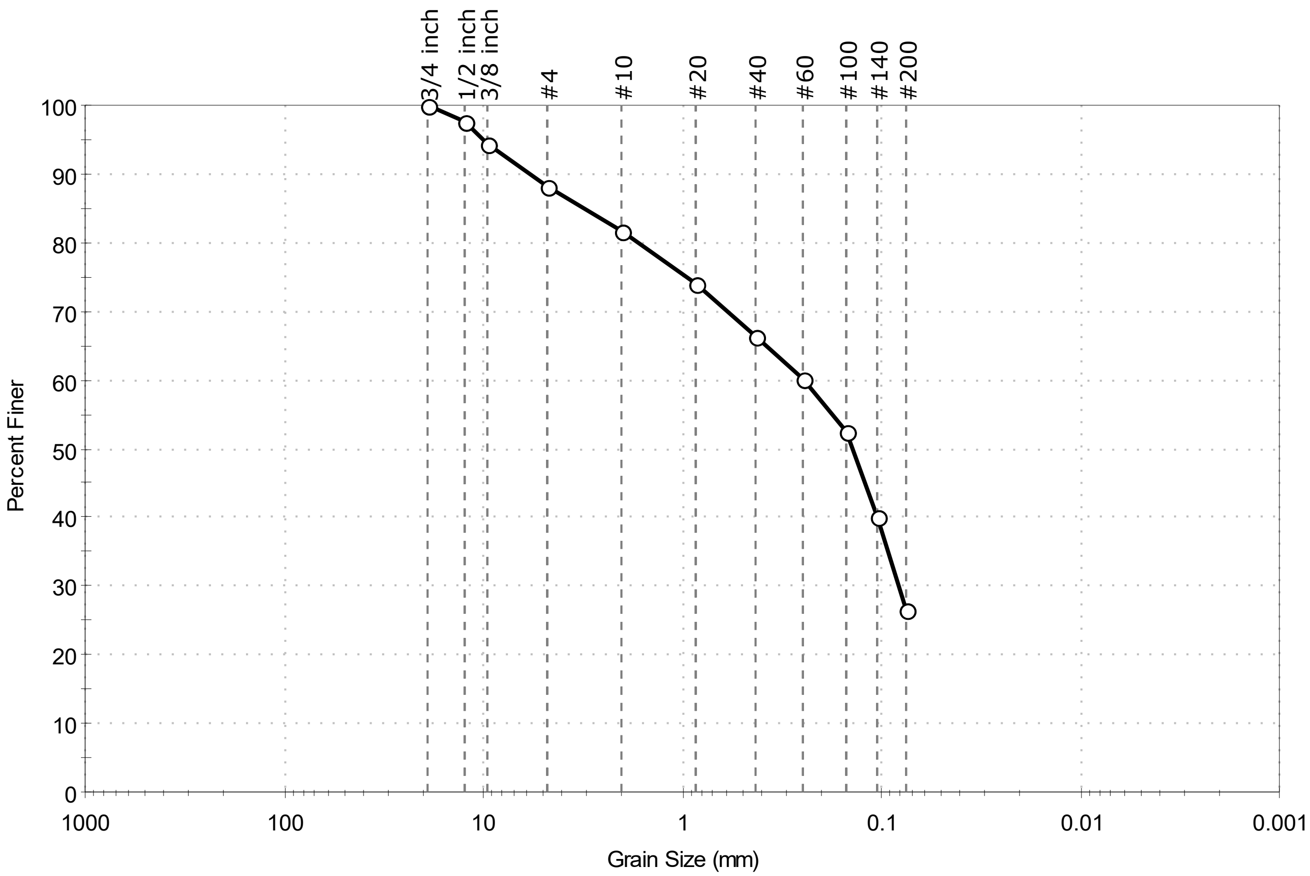
Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-WP-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-4	Test Date:	10/15/25	Checked By:	jsc
Depth :	6-8	Test Id:	838579		

Test Comment: ---
Visual Description: Moist, brownish gray silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	11.6	61.8	26.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/4 inch	19.00	100		
1/2 inch	12.50	98		
3/8 inch	9.50	94		
#4	4.75	88		
#10	2.00	82		
#20	0.85	74		
#40	0.42	66		
#60	0.25	60		
#100	0.15	53		
#140	0.11	40		
#200	0.075	27		

Coefficients

D_{85} =3.0979 mm	D_{30} =0.0819 mm
D_{60} =0.2480 mm	D_{15} =N/A
D_{50} =0.1395 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM	Silty SAND (SM)
AASHTO	Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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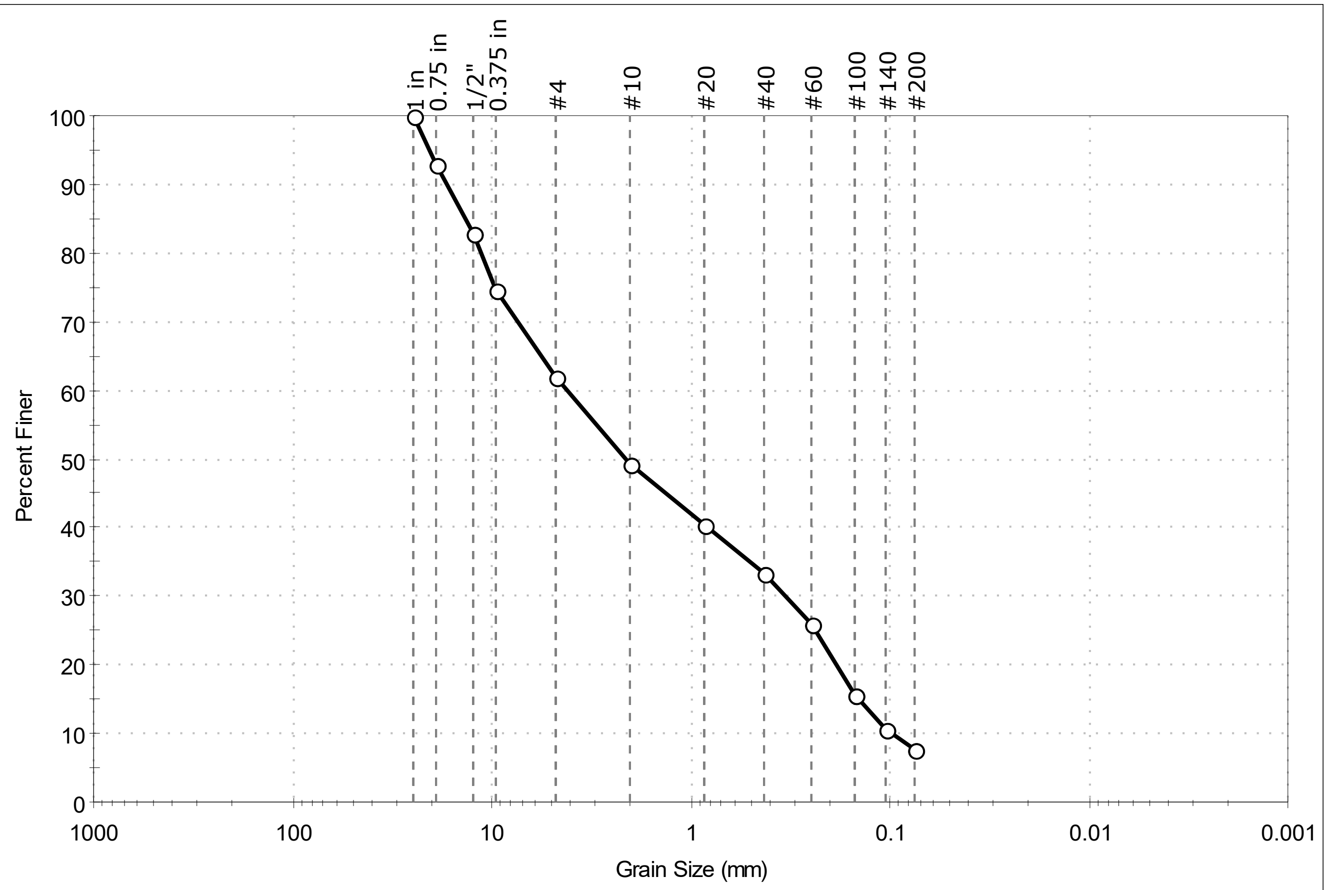
Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-WP-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-7	Test Date:	10/16/25	Checked By:	jsc
Depth :	12-14	Test Id:	838580		

Test Comment: ---

Visual Description: Moist, light brown sand with silt and gravel

Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	38.1	54.3	7.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	93		
1/2"	12.50	83		
0.375 in	9.50	75		
#4	4.75	62		
#10	2.00	49		
#20	0.85	40		
#40	0.42	33		
#60	0.25	26		
#100	0.15	16		
#140	0.11	11		
#200	0.075	7.6		

Coefficients

D_{85} =13.7169 mm	D_{30} =0.3345 mm
D_{60} =4.1955 mm	D_{15} =0.1430 mm
D_{50} =2.1228 mm	D_{10} =0.0976 mm
C_u =42.987	C_c =0.273

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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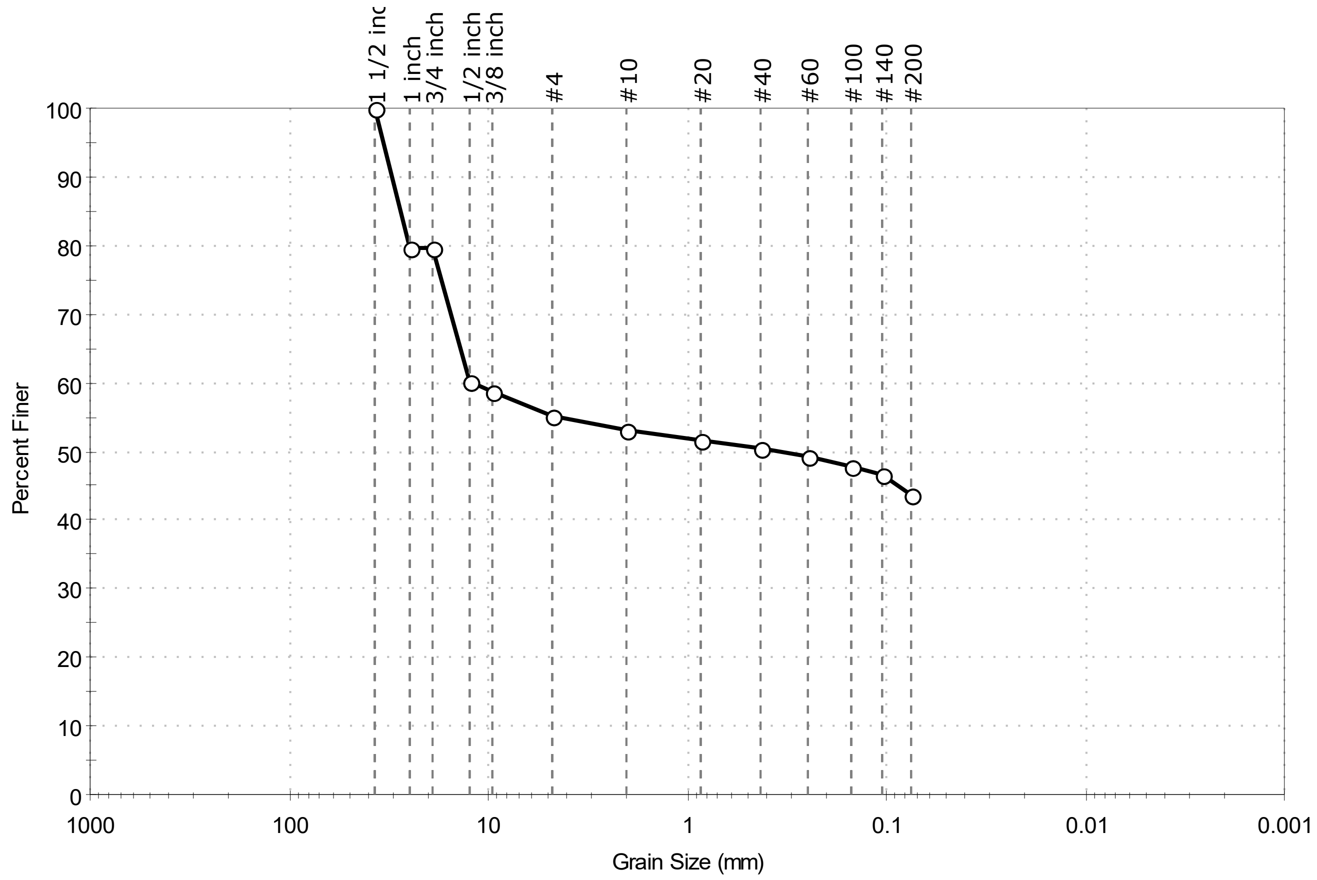
GeoTesting EXPRESS
A Sercel Business

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-WP-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-10	Test Date:	10/15/25	Checked By:	jsc
Depth :	18-20	Test Id:	838581		

Test Comment: ---
Visual Description: Moist, light brown silty gravel
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	44.9	11.4	43.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 inch	37.50	100		
1 inch	25.00	80		
3/4 inch	19.00	80		
1/2 inch	12.50	60		
3/8 inch	9.50	59		
#4	4.75	55		
#10	2.00	53		
#20	0.85	51		
#40	0.42	50		
#60	0.25	49		
#100	0.15	48		
#140	0.11	47		
#200	0.075	44		

Coefficients

D_{85} =27.7926 mm	D_{30} =N/A
D_{60} =12.2834 mm	D_{15} =N/A
D_{50} =0.3617 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	ARCADIS U.S., Inc.		
Project:	ARC31156 GE Housatonic ROR		
Location:		Project No:	GTX-321976

Boring ID:	GT-UD-01	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-2	Test Date:	10/10/25	Checked By:	jsc
Depth :	2-4	Test Id:	838560		

Test Comment: ---

Visual Description: Moist, dark yellowish brown sandy silt

Sample Comment: ---

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-2	GT-UD-01	2-4	13	n/a	n/a	n/a	n/a	Sandy SILT (ML)

0% Retained on #40 Sieve

Dry Strength: LOW

Dilatancy: RAPID

Toughness: n/a

The sample was determined to be Non-Plastic

printed 10/22/2025 10:22:55 AM

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-01	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-5	Test Date:	10/10/25	Checked By:	jsc
Depth :	8-10	Test Id:	838561		

Test Comment: ---
Visual Description: Moist, grayish brown sand with silt
Sample Comment: ---

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-5	GT-UD-01	8-10	6	n/a	n/a	n/a	n/a	Poorly graded SAND with Silt (SP-SM)

34% Retained on #40 Sieve
Dry Strength: LOW
Dilatancy: RAPID
Toughness: n/a
The sample was determined to be Non-Plastic

printed 10/22/2025 10:22:56 AM

Client: ARCADIS U.S., Inc.
Project: ARC31156 GE Housatonic ROR
Location:
Project No: GTX-321976

Boring ID:	GT-UD-01	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-8	Test Date:	10/10/25	Checked By:	jsc
Depth :	14-16	Test Id:	838562		

Test Comment: ---
Visual Description: Moist, light brown silty sand with gravel
Sample Comment: ---

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-8	GT-UD-01	14-16	14	n/a	n/a	n/a	n/a	Silty SAND with Gravel (SM)

46% Retained on #40 Sieve
Dry Strength: LOW
Dilatancy: RAPID
Toughness: n/a
The sample was determined to be Non-Plastic

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-2	Test Date:	10/21/25	Checked By:	jsc
Depth :	2-4	Test Id:	838563		

Test Comment: ---
Visual Description: Moist, dark reddish brown silty sand
Sample Comment: ---

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-2	GT-UD-02	2-4	16	n/a	n/a	n/a	n/a	Silty SAND (SM)

26% Retained on #40 Sieve
Dry Strength: LOW
Dilatancy: RAPID
Toughness: n/a
The sample was determined to be Non-Plastic

printed 10/22/2025 10:22:57 AM

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-4	Test Date:	10/13/25	Checked By:	jsc
Depth :	6-8	Test Id:	838564		

Test Comment: ---
Visual Description: Moist, light brown silty sand
Sample Comment: ---

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-4	GT-UD-02	6-8	16	n/a	n/a	n/a	n/a	Silty SAND (SM)

0% Retained on #40 Sieve
Dry Strength: LOW
Dilatancy: RAPID
Toughness: n/a
The sample was determined to be Non-Plastic

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-7	Test Date:	10/13/25	Checked By:	jsc
Depth :	12-14	Test Id:	838565		

Test Comment: ---
Visual Description: Moist, grayish brown silty sand
Sample Comment: ---

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-7	GT-UD-02	12-14	39	n/a	n/a	n/a	n/a	Silty SAND (SM)

0% Retained on #40 Sieve
Dry Strength: LOW
Dilatancy: RAPID
Toughness: n/a
The sample was determined to be Non-Plastic

Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-WP-02	Sample Type:	Jar	Tested By:	ajl
Sample ID:	S-4	Test Date:	10/13/25	Checked By:	jsc
Depth :	6-8	Test Id:	838566		

Test Comment: ---
Visual Description: Moist, brownish gray silty sand
Sample Comment: ---

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-4	GT-WP-02	6-8	17	n/a	n/a	n/a	n/a	Silty SAND (SM)

34% Retained on #40 Sieve
Dry Strength: LOW
Dilatancy: RAPID
Toughness: n/a
The sample was determined to be Non-Plastic

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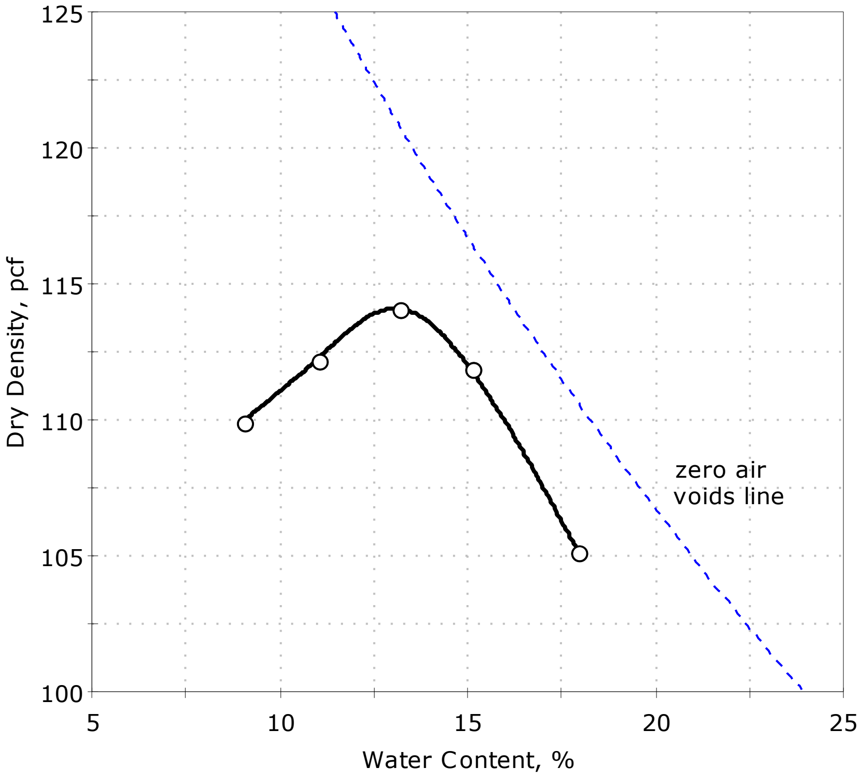
Client:	ARCADIS U.S., Inc.				
Project:	ARC31156 GE Housatonic ROR				
Location:				Project No:	GTX-321976
Boring ID:	GT-UD-02	Sample Type:	Bucket	Tested By:	cwd
Sample ID:	BS-1	Test Date:	10/11/25	Checked By:	jsc
Depth :	3-5.5	Test Id:	838582		

Test Comment: ---
Visual Description: Moist, dark brown silty sand
Sample Comment: ---

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4	Point 5
Dry density, pcf	109.9	112.2	114.1	111.9	105.2
Moisture Content, %	9.0	11.0	13.2	15.1	17.9

Method : A

Preparation : DRY

As received Moisture :15 %

Rammer : Mechanical

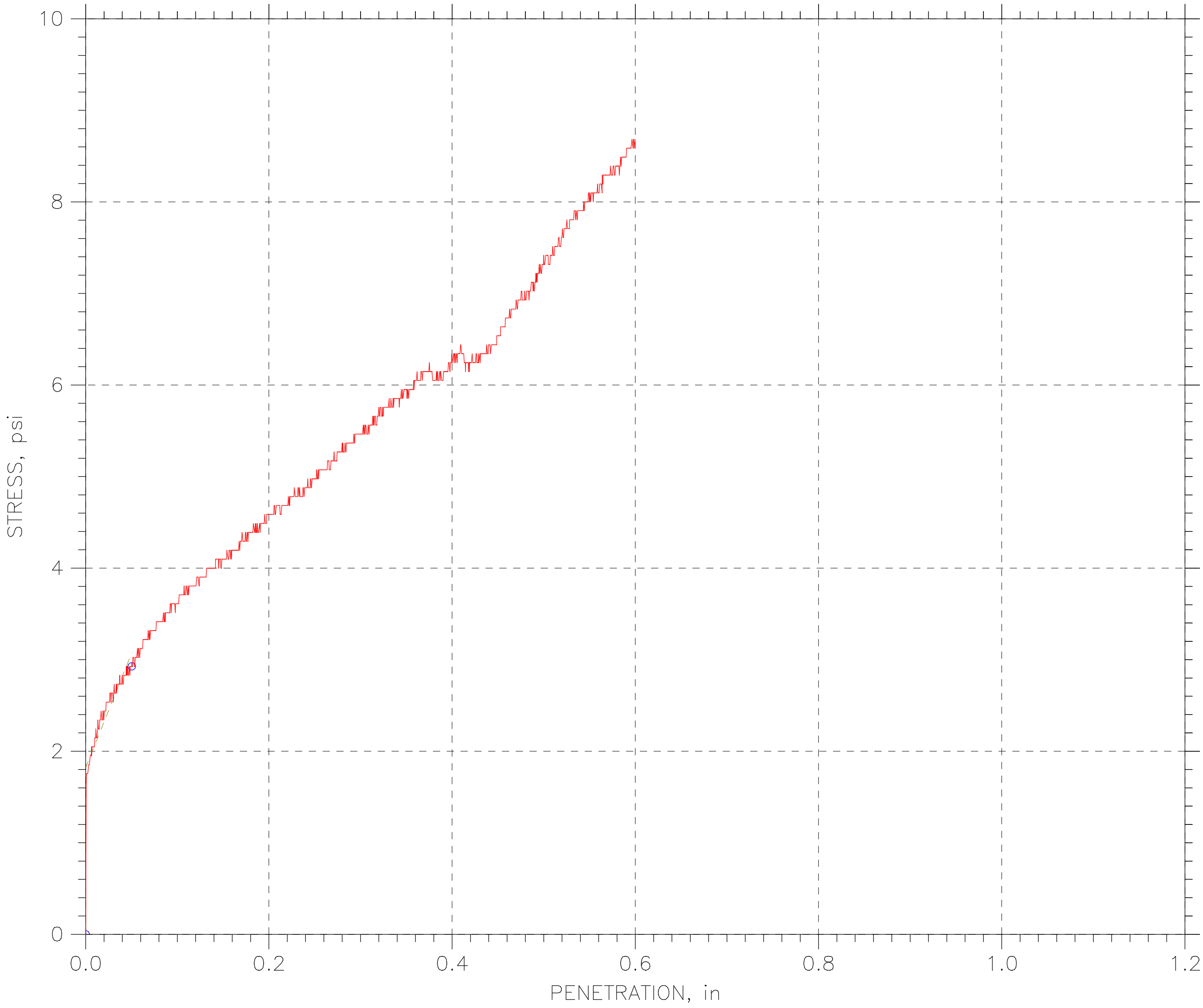
Zero voids line based on assumed specific gravity of 2.6

Maximum Dry Density= 114.1 pcf
Optimum Moisture= 13.1 %

printed 10/22/2025 10:25:35 AM

CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



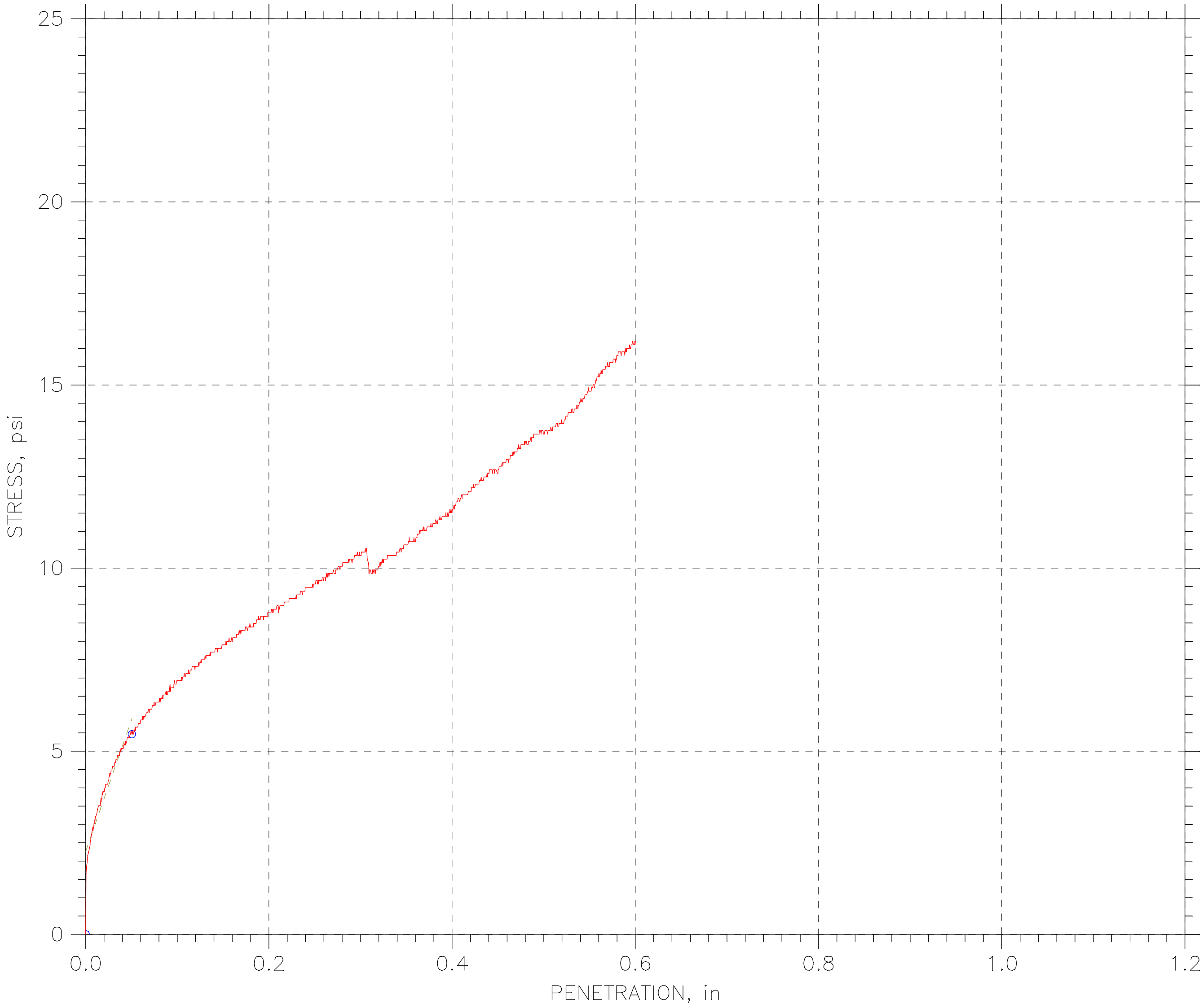
Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 0	at 0.3 in: 0	at 0.5 in: 0
Sample Volume: 0.07494 ft^3	at 0.2 in: 0	at 0.4 in: 0	
Sample Mass: 3736 gm			

Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: -1.35 %	Tare ID	E14824	E15067	E15097
Surcharge: 4540 gm	Tare Mass, gm	8.25	8.27	8.37
Void Ratio: 0.70	Mass Tare + Wet Soil, gm	310.77	215.9	274.15
Wet Unit Weight: 109.91 pcf	Mass Tare + Dry Soil, gm	275.42	184.61	232.76
Dry Unit Weight: 97.065 pcf	Water Content, %	13.23	17.74	18.45

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: BS-UD-01	Tested By: cwd	Checked By: ank
Sample No.: BS-1	Test Date: 10/29/25	Depth: 0-3
Test No.: CBR-1	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 85% of 114.1 pcf at 13.1% moisture content.		

CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



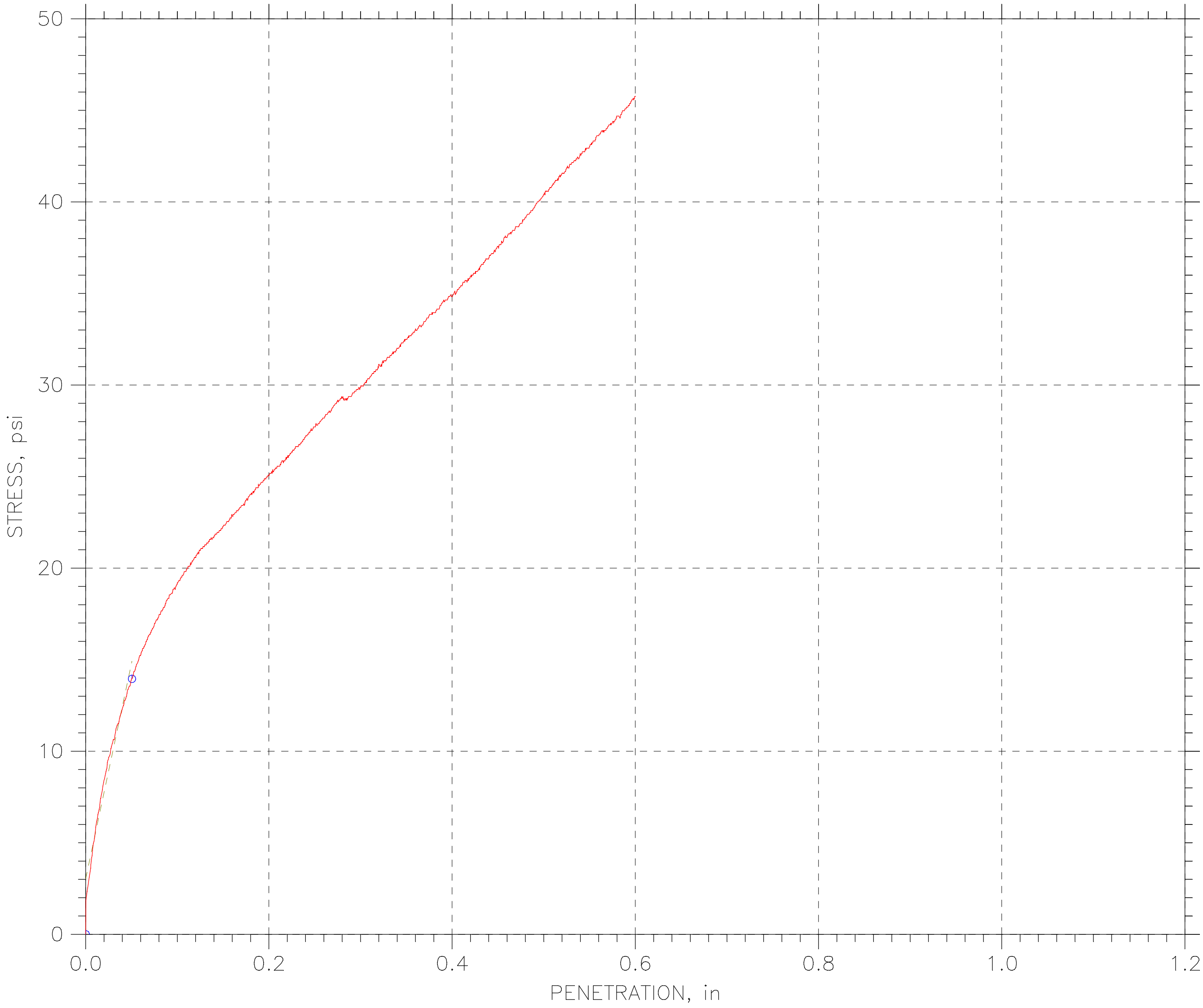
Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 1	at 0.3 in: 1	at 0.5 in: 1
Sample Volume: 0.07494 ft^3	at 0.2 in: 1	at 0.4 in: 0	
Sample Mass: 3958 gm			

Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: -0.31 %	Tare ID	E14824	E15412	E15451
Surcharge: 4540 gm	Tare Mass, gm	8.25	8.43	8.32
Void Ratio: 0.61	Mass Tare + Wet Soil, gm	310.77	219.71	340.72
Wet Unit Weight: 116.44 pcf	Mass Tare + Dry Soil, gm	275.42	190.15	292.41
Dry Unit Weight: 102.83 pcf	Water Content, %	13.23	16.27	17.01

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: BS-UD-01	Tested By: cwd	Checked By: ank
Sample No.: BS-1	Test Date: 10/29/25	Depth: 0-3
Test No.: CBR-2	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 90% of 114.1 pcf at 13.1% moisture content.		

CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 2	at 0.3 in: 2	at 0.5 in: 2
Sample Volume: 0.07494 ft^3	at 0.2 in: 2	at 0.4 in: 1	
Sample Mass: 4177 gm			

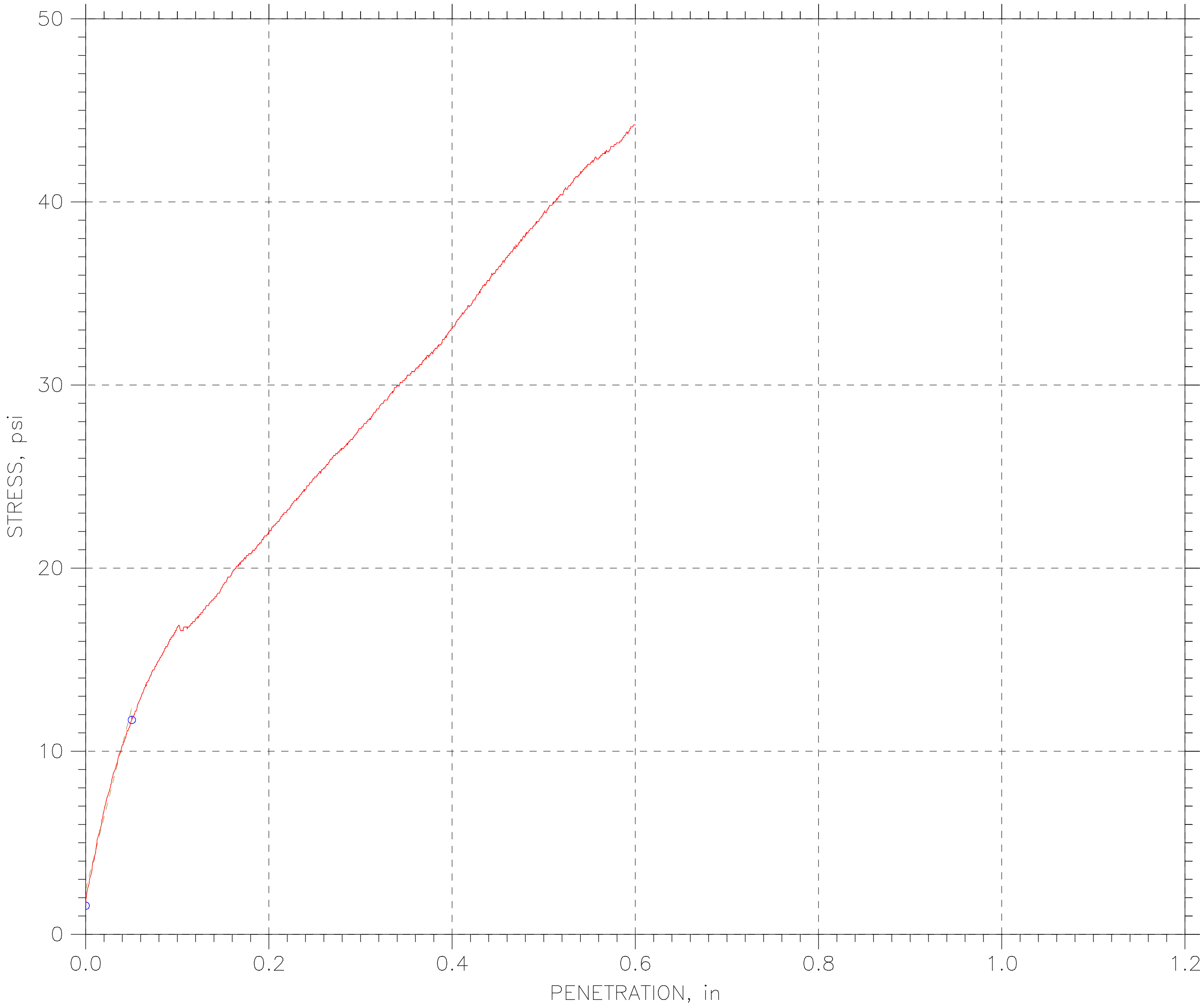
Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: -0.04 %	Tare ID	E14824	E15507	E15749
Surcharge: 4540 gm	Tare Mass, gm	8.25	8.38	8.46
Void Ratio: 0.52	Mass Tare + Wet Soil, gm	310.77	247.08	313.85
Wet Unit Weight: 122.88 pcf	Mass Tare + Dry Soil, gm	275.42	215.71	274.37
Dry Unit Weight: 108.52 pcf	Water Content, %	13.23	15.13	14.85

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: BS-UD-01	Tested By: cwd	Checked By: ank
Sample No.: BS-1	Test Date: 10/29/25	Depth: 0-3
Test No.: CBR-3	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 95% of 114.1 pcf at 13.1% moisture content.		

Wed, 05-NOV-2025 11:34:43

CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 2	at 0.3 in: 1	at 0.5 in: 1
Sample Volume: 0.07494 ft^3	at 0.2 in: 1	at 0.4 in: 1	
Sample Mass: 3725 gm			

Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: -0.15 %	Tare ID	E15019	E14447	E15292
Surcharge: 4540 gm	Tare Mass, gm	8.32	8.25	8.26
Void Ratio: 0.70	Mass Tare + Wet Soil, gm	153.62	147.16	232.66
Wet Unit Weight: 109.58 pcf	Mass Tare + Dry Soil, gm	137.07	124.95	193.81
Dry Unit Weight: 97.102 pcf	Water Content, %	12.85	19.03	20.94

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: GT-WP-01	Tested By: chf	Checked By: ank
Sample No.: BS-1	Test Date: 10/30/25	Depth: 3-5
Test No.: CBR-4	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 85% of 114.1 pcf at 13.1% moisture content.		

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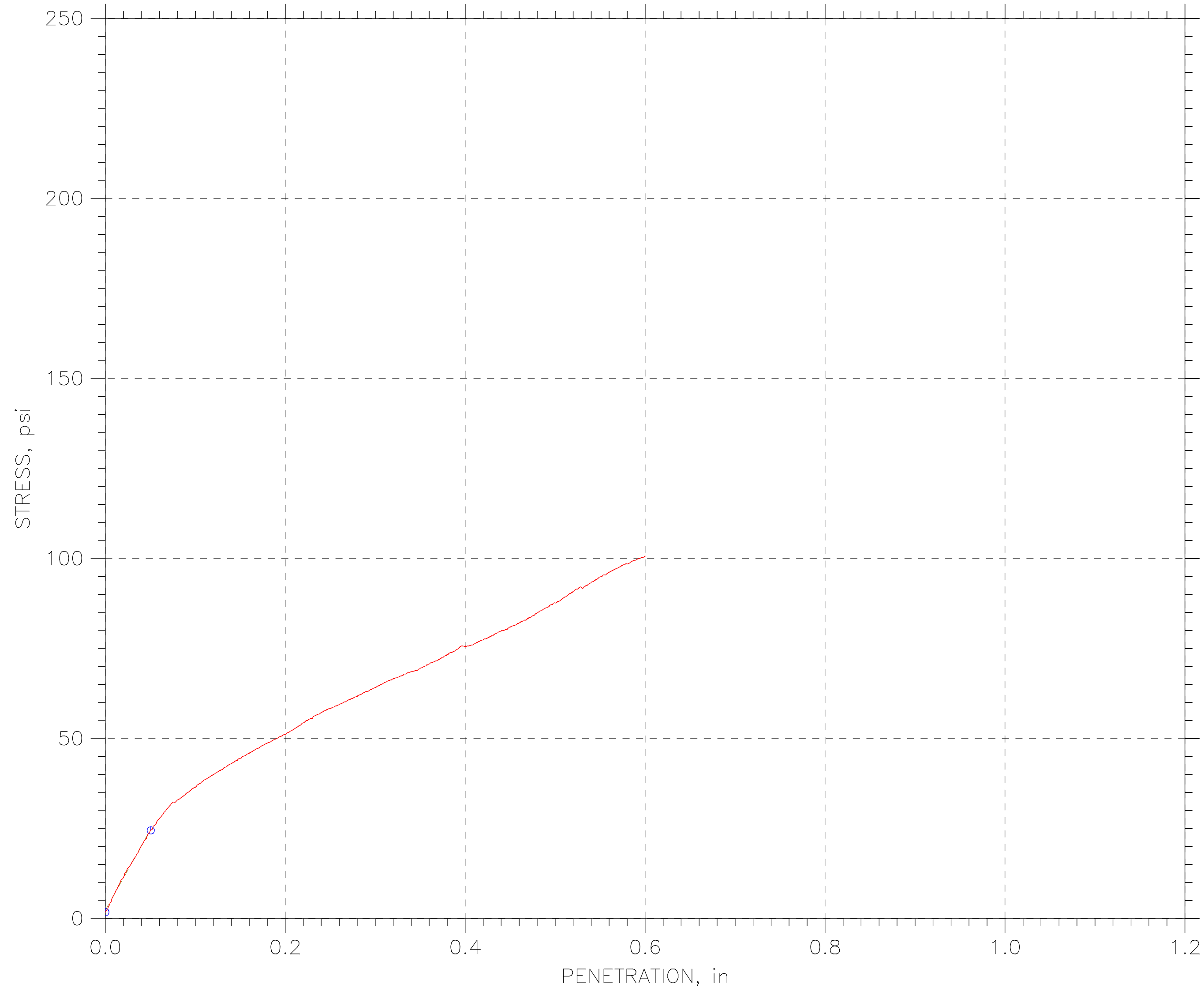
CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 4	at 0.3 in: 3	at 0.5 in: 3
Sample Volume: 0.07494 ft^3	at 0.2 in: 3	at 0.4 in: 3	
Sample Mass: 3947 gm			

Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: 0.02 %	Tare ID	E15019	E12435	E15657
Surcharge: 4540 gm	Tare Mass, gm	8.32	8.26	8.37
Void Ratio: 0.61	Mass Tare + Wet Soil, gm	153.62	147.87	413.85
Wet Unit Weight: 116.11 pcf	Mass Tare + Dry Soil, gm	137.07	125.08	352.62
Dry Unit Weight: 102.89 pcf	Water Content, %	12.85	19.51	17.79

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: GT-WP-01	Tested By: chf	Checked By: ank
Sample No.: BS-1	Test Date: 10/30/25	Depth: 3-5
Test No.: CBR-5	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 90% of 114.1 pcf at 13.1% moisture content.		

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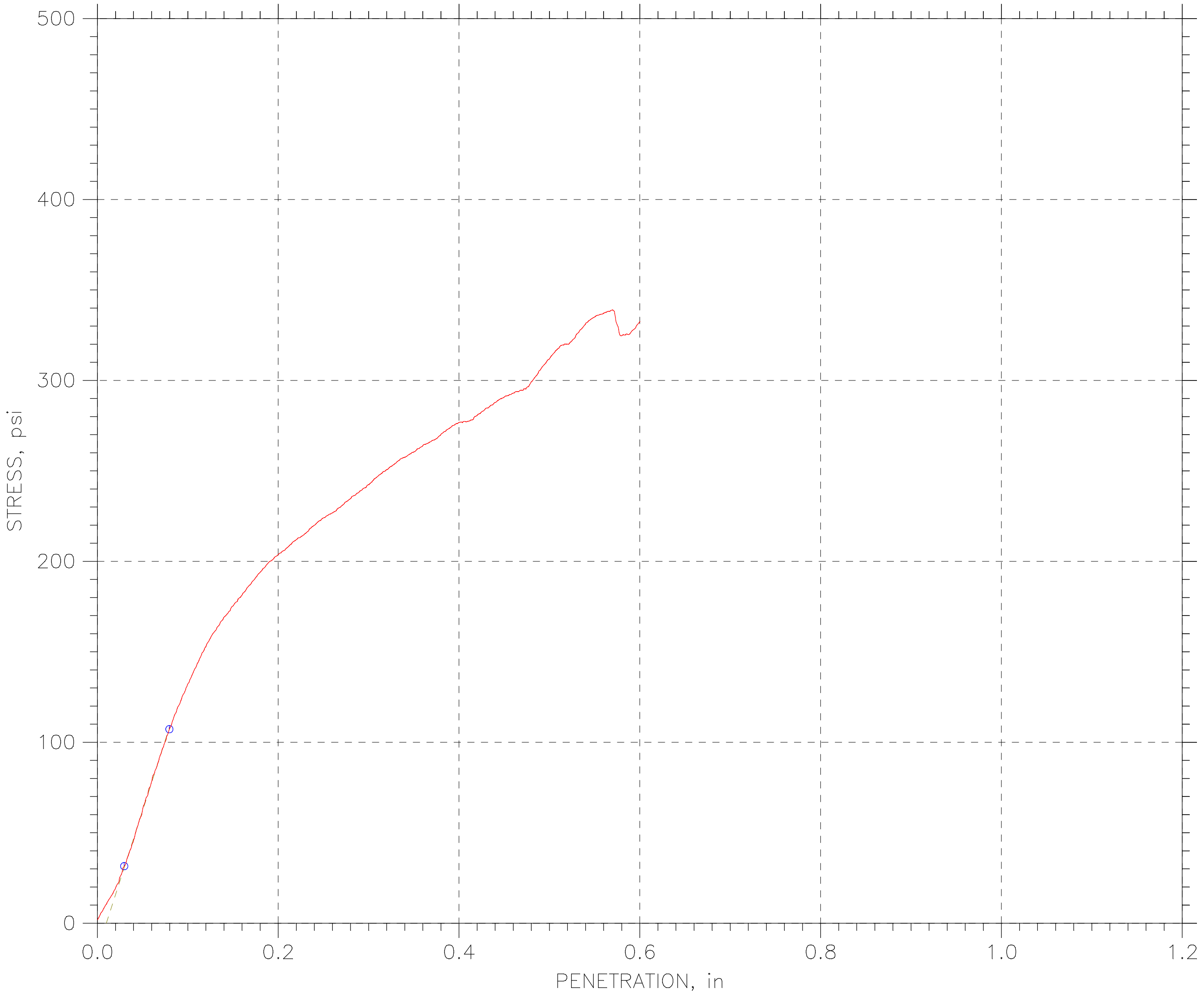
CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



Sample Height: 4.58 in	California Bearing Ratio			
Sample Area: 28.274 in^2	at 0.1 in: 14	at 0.3 in: 13		at 0.5 in: 12
Sample Volume: 0.07494 ft^3	at 0.2 in: 14	at 0.4 in: 12		
Sample Mass: 4166 gm				
Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: 0.02 %	Tare ID	E15019	E12001	E15538
Surcharge: 4540 gm	Tare Mass, gm	8.32	8.49	8.36
Void Ratio: 0.52	Mass Tare + Wet Soil, gm	153.62	122.3	300.14
Wet Unit Weight: 122.56 pcf	Mass Tare + Dry Soil, gm	137.07	106.6	260.73
Dry Unit Weight: 108.6 pcf	Water Content, %	12.85	16.00	15.62

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: GT-WP-01	Tested By: chf	Checked By: ank
Sample No.: BS-1	Test Date: 10/30/25	Depth: 3-5
Test No.: CBR-6	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 95% of 114.1 pcf at 13.1% moisture content.		

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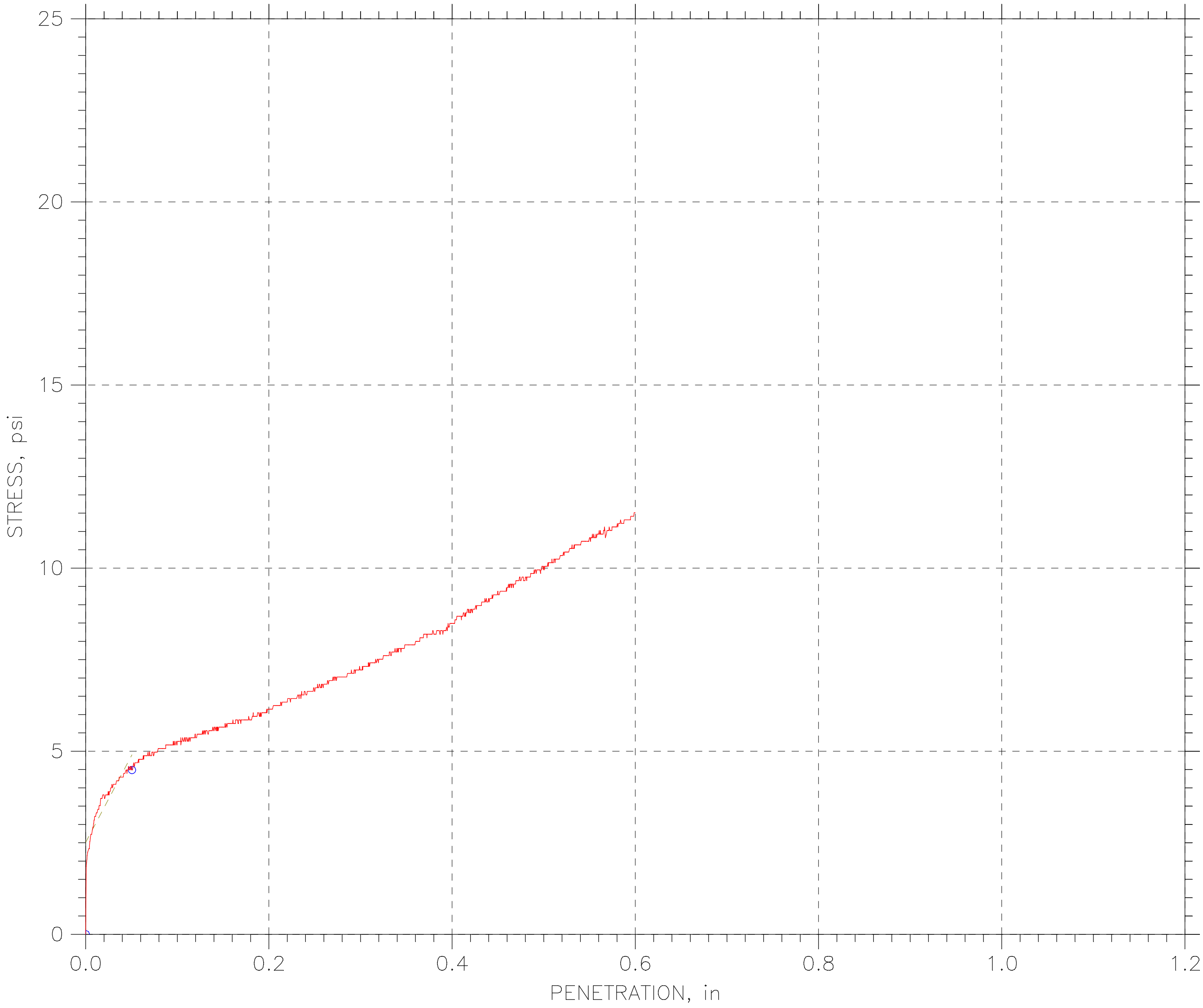
CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



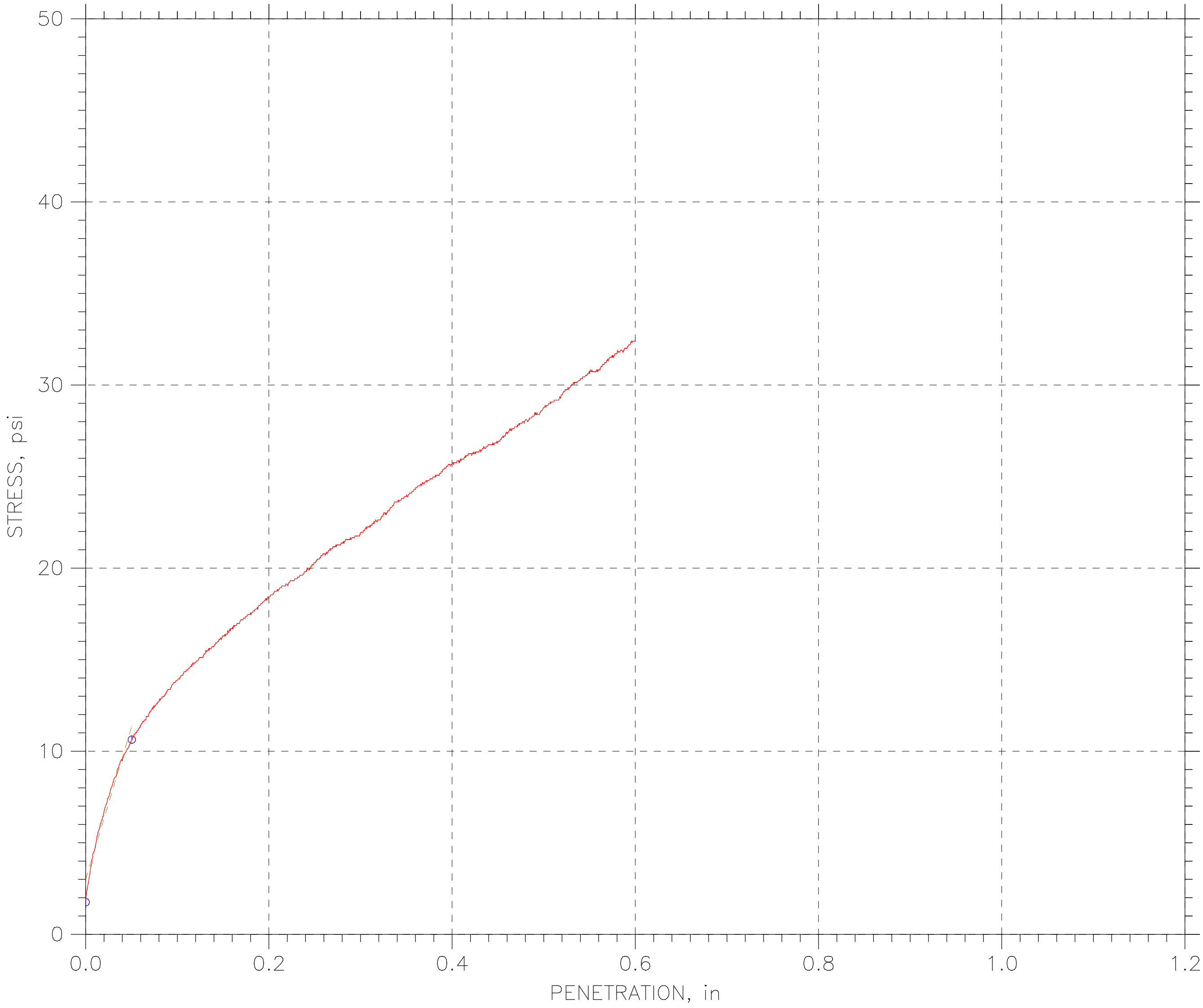
Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 0	at 0.3 in: 0	at 0.5 in: 0
Sample Volume: 0.07494 ft^3	at 0.2 in: 0	at 0.4 in: 0	
Sample Mass: 3747 gm			

Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: -0.31 %	Tare ID	E13790	E12830	E14426
Surcharge: 4540 gm	Tare Mass, gm	8.21	8.27	8.37
Void Ratio: 0.70	Mass Tare + Wet Soil, gm	108.38	119.48	232.14
Wet Unit Weight: 110.23 pcf	Mass Tare + Dry Soil, gm	96.62	103.06	198.49
Dry Unit Weight: 97.29 pcf	Water Content, %	13.30	17.32	17.70

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: GT-WP-02	Tested By: chf	Checked By: ank
Sample No.: BS-1	Test Date: 10/31/25	Depth: 0-2
Test No.: CBR-7	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 85% of 114.1 pcf at 13.1% moisture content.		

CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 1	at 0.3 in: 1	at 0.5 in: 1
Sample Volume: 0.07494 ft^3	at 0.2 in: 1	at 0.4 in: 1	
Sample Mass: 3965 gm			

Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: 0.00 %	Tare ID	E13790	E14940	E13138
Surcharge: 4540 gm	Tare Mass, gm	8.21	8.29	8.25
Void Ratio: 0.61	Mass Tare + Wet Soil, gm	108.38	194.28	308.03
Wet Unit Weight: 116.64 pcf	Mass Tare + Dry Soil, gm	96.62	168.32	264.75
Dry Unit Weight: 102.95 pcf	Water Content, %	13.30	16.22	16.87

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: GT-WP-02	Tested By: chf	Checked By: ank
Sample No.: BS-1	Test Date: 10/31/25	Depth: 0-2
Test No.: CBR-8	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 90% of 114.1 pcf at 13.1% moisture content.		

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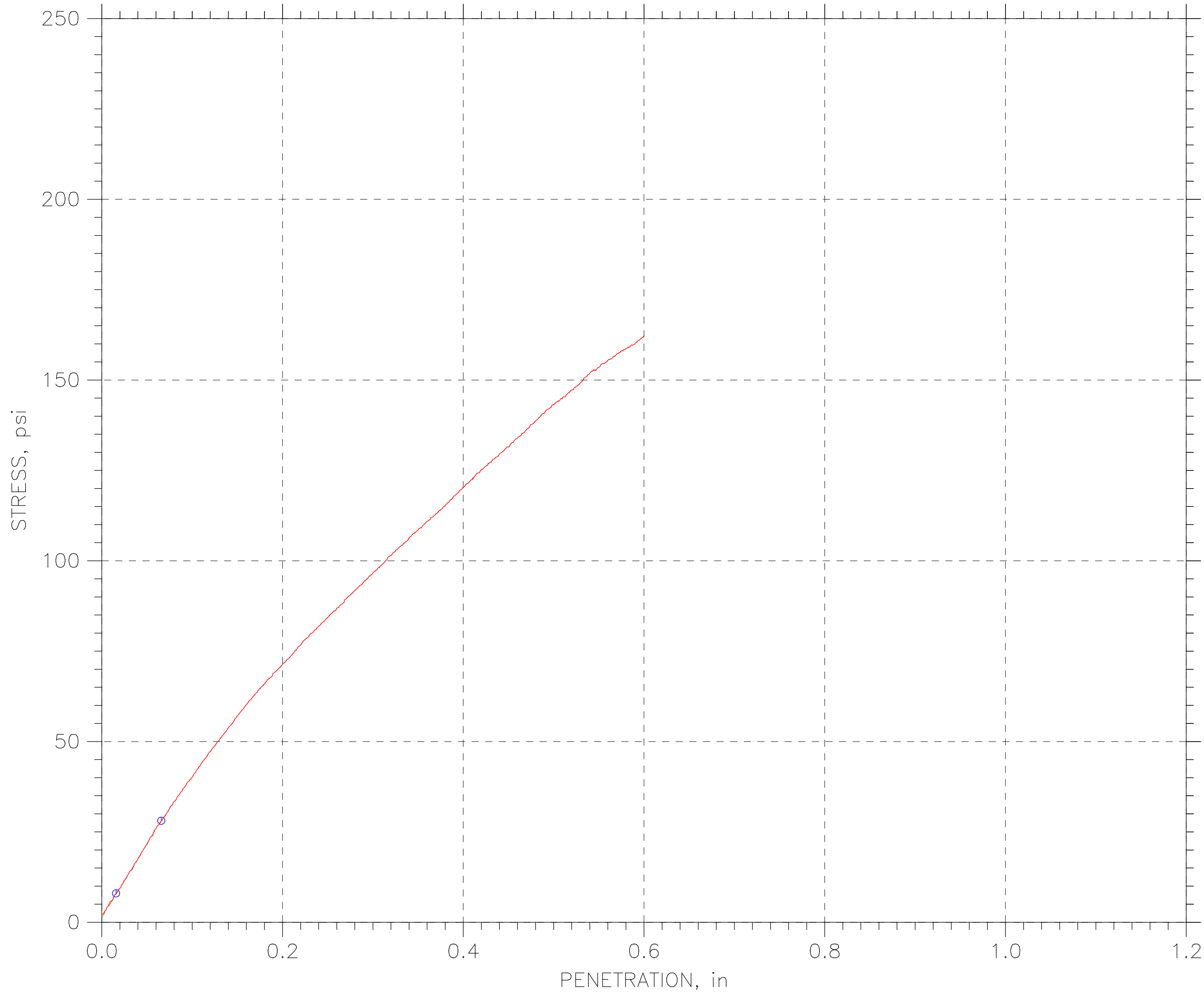
CALIFORNIA BEARING RATIO TEST REPORT

ASTM D1883



Sample Height: 4.58 in	California Bearing Ratio		
Sample Area: 28.274 in^2	at 0.1 in: 4	at 0.3 in: 5	at 0.5 in: 5
Sample Volume: 0.07494 ft^3	at 0.2 in: 5	at 0.4 in: 5	
Sample Mass: 4186 gm			

Sample Condition: Soaked	Water Content	Before	Top	Average
Swell: 0.02 %	Tare ID	E13790	E15071	E15078
Surcharge: 4540 gm	Tare Mass, gm	8.21	8.25	8.26
Void Ratio: 0.52	Mass Tare + Wet Soil, gm	108.38	162.72	351.06
Wet Unit Weight: 123.15 pcf	Mass Tare + Dry Soil, gm	96.62	142.59	303.35
Dry Unit Weight: 108.69 pcf	Water Content, %	13.30	14.98	16.17

Project: ARC31156GEHousatonicROR	Location: ---	Project No.: GTX-321976
Boring No.: GT-WP-02	Tested By: chf	Checked By: ank
Sample No.: BS-1	Test Date: 10/31/25	Depth: 0-2
Test No.: CBR-9	Sample Type: reconstt.	Elevation: ---
Description: Moist, dark brown silty sand		
Remarks: Compacted to 95% of 114.1 pcf at 13.1% moisture content.		

Wed, 05-NOV-2025 10:33:49

WARRANTY and LIABILITY

GeoTesting Express (GTX) warrants that all tests it performs are run in general accordance with the specified test procedures and accepted industry practice. GTX will correct or repeat any test that does not comply with this warranty. GTX has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

GTX may report engineering parameters that require us to interpret the test data. Such parameters are determined using accepted engineering procedures. However, GTX does not warrant that these parameters accurately reflect the true engineering properties of the *in situ* material. Responsibility for interpretation and use of the test data and these parameters for engineering and/or construction purposes rests solely with the user and not with GTX or any of its employees.

GTX's liability will be limited to correcting or repeating a test which fails our warranty. GTX's liability for damages to the Purchaser of testing services for any cause whatsoever shall be limited to the amount GTX received for the testing services. GTX will not be liable for any damages, or for any lost benefits or other consequential damages resulting from the use of these test results, even if GTX has been advised of the possibility of such damages. GTX will not be responsible for any liability of the Purchaser to any third party.

Commonly Used Symbols

A	pore pressure parameter for $\Delta\sigma_1 - \Delta\sigma_3$
B	pore pressure parameter for $\Delta\sigma_3$
CAI	CERCHAR Abrasiveness Index
CIU	isotropically consolidated undrained triaxial shear test
CR	compression ratio for one dimensional consolidation
CSR	cyclic stress ratio
C_c	coefficient of curvature, $(D_{30})^2 / (D_{10} \text{ x } D_{60})$
C_u	coefficient of uniformity, D_{60}/D_{10}
C_c	compression index for one dimensional consolidation
C_α	coefficient of secondary compression
c_v	coefficient of consolidation
c	cohesion intercept for total stresses
c’	cohesion intercept for effective stresses
D	diameter of specimen
D	damping ratio
D_{10}	diameter at which 10% of soil is finer
D_{15}	diameter at which 15% of soil is finer
D_{30}	diameter at which 30% of soil is finer
D_{50}	diameter at which 50% of soil is finer
D_{60}	diameter at which 60% of soil is finer
D_{85}	diameter at which 85% of soil is finer
d_{50}	displacement for 50% consolidation
d_{90}	displacement for 90% consolidation
d_{100}	displacement for 100% consolidation
E	Young’s modulus
e	void ratio
e_c	void ratio after consolidation
e_o	initial void ratio
G	shear modulus
G_s	specific gravity of soil particles
H	height of specimen
H_R	Rebound Hardness number
i	gradient
I_S	Uncorrected point load strength
$I_{S(50)}$	Size corrected point load strength index
H_A	Modified Taber Abrasion
H_T	Total hardness
K_o	lateral stress ratio for one dimensional strain
k	permeability
LI	Liquidity Index
m_v	coefficient of volume change
n	porosity
PI	plasticity index
P_c	preconsolidation pressure
p	$(\sigma_1 + \sigma_3) / 2$, $(\sigma_v + \sigma_h) / 2$
p’	$(\sigma'_1 + \sigma'_3) / 2$, $(\sigma'_v + \sigma'_h) / 2$
p'_c	p’ at consolidation
Q	quantity of flow
q	$(\sigma_1 - \sigma_3) / 2$
q_f	q at failure
q_o, q_i	initial q
q_c	q at consolidation
S	degree of saturation
SL	shrinkage limit

U, UC	unconfined compression test
UU, Q	unconsolidated undrained triaxial test
u_a	pore gas pressure
u_e	excess pore water pressure
u, u_w	pore water pressure
V	total volume
V_g	volume of gas
V_s	volume of solids
V_s	shear wave velocity
V_v	volume of voids
V_w	volume of water
V_o	initial volume
v	velocity
W	total weight
W_s	weight of solids
W_w	weight of water
w	water content
w_c	water content at consolidation
w_f	final water content
w_l	liquid limit
w_n	natural water content
w_p	plastic limit
w_s	shrinkage limit
w_o, w_i	initial water content
α	slope of q_f versus p_f
α'	slope of q_f versus p_f'
γ_t	total unit weight
γ_d	dry unit weight
γ_s	unit weight of solids
γ_w	unit weight of water
ε	strain
ε_{vol}	volume strain
ε_h, ε_v	horizontal strain, vertical strain
μ	Poisson’s ratio, also viscosity
σ	normal stress
σ'	effective normal stress
σ_c, σ'_c	consolidation stress in isotropic stress system
σ_h, σ'_h	horizontal normal stress
σ_v, σ'_v	vertical normal stress
σ'_{vc}	Effective vertical consolidation stress
σ_1	major principal stress
σ_2	intermediate principal stress
σ_3	minor principal stress
τ	shear stress
φ	friction angle based on total stresses
φ'	friction angle based on effective stresses
φ'_r	residual friction angle
φ_{ult}	φ for ultimate strength

Appendix C

Baseline Restoration Assessment Report for Rail Transload Areas in Reaches 5 and 6

Appendix C

Baseline Restoration Assessment Report for Rail Transload Area Properties in Reaches 5 and 6

February 20, 2026

Prepared for General Electric Company
Pittsfield, Massachusetts

Baseline Restoration Assessment Report for Rail Transload Area Properties in Reaches 5 and 6

February 20, 2026

Prepared for
General Electric Company
1 Plastics Avenue
Pittsfield, Massachusetts 01201

Prepared by
AECOM
500 Enterprise Drive
Rocky Hill, Connecticut 06067

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ABBREVIATIONS

BRA	Baseline Restoration Assessment
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GE	General Electric Company
GIS	Geographic Information System
GPS	global positioning system
IPaC	Information for Planning and Consultation (USFWS)
LiDAR	Light Detection and Ranging
mg/kg	milligram per kilogram
MIPAG	Massachusetts Invasive Plant Advisory Group
MNHESP	Massachusetts Natural Heritage and Endangered Species Program
MWPA	Massachusetts Wetlands Protection Act
NWI	National Wetlands Inventory
PCB	polychlorinated biphenyl
PDI	pre-design investigation
RCRA	Resource Conservation and Recovery Act
Revised T&D Plan	Revised On-Site and Off-Site Transportation and Disposal Plan
ROR	Rest of River
UDF	Upland Disposal Facility
USACE	U.S. Army Corps of Engineers
USDA NRCS	U.S. Department of Agriculture Natural Resource Conservation Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Woodlot	Woodlot Alternatives, Inc (now Stantec)

1.0 Introduction and Scope

1.1 Introduction

This Baseline Restoration Assessment (BRA) Report for the Rail Transload properties in Reaches 5 and 6 has been prepared by AECOM on behalf of the General Electric Company (GE). This report includes results of the ecological characterization and habitat data collection conducted as part of the pre-design investigation (PDI) activities for the areas that will contain rail transload facilities to be constructed in support of a Remedial Action for the Housatonic Rest of River (ROR). That Remedial Action was specified in the final Revised Resource Conservation and Recovery Act (RCRA) Corrective Action Permit issued by the U.S. Environmental Protection Agency (EPA) to GE on December 16, 2020 (EPA 2020). On October 15, 2024, GE submitted a *Revised On-Site and Off-Site Transportation and Disposal Plan* (Revised T&D Plan; Arcadis 2024), which described GE's plans for the transportation and disposal of excavated material from the ROR. In that revised plan, GE proposed using rail transport for some of the materials removed during the Remedial Action, and it proposed three locations for the loading and/or unloading of rail cars.

On April 29, 2025, EPA issued a conditional approval letter for the Revised T&D Plan. That letter approved the three locations for the rail transload areas and directed GE to submit pre-design investigation (PDI) work plans to describe the necessary investigations to support the design of these rail transload areas, with the initial work plan to address the first two of those locations. Those locations, shown on **Figure 1**, are:

- Utility Drive area, located adjacent to the Pittsfield Wastewater Treatment Plant in Reach 5A in the City of Pittsfield, Massachusetts; and
- Woods Pond Spur area, located adjacent to Reach 6 along the western side of Woods Pond and adjacent to the Lenox Rail Station and Berkshire Scenic Railway Museum in Lenox, Massachusetts.

On May 15, 2025, GE submitted to EPA a document titled *Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6* (Rail PDI Work Plan). That work plan described GE's proposed pre-design investigations for the properties that will contain rail transload facilities. Section 2.3 of that work plan described the BRA activities that would be conducted by GE at each property that will contain rail transload facilities, including potential locations for construction of the transload areas and eventual restoration and/or reuse of those areas. EPA provided conditional approval of the Rail PDI Work Plan on July 24, 2025.

In August 2025, AECOM initiated that BRA by conducting an ecological characterization and habitat assessment of these two properties in accordance with the Rail PDI Work Plan. The ecological and habitat assessment covered areas of the proposed rail transload facilities, site access roads, associated support areas, and staging and material storage areas and surrounding habitats within the properties. Although the layout of these rail transload areas was later modified and expanded following submission of the Rail PDI Work Plan, the BRA activities conducted were adequate to cover the modified and expanded layouts at both properties. Approximately 36.5 acres were assessed at the Utility Drive property and approximately four acres were assessed at the Woods Pond Spur property.

For purposes of this BRA report, the overall properties within which the assessments were conducted (including all mapped habitat types and ecological resources) are referred to as the Utility Drive rail transload property (or just Utility Drive property) and the Woods Pond Spur rail transload property (or just Woods Pond Spur property), as applicable. The specific footprints of the proposed rail transload infrastructure and associated construction or disturbance limits are referred to, where applicable, as the Utility Drive rail transload area and Woods Pond Spur rail transload area, respectively.

1.2 Scope of Baseline Restoration Assessment

This section provides an overview of the BRA baseline activities conducted at the rail transload properties in accordance with the Rail PDI Work Plan and the additional requirements specified by EPA in its conditional approval letter for that Work Plan as well as other directives from EPA. These activities were conducted for GE by AECOM, with field investigations under EPA oversight, to develop and implement a detailed baseline ecological inventory and assessment of existing conditions and serve as the foundation for developing the design plan for the rail transload areas. The baseline habitat assessment of the Utility Drive and Woods Pond Spur properties included the following components:

- The presence, location, and species composition of the habitats at these properties were identified initially through on-line database reviews and aerial photograph interpretation. This process included producing cover type mapping using the habitat classification system developed by DeGraaf and Yamasaki (2001) as well as the community type classification mapping used in the *Ecological Characterization of the Housatonic River* (Woodlot 2002). The mapping was done with the aid of aerial photographs, and these preliminary delineations were transferred onto the updated aerial photographic and topographic mapping obtained for the rail transload properties. Field investigations were then conducted over the entirety of both properties to review and verify or adjust the habitat cover type delineations.

- During the field surveys, each discrete cover type unit was subject to a detailed inventory. A broad range of habitat parameters was recorded to characterize the structural, physical, hydrologic, and biological conditions within each habitat cover unit, including plant species composition and other habitat features.

- Evaluations for the presence of wetland resource areas were conducted at each rail transload property. Where areas meeting state or federal wetland criteria were identified, they were subject to field verification. This verification included completing the U.S. Army Corps of Engineers (USACE) Wetland Determination Data Form for the Northeast Region.
- An evaluation was conducted for the possible presence of vernal pools at both rail transload properties. This evaluation was performed as part of an overall evaluation of potential vernal pools in the Reach 5A floodplain in 2018 and 2019, which included an inspection of wetland areas using procedures employed by the Massachusetts Natural Heritage and Endangered Species Program (MNHESP) for determining whether a pool meets the criteria for a certified vernal pool (AECOM 2020). No potential vernal pools were identified at either the Utility Drive property or the Woods Pond Spur property.
- The potential presence of federal or state-listed threatened or endangered species or other state-listed species and their habitats was initially identified through review of the U.S. Fish and Wildlife (USFWS) on-line Information for Planning and Consultation (IPaC) and review of the MNHESP records on state-listed species, including “Species Habitat” mapping provided by MNHESP in March 2025. To the extent practicable, the results of these reviews at the Utility Drive property were assessed during field surveys discussed below.
- The presence, location, and abundance of invasive plant species, including both those listed by the USACE New England District (USACE 2020b) and those listed by the Massachusetts Invasive Plant Advisory Group (MIPAG 2022), including “likely invasive” species, were investigated through base mapping and aerial photograph reviews in combination with field surveys.
- In July and August 2025, field surveys were conducted by teams of ecologists to inventory and assess habitat conditions at the Utility Drive and Woods Pond Spur rail transload properties. A total of 24 vegetation plots were systematically sampled at the Utility Drive property to quantitatively describe the plant communities and assist in mapping habitat cover types. A general overview was conducted to assess vegetation, plant communities and habitat cover types within both the Utility Drive and Woods Pond Spur properties. Rare species surveys were conducted at the Utility Drive property in the summer and fall by subject matter experts as appropriate. Field investigations included either direct oversight by scientists on behalf of EPA or notification to EPA to provide an opportunity for direct oversight.

2.0 Environmental Setting

2.1 Utility Drive Rail Transload Property

The Utility Drive rail transload property, situated within or adjacent to the southern portion of Reach 5A, is located in the southern portion of the City of Pittsfield in Berkshire County, Massachusetts, within the George L. Darey Housatonic Valley Wildlife Management Area. This property is bordered by Utility Drive to the south, the existing Springfield Terminal Railroad tracks to the west, a woodland strip bordering a field area to the north, and wetland and floodplain habitats associated with the Housatonic River floodplain to the east. The entire property is mapped by MNHESP as “Priority Habitat of Rare Species” and “Estimated Habitat of Rare Wildlife” (MNHESP 2021). The USGS topographic map identified a portion of this property as a previous gravel pit (MassGIS 2025a). Currently the property exhibits upland open field habitat, limited wetland habitat, and a maintained access way and sewer line right-of-way along the property’s eastern border.

2.2 Woods Pond Spur Rail Transload Property

The Woods Pond Spur rail transload property, situated within or adjacent to the western side of Reach 6, is located in the Town of Lenox in Berkshire County. This property is located in the Housatonic River Valley, just west of Woods Pond, between Willow Creek Road and the Springfield Terminal railroad tracks. The Lenox Station and Berkshire Scenic Railway Museum occupy the southeastern portion of the property, adjacent to the proposed rail spur transload area. The Housatonic River and Woods Pond to the east flow south to the Woods Pond Dam, the first significant impoundment on the river. This property is located approximately 0.5 miles northwest of the GE Upland Disposal Facility (UDF) to be used for the disposal of some dredged and excavated materials as part of the ROR Remedial Action.

Zoned as industrial property, this property was previously developed and includes an existing building pad and gravel surface driveway that leads from Willow Creek Road to the railway museum and railroad tracks and station. The northern portion of this property is occupied by a utility line right-of-way, includes two utility tower structures, and is traversed by overhead utility lines.

3.0 Methods

For the overall ecological characterization and habitat inventories, two survey teams including wildlife biologists and wetland and soil scientists conducted site visits in July and August 2025, with oversight by EPA representatives. Surveys included confirmation, refinement, and finalization mapping of the natural plant communities identified during the desktop analysis; detailed identification of the plant types present (including invasive species); delineation of the limits of on-site wetlands (where present); recording of habitat information for each habitat type; and assessment of wildlife habitats. Additional field surveys for rare species were conducted at the Utility Drive rail transload area by subject matter experts as appropriate. This section describes the methods used to conduct this baseline assessment. The results are presented in Section 4.

3.1 Background Data Collections

During preparation of the Rail PDI Work Plan, background information was reviewed to develop a preliminary understanding of potential habitat conditions at and in proximity to both rail transload properties including natural community types, the potential presence of federally listed threatened or endangered species and state-listed rare species, potential wetlands and vernal pools, and invasive species. That information was derived from on-line sources, such as the MassGIS Data Layers (MassGIS 2025a), the USFWS National Wetlands Inventory (NWI) Mapping, IPaC results, MNHESP data, and aerial photograph reviews. In March of 2025, MNHESP provided GE with digital information consisting of “Species Habitat” mapping for state-listed species in Reaches 5 through 8 of the ROR, including a 1,000-foot buffer from the 1 mg/kg PCB isopleth, which provided coverage of the rail transload properties. Surveys for state-listed species were implemented based on this mapping.

During the background data collection, the presence, location, and species composition of terrestrial habitats were reviewed through on-line database reviews and aerial photograph interpretation. This process included producing cover type mapping using the habitat classification system developed by DeGraaf and Yamasaki (2001) as well as the community type classification mapping used in the 2002 Woodlot Ecological Characterization. The DeGraaf and Yamasaki cover type categories are very similar to the cover types used for the Woodlot (2002) ecological characterization but provide for greater differentiation of some of the habitat cover types, particularly in upland areas of the Woods Pond Spur property, whereas the Woodlot Ecological Characterization focused on floodplain habitats.

Table 1 provides a comparison of the habitat cover types between the 2002 Woodlot and 2001 DeGraaf and Yamasaki classification systems. As can be seen there, the cover types are generally comparable, with mostly minor naming changes between the two systems. For example, DeGraaf and Yamasaki provide four distinctions of upland field cover types, whereas Woodlot lumped all such areas into one “cultural grassland” cover type. Given the relatively widespread presence of these cover types at these properties, use of the DeGraaf and Yamasaki system allowed for finer distinctions in the upland habitat cover mapping and improved characterization of potential wildlife habitat.

The mapping was done with the aid of aerial photographs, and these preliminary delineations were transferred onto the updated aerial photographic and topographic mapping obtained for the transload properties. Field investigations were conducted over the entirety of both properties to review and verify or adjust the habitat cover type delineations.

3.2 Field Investigations

During the field investigations, ecological habitat conditions were documented at the rail transload properties. During these field surveys, the main discrete habitat cover type units were subject to a detailed inventory by recording a range of habitat parameters to characterize structural, physical, hydrologic, and biological conditions within each habitat cover type unit. These characterizations included soil characteristics (at the Utility Drive property only), plant species composition, a broad range of habitat features, and habitat degradation. Plant species were identified using appropriate botanical reference material for the region. The indicator status of each species was identified following USACE (2020a). The specific investigations to assess the potential presence of wetlands and vernal pools are discussed in the following subsections.

3.2.1 Wetland Delineation and Inventory

The evaluation of the potential presence of wetland resource areas within and adjacent to the rail transload properties was performed in two phases – initial desktop studies of existing data sources followed by a detailed field survey effort. Resources consulted during the desktop analyses included USGS topographic quadrangle maps, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Soil Survey data, USFWS NWI mapping, most recent color aerial photographs, and other data layers available from MassGIS (2025a). The field survey work included the identification, delineation, and verification of any wetlands identified. The verification included completing the USACE Wetland Determination Data Forms for the Northeast Region for any wetlands identified, incorporating the three-parameter criteria (vegetation, soils, and hydrology) for federal wetland determinations (USACE 2020a).

At the Utility Drive transload property, the background information reviewed indicated the potential presence of a number of wetlands located within the lower-elevation portions of that property. Those areas were evaluated in the field to determine whether they constitute wetlands under state and/or federal wetland criteria, including completing the USACE Wetland Determination Data Form as part of this determination.

At the Woods Pond Spur transload property, an assessment of that approximate four-acre property east of Willow Creek Road, as well as the forested area west of Willow Creek Road, showed that no wetlands are present within or adjacent to this property.

3.2.2 Vernal Pool Assessment

Investigations to assess the presence of potential vernal pools at the rail transload properties were conducted as part of the vernal pools assessments conducted by GE in 2018 and 2019 in Reach 5A (AECOM 2020). Wetlands at the Utility Drive property did not meet the NHESP criteria for vernal pool certification, and no potential vernal pool habitat was present at the Woods Pond Spur property. As a result, no focused vernal pool surveys were conducted at these properties.

3.2.3 Plant Community Inventory and Wildlife Habitat Survey

Documentation of mammals, birds, and invertebrates at the rail transload properties was made through direct observation and through indirect evidence of wildlife presence (e.g., scat, tracks, vocalizations, burrows). In addition, identification and delineation of any habitats or natural communities which could support listed rare species were recorded.

Habitat requirements for many species of wildlife common to New England are well documented; and therefore, by characterizing plant community composition and structure, the potential for a certain species to be present in an area can be assessed. Plant inventory and cover type mapping were accomplished through both qualitative and quantitative means.

At the Utility Drive property, qualitative meander surveys and mapping of habitat cover types were conducted in the field by randomly locating data collection plots within each plant community/cover type to be representative of general conditions within that property. These plots were located with GPS, digitized using ArcGIS, and then plotted onto a plant community cover type map. Percent cover of trees, woody shrubs, and vines were estimated within five-by-five meter quadrats ($25m^2$) with a nested one-by-one meter (one m^2) quadrat for estimating herbaceous plant cover (graminoids and forbs). A Daubenmire mid-point cover class scheme (based on Barbour et al., 1999), modified to include a <1% category, was used to estimate percent cover of each species.

For each habitat type sampled quantitatively at this property, four descriptive metrics were reported: (1) species richness; (2) relative dominance; (3) relative frequency; and (4) an Importance Value identifying those plant species that are essentially most important (i.e., most dominant) and occur most frequently within the given community. These community metrics are further described in Barbour et al. (1999). In addition to the data generated by these plot sampling procedures, overall meander surveys for recording vegetative composition were conducted by an AECOM botanist. These surveys included searches for any targeted state-listed rare plant species mapped by MNHESP in Reach 5A, as well as host plants for state-listed butterflies (mustard white (*Pieris oleracea*) and moths (ostrich fern borer moth (*Papaipema* sp. 2 *near pterisii*)). A complete list of all plant species identified within the Utility Drive property during both plot sampling and meander surveys was generated.

For the Woods Pond Spur rail transload property, given the disturbed conditions and sparse vegetative communities as well as the size of the property, that property was assessed by walking transects and documenting cover types and vegetation percent coverage rather than documenting vegetation percent cover within randomly located data plots. The Woods Pond Spur property was also surveyed by the AECOM botanist, and all data were consolidated to generate a comprehensive list of all plant species observed at the Woods Pond Spur property.

The resulting plant community cover maps are presented on **Figures 2 and 3** for the Utility Drive and Woods Pond Spur transload properties, respectively.

3.2.4 Invasive Species Assessment

The presence, location, and abundance of invasive species, including both those listed by the USACE New England District (USACE 2020b) and those listed by the MIPAG (MIPAG 2022), were investigated through base mapping and aerial imagery reviews in combination with field verification. During field investigations, observations of the presence and relative abundance of identified invasive plant species were specifically noted and included in the quantified plant survey plot data within the Utility Drive property, and colonies of invasive species were located by GPS. Overall invasive species observations from meander surveys at both properties were also recorded.

3.3 Wildlife Habitat Assessment

In order to assess habitats for the presence of wildlife species that may be present within the rail transload properties at times but were not observed due to the timing of the surveys or species-specific behaviors and morphology (e.g., living underground, nocturnal existence, camouflage), the plant community cover types characterized and mapped following those described by DeGraaf and Yamasaki (2001) were used. Cover types described by DeGraaf and Yamasaki (2001) are broken down into a hierarchy of cover types within a “Forest Matrix” and a “Non-forested Matrix” and include terrestrial, wetland and deepwater, and other habitat types. These cover types correspond with various wildlife species in New England that typically breed, forage, or shelter within them. Characterizing the landscape within the rail transload properties following this methodology facilitates a more comprehensive evaluation of wildlife habitat within the properties than just by observation encounters alone.

3.4 Rare Species Assessment

In accordance with the Rail PDI Work Plan, the occurrence of federally listed threatened or endangered species and/or their habitat at the two rail transload properties was assessed based on the USFWS on-line IPaC (USFWS 2025). Using that tool, a list of federally listed or proposed rare species and critical habitats that are known or expected to be on or near these properties was generated.

The potential occurrence of state-listed threatened, endangered, or special concern species and/or their habitat at these two properties was initially assessed based on records and documentation available from the MNHESP. That documentation included "Species Habitat" mapping provided by MNHESP to GE in March 2025 for state-listed species for Reaches 5-8 of the ROR, including a 1,000-foot buffer from the 1 mg/kg PCB isopleth, which provided coverage of the rail transload properties.

Subsequently, as required by EPA, surveys of federal and state-listed rare species were conducted in Reach 5A in 2025. Those surveys encompassed the Utility Drive rail transload property. As also required by EPA (in a conditional approval letter dated November 24, 2025), surveys for certain state-listed and federally listed or proposed species at the Woods Pond Spur rail transload property will be conducted in 2026 as part of such surveys in Reach 6.

3.5 Geology and Soils

Documentation of bedrock and surficial geologic conditions at the rail transload properties was based upon information available on MassGIS (2025b & c), supported by previous studies such as that described in the Woodlot 2002 Ecological Characterization. Soil conditions were evaluated using the information provided by the USDA NRCS Web Soil Survey (USDA NRCS 1988), (https://websoilsurvey.nrcs.usda.gov). Soil conditions at the Utility Drive property were also evaluated in the field at 24 survey locations distributed among the mapped cover types. At each of these locations, a soil profile description was documented from a test pit, using either a shovel or auger, which allowed for a detailed assessment of the soils in the top two to three feet. Given the disturbed conditions of the Woods Pond Spur property, such as gravel driveways and hard packed conditions associated with old building pads and parking areas, soil profile data were not collected at that property.

3.6 Ecological Functions and Values Assessment

From a baseline perspective, ecological functions of the habitats identified at the rail transload properties were assessed as provided in the Rail PDI Work Plan.

The assessment of upland ecological functions was based largely on the habitat characteristics and the associated wildlife functions which are observed or have potential to occur within the identified habitat. For establishing and documenting these relationships, the principles and procedures developed by DeGraaf and Yamasaki (2001) were used.

An assessment of the functions and values of the wetlands at the Utility Drive property was conducted in accordance with *The Highway Methodology Workbook Supplement: Wetland Functions and Values: A Descriptive Approach* developed by the USACE (USACE 1999). According to that report, wetland functions are defined as those properties that are intrinsic to the wetland system (e.g., nutrient cycling, hydrology). In contrast, wetland values are properties ascribed to the wetland system by society.

4.0 Results

Results of the desktop analysis and field survey efforts are described below. Representative photographs from the field visits to these rail transload properties are provided in **Attachment C-1**. The USACE wetland determination forms for the Utility Drive property are provided in **Attachment C-2**.

4.1 Geology and Soils

The rail transload properties are situated within the Housatonic River Drainage Basin and the Grenville Shelf Sequence. The dominant lithogeochemical character of the near-surface bedrock in this sequence is composed of carbonate rocks and other metasedimentary rocks deposited in a carbonate shelf sequence overlying the Grenville basement, which extends from western Connecticut to Massachusetts and Vermont (MassGIS 2025b).

Based on the USGS 1:24,000 Surficial Geology (MassGIS 2025c), the Utility Drive property is mapped as having coarse deposits consisting of gravel deposits, sand and gravel deposits and sand and gravel deposits. Wetland areas are mapped as swamp deposits of organic muck and peat that contain minor amounts of sand, silt, and clay at least three feet thick and overlie glacial deposits or bedrock (**Figure 4** and **Attachment C-3**).

Review of the USDA NRCS Soil Survey indicates soils mapped as Natchaug and Catden muck in the southern portion of the Utility Drive property; these are very poorly drained soils consisting of highly decomposed organic material over loamy glaciofluvial deposits and/or till. Soils in the northern half of the property, mapped as Oakville and Groton series (**Figure 4)**, are excessively drained soils composed of loose sandy glaciofluvial deposits. The property's topography consists of two large rolling hills aligned east to west in the northern half of the property and level topography toward the southern and western portions of the property. The mapped soils correspond with this rolling topography, with the excessively drained soils mapped over the higher portions of the property and the poorly drained soils in the lower elevation areas.

The Woods Pond Spur property is mapped as thin till, composed of a nonstratified matrix of sand, some silt, and little clay embedded with scattered pebble, cobble, and boulder clasts, with commonly distributed large surface boulders. The NRCS mapped this area where till is generally less than 10 to 15 feet thick as Udorthents (man-made or altered soils), defining areas of excavated and filled land over loose glaciofluvial deposits. Igneous and metamorphic rock and/or friable basal till derived from igneous and metamorphic rock are indicated to underlay the area (**Figure 5** and **Attachment C-3)**.

4.2 Plant Community Inventory and Wildlife Habitat

This section discusses the results of vegetative cover type mapping conducted to characterize the habitat conditions identified at the rail transload properties. In addition, it presents the results of the plant species inventory and documentation of observed and potential wildlife habitat.

4.2.1 Cover Type Mapping

Following the DeGraaf and Yamasaki (2001) habitat classification system, habitat cover types are separated into two broad categories – Forested Matrix and Non-forested Matrix – which represent both terrestrial and (where applicable) wetland habitats. Based on relationships between habitat cover types and the wildlife species that are typically associated with them, a list was generated of potential wildlife species for each rail transload property.

4.2.1.1 Utility Drive Property

A total of eight different habitat cover types were mapped at the Utility Drive property following the DeGraaf and Yamasaki (2001) habitat classification system. The cover types identified are summarized in **Table 2** and shown on **Figure 2**.

Terrestrial cover types observed at the Utility Drive property include northern hardwood forest, upland field (grass/forbs and shrub/old field), palustrine wetlands, and non-vegetated habitats. Upland field habitat grass/forbs was the primary habitat at the property. Subcategories in the upland field class include areas dominated by forbs, grasses, and shrubs. Palustrine wetland cover types include shallow marsh, deep marsh, shrub swamp, and swamp hardwood.[1] In addition, several areas associated with paved access roads and rail tracks were classified as non-vegetated diminished habitat.

Approximately 1.14 acres (3.1% of the total Utility Drive property) comprise the areas of diminished habitat value because they consist of paved access roads and the existing railroad track right-of-way. Approximately 22 acres (59%) of the property comprise upland field habitats dominated by a mixture of forbs, grasses, small clumps shrubs and a few scattered saplings. Approximately seven acres (19%) of the property are forested and eight acres (19%) consist of palustrine wetland cover types.

4.2.1.2 Woods Pond Spur Property

Terrestrial cover types observed at the Woods Pond Spur property comprise areas of non-forested upland field habitat and non-vegetated diminished habitat. Subcategories in the upland field class include areas dominated by forbs, grasses, shrubs and sparse tree cover. Approximately 1.2 acres

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[1] Although various palustrine wetland cover types were found at the Utility Drive property, the wetlands (as defined by federal and state criteria) that will be affected are limited. As discussed in Section 4.3 below, only one wetland resource area – an intermittent stream – will be affected by the construction and operation of the rail transload facilities at that property.

(28.0%) consist of upland field shrub/old field habitat with diminished habitat value due to previous disturbance from industrial activities and utility infrastructure. In addition, stockpiled railroad ties fragment the herbaceous vegetation centrally located within the property. Approximately 2.9 acres (72.3% of the property) comprise areas of non-vegetated diminished habitat value because they consist of non-vegetated paved access roads, hard-packed parking lot and an old building pad. The cover types identified at the Woods Pond Spur property are summarized in **Table 3** and shown on **Figure 3**.

4.2.2 Plant Inventory

4.2.2.1 Utility Drive Property

A total of 24 vegetation plots were evaluated in detail to quantitatively describe the plant communities and map habitat cover types within the Utility Drive property. Percent cover of trees, woody shrubs, and vines was estimated within 5x5 meter plots, and a nested one-square meter was used for estimating herbaceous plant cover. As described above, several plant metrics were calculated to help describe and summarize the field-collected plot data and included Species Richness, Relative Dominance (D_R), Relative Frequency (F_R) and Importance Values (IV_{ave}).

A total of 142 plant species were observed across the entire Utility Drive property, as listed in **Table 4**. These include 18 trees, 14 woody shrubs, six woody vines, and 104 herbaceous plant species. A total of 17 observed species are listed as invasive and three are listed as likely invasive by MIPAG (https://www.massnrc.org/mipag/linvasive.htm), as shown in **Table 4**. These invasive species include nine herbaceous plants, six woody shrubs, one tree, and one vine. The USACE New England District (USACE 2020b) does not list any plants as invasive that are not listed by MIPAG (2022) as invasive or likely invasive. No plants were identified as either state-listed or federally listed rare species.

A total of 52 plant species (including those listed by MIPAG as invasive or likely invasive) were observed within the vegetation plots. The number of species observed per plot ranged from three to eight species with an average of 5.3 (±0.3 SE) species per plot. Six plant species observed in the plots are listed by MIPAG as invasive or likely invasive and occurred in 18 out of the 24 vegetation plots.

Plant metrics calculated for the Utility Drive property include only species that were observed in two or more plots. These metrics are presented in **Table 5**.

The most frequently occurring plant and that with the highest relative dominance and greatest importance value was Morrow's honeysuckle (*Lonicera morrowii*), an invasive species. This invasive species was observed in nine of the vegetation plots. A second invasive plant, common (or European) buckthorn (*Rhamnus cathartica*), was also included in the top five ranked species, along with native vegetation that exhibited the highest percent cover on average – namely, switch grass (*Panicum virgatum*), whorled bedstraw (*Galium mollugo*), and dotted hawthorn (*Crataegus punctata*).

Table 6 provides a list of plant species and corresponding percent covers observed in palustrine cover types at the Utility Drive property.

Upland Field - Grass / Forbs

Upland field grass/forbs habitat account for approximately 18.7 acres of the Utility Drive property. This cover type is typically associated with hayfields or abandoned agricultural fields that are reverting back to secondary succession (shrub and forest habitat).

A total of 18 species of grasses and forbs were observed in the 14 vegetation plots inspected within this cover type (**Table 7**). Based on the plot data, species with the largest IV_{ave} include switchgrass, whorled bedstraw, lemon thyme (*Thymus pulegioides*), spotted knapweed (*Centaurea stoebe*), and bluejoint grass (*Calamagrostis canadensis*). Of these, spotted knapweed is listed as likely invasive. Other MIPAG-listed invasive species were also observed, including Morrow's honeysuckle, Asiatic bittersweet (*Celastrus orbiculatus*), purple loosestrife (*Lythrum salicaria*), common buckthorn, and garlic mustard (*Alliaria petiolata*). Percent cover of invasive species within each plot was generally less than 21%. Only two plots were documented to have approximately 75% cover of spotted knapweed.

Upland Field – Shrub / Old Field

Upland field-shrub/old field habitat accounts for approximately three acres of the Utility Drive property. Twelve areas of this cover type were identified and delineated at the property. DeGraaf and Yamasaki (2001) describe this cover type as abandoned fields reverting to forest and characterized by grasses, shrubs, and small trees. Based on the sample plots, the dominant species observed within this cover type included Morrow's honeysuckle, elderberry (*Sambucus nigra)*, gray dogwood (*Cornus racemosa)*, white meadowsweet (*Spiraea alba)*, common buckthorn, and black raspberry (*Rubus occidentalis*). Bradford pear (*Pyrus calleryana*), autumn-olive (*Elaeagnus umbellata*) and saplings of black oak (*Quercus velutina)* were also observed within the upland field. MIPAG-listed invasive species included Morrow's honeysuckle, common buckthorn, and autumn-olive.

Palustrine Deep Marsh

Approximately 1.5 acres of palustrine deep marsh habitat was mapped within the Utility Drive property. This habitat is part of a wetland system and stream channels that flow east from Holmes Road to the Housatonic River, east of the property. The exact depth of the marsh is unknown at this time, but it is, at a minimum, greater than one to two feet deep at its center. Portions of the marsh appear to be permanently flooded and largely vegetated with emergent vegetation. The marsh system includes a broad fringe of palustrine shallow marsh cover type of emergent cattails (*Typha angustifolia* and *Typha latifolia)*, and invasive purple loosestrife that is further surrounded by a narrow band of upland field – shrub/old field and northern hardwood cover types.

Palustrine Shallow Marsh

Approximately 4.4 acres of palustrine shallow marsh habitat are mapped within the property. DeGraaf and Yamasaki (2001) describe this palustrine cover type as a combination of several wetland cover types; the shallow marsh at the property is dominated by emergent vegetation with few woody species. A total of 25 plant species were observed within the shallow marsh cover type; three were upland species, and three were MIPAG-listed invasive plant species (purple loosestrife, common reed (*Phragmites australis)*, and common buckthorn).

The largest shallow marsh habitat at the property, approximately 3.8 acres, is located in the south-central half of the property and is contiguous with a wetland system to the east and the Housatonic River via an intermittent stream located in the southeast portion of the property. The southwestern corner of this marsh is bordered by a swamp hardwood cover type.

An approximate 0.23-acre shallow marsh, located at the southeastern corner of the property, receives stormwater runoff from culverts that convey flow to the marsh from the surrounding area. The shallow marsh portion of the wetland is dominated by cattail and the invasive purple loosestrife.

Approximately 0.06 acre of shallow marsh is located along the eastern portion of the property. This marsh is contiguous with palustrine shrub swamp to its south. The marsh is dominated by tussock sedge (*Carex stricta*), sensitive fern (*Onoclea sensibilis*), spotted Joe-Pye-weed (*Eutrochium maculatum*), and purple loosestrife. Only one invasive plant, purple loosestrife, was observed within this portion of the marsh.

The shallow marsh habitat at the property is described as a densely vegetated community dominated by narrow-leaf and broad-leaf cattail, purple loosestrife, soft rush (*Juncus effusus*), sedges (*Carex* spp.) and wrinkle-leaf goldenrod (*Solidago rugosa*). Other commonly observed vegetation within this cover type includes American bur-reed (*Sparganium americanum*), purple marsh-locks (*Comarum palustre*), devil's beggar-ticks (*Bidens frondosa*), purple-leaf willowherb (*Epilobium coloratum*), arrow-leaved tearthumb (*Persicaria sagittata*), sensitive fern, giant goldenrod (*Solidago gigantea*) and jewelweed (*Impatiens capensis*).

Palustrine Shrub Swamp

DeGraaf and Yamasaki (2001) characterize shrub swamps as dominated by woody vegetation less than 20 feet tall with hydric soil that is seasonally or permanently flooded. The palustrine shrub swamp, an approximately 0.15 acre-swamp centrally located along the eastern side of the property, is contiguous with the 0.06-acre shallow marsh described above. This shrub swamp includes a cover type dominated by common buckthorn, Morrow's honeysuckle, silky dogwood (*Cornus amomum*) and speckled alder (*Alnus incana*). Only one invasive plant, common buckthorn, was identified within this cover type. During high water conditions, the swamp appears to flow east overland toward a large wetland system situated adjacent to the Housatonic River.

Swamp Hardwood

Approximately 0.7 acre of swamp hardwood cover type was mapped at the southwestern corner of the 4.4-acre shallow marsh described above. This swamp generally flows east to the 4.4-acre shallow marsh via ephemeral stream channels during highwater conditions. DeGraaf and Yamasaki (2001) describe swamp hardwoods in New England as dominated by red maple (*Acer rubrum*) and associated species. The property's swamp hardwood included an overstory of black birch (*Betula lenta*), eastern cottonwood (*Populus deltoides*), and boxelder (*Acer negundo*), with a shrub understory of common buckthorn, Morrow's honeysuckle, silky dogwood, and multiflora rose (*Rosa multiflora*).

Northern Hardwood

Approximately seven acres of northern hardwood cover type exist along the property's western, northern, and eastern borders, as well as bordering portions of the shallow marsh in the center of the property. This cover type includes a mix of trees and shrubs with minimal herbaceous vegetation. Seven woody species, one vine, and one herbaceous plant were observed in sample plots, four of which were listed as invasive by MIPAG. Based on the plot data, common species observed within this cover type include black birch, white pine (*Pinus strobus*), and black cherry (*Prunus serotina*). Invasive species include Morrow's honeysuckle, Asiatic bittersweet, common buckthorn, and garlic mustard. Dominant species within the sample plots included eastern cottonwood, large-tooth aspen (*Populus grandidentata*), common buckthorn, and Morrow's honeysuckle. Likely due to past disturbances associated with the historic gravel pit activity, the understory of this cover type is dominated by the invasive Morrow's honeysuckle.

Northern hardwood forests are characterized by their diversity of tree species, uneven aged, with greater number of tree species compared to stands dominated by hardwood species. These are characterized as stands of trees where neither hardwoods nor softwoods exceed 75% of the total basal area or canopy cover in the stand (Kenefic et al. 2021). Species observed within this mapped cover type include black cherry, large-toothed aspen, white pine, dotted hawthorn, gray birch (*Betula populifolia*), common buckthorn, Morrow's honeysuckle, boxelder, and black birch.

Based on plot data, the species with the largest IV_{ave} in this cover type are Morrow's honeysuckle, dotted hawthorn, common buckthorn, boxelder and black cherry as the dominant species (**Table 8**). The invasive plants Morrow's honeysuckle and common buckthorn were observed throughout the northern hardwood cover type. These species accounted for as much as 60% of the total plot area sampled.

Non-Vegetated Cover Type

Approximately 1.1 acres of non-vegetated areas of the property occur, all associated with paved access road and railroad tracks.

4.2.2.2 Woods Pond Spur Property

The Woods Pond Spur rail transload property is vegetated with herbaceous and shrub cover types, typically consisting of mugwort (*Artemisia vulgaris*), spotted knapweed, goldenrods (*Solidago spp*.), blackberries (*Rubus spp*.), purple loosestrife, Morrow's honeysuckle, staghorn sumac (*Rhus hirta*) and silky dogwood. A narrow tree line of aspen (*Populus tremuloides*), ash (*Fraxinus sp*.), hickory (*Carya sp*.), and a mix of honeysuckle and dogwood shrubs separates the northwestern portion of the property from Willow Creek Road. A complete list of plant species observed at the Woods Pond Spur property is provided in **Table 9**. In general, the property was characterized as sparsely vegetated open areas of hardpack surfaces covered by grasses with areas of herbaceous vegetation and small stands of trees. A hedge row of three multi-trunk red maples, one eastern cottonwood, and an understory of herbaceous vegetation dominated by mugwort separates the gravel driveway and railroad tracks from the old building pad/parking area.

Upland Field – Shrub / Old Field

Approximately 1.2 acres of upland field-shrub/old field is located within the Woods Pond Spur property. This habitat typically develops after disturbances and is generally dominated by herbaceous vegetation that colonizes the disturbed soils. This cover type at the property is characterized by herbaceous annuals and perennials, a few regenerating trees, and maintained shrublands associated with the utility line right of way at the north end of the property. A total of six woody species, nine herbaceous species, and two vines were observed within the property. The percent cover by the various species is listed in **Table 10**. Common species observed at the property within this cover type included mugwort, purple loosestrife, common milkweed (*Asclepias syriaca*), Morrow's honeysuckle, and Bebb's willow (*Salix bebbiana*). Seven of the species observed at the property are listed as invasive (Asian bittersweet, purple loosestrife, common reed, Morrow's honeysuckle, Japanese knotweed, common buckthorn, and multiflora rose), and two are listed as likely invasive (spotted knapweed and common barberry).

Non-Vegetated Cover Type

Approximately 2.9 acres of the property are identified as non-vegetated areas and include areas that are used for parking and access road to the rail station and railroad tracks. Much of the non-vegetated areas consist of hardpacked gravel or low groundcover surfaces that accommodate the Berkshire Scenic Railway Museum.

4.2.3 Wildlife Habitat

Table 11 and **Table 12** provide lists of observed and potential wildlife species associated with all the habitat cover types identified at the Utility Drive rail transload property. These lists have been generated using the habitat suitability guidance described by DeGraaf and Yamasaki (2001) and include both terrestrial and wetland cover classes from within the Forested Matrix and the Non-forested Matrix. A total of 107 wildlife species have been rated as potentially occurring at the Utility Drive property based on recognized habitat conditions (according to the associations described by DeGraaf and Yamasaki 2001). These include 68 birds, 23 mammals, and 16 species of amphibians and reptiles.

As described above in Section 4.2.1.2, habitat conditions at the Woods Pond property are generally considered low quality for wildlife, as a large proportion of the property is composed of impervious surfaces, open gravel and hardpacked surfaces with low ground cover, and areas of invasive species juxtaposed between a paved public road and an active rail line. Less than one third of the property exhibits a plant community similar in appearance to old field habitat (i.e., herbaceous and upland scrub-shrub cover), but exists as fragmented patches with invasive plant species, surrounded by disturbed areas. Some of the species listed in **Table 11** and **Table 12** under the Upland Field category may be present in these areas at times, but are unlikely to use them as a primary habitat.

The potential occurrence of state-listed and federally listed wildlife species is discussed in Section 4.5.

Forested Matrix

As described above, the forested matrix includes both terrestrial and wetland habitats with deciduous and mixed canopy cover. Forests provide food resources, cover, and nesting habitat for a wide variety of mammals, birds, amphibians, reptiles, and invertebrates. The tree and shrub layers within the forested matrix provide food and cover for many birds and larger mammals such as white-tailed deer (*Odocoileus virginianus*). Although the forested area at the Utility Drive property is relatively small, it is connected to wetlands systems associated with the Housatonic River. Under these conditions, some of the larger, wide-ranging mammals such as bobcat (*Lynx rufus*) and forest interior birds like thrushes or other neotropical migrants (e.g., warblers) could use this habitat.

The micro-topography and detritus found on the forest floor (e.g., leaf litter and fine and coarse woody debris) provide food and cover for invertebrates, amphibians, and reptiles. Smaller mammals, such as the gray squirrel (*Sciurus carolinensis*), Eastern chipmunk (*Tamias striatus*), and raccoons (*Procyon lotor*), utilize fallen logs for cover and nest cavities.

Forested wetlands also provide a diverse assemblage of vegetation and an abundance of food, shelter, migratory and wintering areas, water sources, and breeding areas for a number of wildlife species. Amphibian species also require forested wetlands for moisture and temperature regulation during the hottest and driest times of the year. Reptiles will use these habitats for thermoregulation and rehydration as well, including eastern garter snake (*Thamnophis sirtalis*) and ribbon snakes (*Thamnophis sauritus*).

Non-Forested Matrix

The Non-forested Matrix, including upland fields, provide food resources, cover, and nesting habitat for a variety of mammals, birds, amphibians, reptiles, and invertebrates. Cover types within the upland field category include those areas dominated by forbs, grasses, and shrub/old field habitats. The open areas dominated by forbs and grasses provide temporary forage and nesting for a number of bird species such as killdeer (*Charadrius vociferus*), field sparrow (*Spizella pusilla*), and raptors including broad-winged hawks (*Buteo platypterus*) and turkey vulture (*Cathartes aura*). During the 2025 site visits, American crow (*Corvus brachyrhynchos*), black vulture (*Coragyps atratus*), and bald eagle (*Haliaeetus leucocephalus*) were observed flying over these habitats at the Utility Drive property. Small mammals and numerous invertebrate species typically use these open field habitats and their edges to forage. These habitats also provide hunting opportunities for larger mammals such as red fox (*Vulpes vulpes*) and predatory birds including red-tailed hawks *(Buteo jamaicensis)* and American kestrels *(Falco sparverius)*.

Shrub/old field habitats can be utilized as foraging and nesting habitat or protective cover by a number of mammals, songbirds, invertebrates, reptiles, and amphibians. Species such as the Eastern cottontail (*Sylvilagus floridanus*), gray squirrel, red fox, Virginia opossum (*Didelphis virginiana*), and raccoon utilize these types of habitats. Eastern cottontails and white-tailed deer tracks were observed in these areas. Where these open areas border on forest edges, habitats are available for coyote (*Canis latrans*), eastern cottontail, and forest edge bird species, such as the American robin (*Turdus migratorius*), brown thrasher (*Toxostoma rufum*), and northern mockingbird (*Mimus polyglottus*).

Shallow emergent marsh, shrub swamp, and deep marsh habitats at the Utility Drive property may also be used for breeding and feeding by a variety of bat species and ducks, including the big brown bat (*Eptesicus fuscus*) and mallard duck *(Anas platyrhynchos)*, among others. Open field areas are also typically used by these species as secondary habitats for feeding.

The non-forested areas of the Woods Pond Spur property may provide habitat for a limited number of species adapted to disturbed sites in proximity to developed land uses. Several species of sparrows, small mammals, and common snake species find such habitat suitable. During the 2025 site visits, red-winged blackbirds (*Agelaius phoeniceus*) were observed within shallow marsh areas comprising the banks around Woods Pond, and painted turtles (*Chrysemys picta*) were observed to the east of the property.

4.3 Delineation and Inventory of Wetlands

Portions of the overall Utility Drive property, particularly the east-central part, were determined to have wetland conditions consisting primarily of palustrine marshes and swamp hardwoods (discussed in Section 4.2). An intermittent stream discharges into these wetlands from the west. USACE Wetland Determination Data Forms documenting the wetland boundary conditions for the wetlands were completed and are provided in **Attachment C-2**. These forms document the hydrologic, vegetation, and soils conditions both inside and outside of the delineated wetland at two transects along the boundary. In addition to meeting the federal criteria for wetland/waters of the U.S., these wetlands appear to meet the classification of two resource areas as defined in the Massachusetts Wetland Protection Act (MWPA) regulations – a Bordering Vegetated Wetland and the Bank of an intermittent stream. However, only one such wetland area, the intermittent stream, will be impacted by the construction and operation of the Utility Drive rail transload area, which will require a crossing of that stream. This will involve the temporary conveyance of the drainage in the stream channel via culverts during the rail transload operations, to be followed by the restoration of the stream channel after site use. That intermittent stream is considered only a Bank resource area under the MWPA regulations.

No wetland habitats were identified or delineated at the Woods Pond Spur property, although Woods Pond is located within close proximity to that property. However, since the pond is located on the opposite side of the existing railroad tracks and no work or activities are planned in that area, the pond limits were not delineated in the field but rather digitized using aerial photographs and LiDAR generated topography.

4.4 Vernal Pool Findings

As previously discussed, during the field investigations, no vernal pools or potential vernal pool habitats were identified within either rail transload property.

4.5 Rare Species Habitat Findings

As discussed in Section 3.4, the potential occurrence of any federally listed or state-listed rare species or their habitat on the rail transload properties was assessed.

The MassGIS (2025a) MassMapper interactive map, available data layers, and active data layers specific to potential and documented habitats indicated that the Utility Drive property contains MNHESP Priority Habitat of rare species. The current MNHESP Priority Habitat mapping does not include the currently anticipated rail layout area at the Woods Pond Spur property but instead is confined to the area to the east (encompassing the northern part of Woods Pond and its floodplain on the eastern side of the existing rail line). MNHESP has included a small section of the property limits within Core Area 2, but this small overlap between the Woods Pond Spur property boundary and Core Area 2 may be a mapping/delineation issue rather than actually reflecting habitat conditions for Core Area 2 species. This area does not appear to provide habitat suitable for any of the Core Area 2 designated species (American bittern [*Botaurus lentiginosis*], common gallinule [*Gallinula galeata*], mustard white butterfly, and wood turtle [*Glyptemys insculpta*]), considering both the existing habitat conditions and the long-term industrial use of the property along the railway. Figure 6 shows the MNHESP Priority Habitat mapping covering both rail transload properties. More details relating to rare species finding for each property are provided in the following sections.

4.5.1 Utility Drive Property

A review of the USFWS IPaC on-line mapping tool (USFWS 2025) revealed potential habitat in the general area of the Utility Drive property for the tricolored bat (*Perimyotis subflavus*) and the monarch butterfly (*Danaus plexippus*), both of which have been proposed by the USFWS for federal listing. The results of this review are included in **Attachment C-4**. The tricolored bat is also state-listed as an endangered species while the monarch butterfly is not currently state-listed.

The Species Habitat mapping provided by MNHESP in March 2025 for state-listed species in the ROR and within a 1,000-foot buffer from the ROR limits indicates mapped habitat for the wood turtle, American bittern, and mustard white butterfly at the Utility Drive property. The adjacent floodplain to the east is mapped as habitat for common gallinule and wapato (*Sagittaria cuneata*).

During the summer of 2025, field surveys were conducted in Reach 5A for the state-listed species indicated by the MNHESP Species Habitat mapping, using survey procedures approved by EPA for Reach 5A. These included surveys of wood turtles, rare butterflies and their host plants, and state-listed bird species. Those surveys encompassed the Utility Drive transload property. The surveys also included a survey at the Utility Drive property for any state-listed plant species (including the wapato, which is mapped in the marshes east of the property), and the bird survey included the common gallinule (also mapped in the marshes east of the property). In addition, an acoustic survey of federal and state-listed bat species was conducted in Reach 5A and also covered the Utility Drive property. Reports on all of these surveys were submitted to EPA in September through December 2025 (AECOM 2025a, b, c, d), and the results relevant to this rail transload property are summarized below.[2]

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[2] GE's report on the state-listed plant species survey is not discussed here. As noted in Section 4.2.2.1, no state-listed plant species were identified in the Utility Drive rail transload property.

Wood Turtle

MNHESP Species Habitat mapping indicates that wood turtle habitat overlaps with the northern portion of the Utility Drive rail transload area layout. The wood turtle survey conducted in Reach 5A in 2025 (AECOM 2025) included visits to the Utility Drive property multiple times in June and July, when wood turtles are most likely to utilize floodplain habitats outside of the river channel for extended periods of time. No wood turtles were observed within the rail transload property during this survey, but one individual was documented near the property.

As discussed in this report, the northern portion of the Utility Drive property includes primarily upland field habitat and edge habitat adjacent to forested and palustrine wetland cover types and are hydrologically connected to the intermittent stream draining toward the Housatonic River. These edge habitats and transition areas may be used intermittently by wood turtles for movement or short-term refuge when adequate shrub or herbaceous cover is present. Much of the interior upland field is open and disturbed and may be less likely to support regular wood turtle use as compared to the adjacent forested floodplain and wet meadow habitats; however, areas of dense cover may be attractive for wood turtles, particularly during the summer months.

Monarch Butterfly and Mustard White Butterfly

The rare butterfly survey included both mustard white and monarch butterflies and focused on their host plants. Searches for the presence of or suitable habitat for the host plants were conducted on foot by meandering slowly and methodically within and adjacent to typical habitats, as appropriate, along with adjacent and surrounding areas. The field work was conducted within the best survey periods as determined by botanical reference reviews and within the flight period for each species where these time periods overlap. Confirmed occurrences of host plants were located with GPS equipment capable of sub-meter accuracy. Individual plants were mapped as a point, and clusters of plants were mapped with a line or polygon feature.

The survey confirmed the presence of 15 species of potential host plants for the target rare butterflies (AECOM 2025b). These species are also listed in **Table 13**. Of the species noted in that table, garlic mustard, dame’s rocket *(Hesperis matronalis)*, hoary alyssum *(Berteroa incana)*, and tower mustard *(Turritis glabra)*, all of which are host plants for mustard white, were identified within the survey area for the Utility Drive property. In addition, two host plant species for the monarch butterfly, common milkweed and swamp milkweed (*Asclepias incarnata*), were observed at the Utility Drive property. Observations included scattered individual or small groups of plants; however, one approximately 0.15-acre patch dominated by milkweed was observed at the Utility Drive property and the limits were GPS-located during the surveys (**Figure 2**). Adult mustard white and monarch butterflies were not observed at this property during the survey. Milkweeds were inspected for monarch butterfly eggs and larvae with negative results.

American Bittern and Common Gallinule

As previously noted, the Species Habitat mapping provided by MNHESP in March 2025 indicated mapped habitat for the American bittern encompassing all of the Utility Drive property and mapped habitat for the common gallinule in the marsh located in the southeastern portion of the property and in the floodplain to the east of that property. However, the survey for these state-listed bird species in 2025 did not find any evidence of either of these species in Reach 5A, including the Utility Drive property (AECOM 2025c). This survey included two stations proximal to the Utility Drive property and four site-specific visits during the breeding season, and it failed to document the presence of either of these bird species.

Bat Species

Although the Species Habitat Mapping provided by MNHESP did not include state-listed bat species in Reach 5A, GE conducted an acoustic field survey in 2025 for the two federally listed or proposed bat species – the northern long-eared bat (*Myotis septentrionalis*, listed as endangered) and the tricolored bat (proposed for federal listing as endangered) – which are also state-listed. That survey also included searches for any other state-listed bat species. An acoustic bat detector station was located along the Housatonic River roughly 1,000 feet east of the Utility Drive property, with two other stations roughly 2,000 feet away; all of these could provide data on potential bat species that may use the Utility Drive property for occasional foraging (there are no significant trees at the property that offer important roosting habitat for bats).

The 2025 acoustic survey confirmed the occurrence of five state-listed bat species, including one that is federally proposed, within Reach 5A, including areas proximal to the Utility Drive property (AECOM 2025d). These were the tricolored bat, little brown bat, eastern red bat (*Lasiurus borealis*), silver-haired bat (*Lasionycteris noctivagans*), and hoary bat (*Lasiurus cinereus*). The northern long-eared bat was not confirmed as occurring anywhere within Reach 5A, including the Utility Drive property.

4.5.2 Woods Pond Spur Property

For the Woods Pond Spur transload property, the USFWS IPaC on-line mapping tool indicated potential habitat for the northern long-eared bat, the tricolored bat, and the monarch butterfly in areas encompassing that property (see **Attachment C-4**). As previously noted, the northern long-eared bat is listed by the USFWS as endangered, and the tricolored bat and monarch butterfly have been proposed for federal listing. The northern long-eared bat and the tricolored bat are also state-listed while the monarch butterfly is not.

The Species Habitat mapping provided by MNHESP in March 2025 did not include any state-listed species at the Woods Pond Spur property, although there is mapped habitat for the common gallinule near that area. On August 8, 2025, GE proposed to conduct a survey for the common gallinule within and adjacent to the Woods Pond Spur rail transload property (AECOM 2025e). In its November 24, 2025 conditional approval letter for that proposal, EPA directed GE to expand the surveys in that area to also cover the northern long-eared bat, the tricolored bat, and the monarch butterfly; and it noted that these surveys could be conducted at the same time as the rare species surveys for Reach 6. These surveys will be conducted in 2026 and will provide additional information on the potential presence of rare species at the Woods Pond Spur property.

4.6 Ecological Functions and Values Assessment

4.6.1 Wetland Functions and Values Assessment

As noted in Section 3.6, an assessment of wetland functions and values was conducted in accordance with USACE Highway Methodology Workbook Supplement (USACE 1999). No wetlands were identified at the Woods Pond Spur property, and some wetlands were identified at the overall Utility Drive property, although only one (an intermittent stream) will be affected by the construction and operation of the rail transload area. As a general matter, the primary functions and values of the palustrine wetlands and hardwood swamp include floodflow alteration, sediment/toxicant retention, nutrient removal, wildlife habitat function and uniqueness/heritage and endangered species habitat values. Due to the high organic content underlying these wetlands, hydrologic input from surface runoff and direct precipitation will likely provide flood storage and desynchronization. The wetlands also serve a groundwater discharge function related to forming the intermittent streamflow from seasonal groundwater discharging to the surface. Wildlife habitat is also considered an important function, especially given the potential presence of rare species habitats at the Utility Drive property. Secondary functions likely include water quality improvement functions related to sediment/toxicant/pathogen retention. These wetland areas are easily accessed with adjacent walking paths and provide value for recreation and have educational/scientific value.

4.6.2 Upland Habitats Functions and Values Assessment

Ecological functions provided by the upland habitats on the Utility Drive and Woods Pond Spur properties are closely related to the habitat cover types. As described in previous sections, the Northern Hardwood forested areas adjacent upland fields provide significant edge habitat for a broad array of wildlife species. The vegetative structural diversity and complexity in the areas give rise to habitat and species diversity.

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Tables

Table 1. Cover type comparison: DeGraaf and Yamasaki (2001) versus Woodlot (2002)

Cover Type per DeGraaf and Yamasaki (2001)	Cover Type per Woodlot (2002)
Aspen/Birch Successional	Successional Northern Hardwoods
Eastern White Pine	Northern Hardwoods-Hemlock-White Pine Forest
Northern Hardwoods	Red Oak-Sugar Maple Transition Forest and Northern Hardwoods-Hemlock-White Pine Forest
Palustrine - Swamp Hardwoods	Red Maple Swamp
Palustrine - Pond	Moderately Alkaline Lake/Pond
Palustrine Deep Marsh	Deep Emergent Marsh
Palustrine - Shallow Marsh	Shallow Emergent Marsh
Palustrine - Shrub Swamp	Shrub Swamp
Upland Field - Forbs	Cultural Grasslands
Upland Field - Grass	Cultural Grasslands
Upland Field - Grass/Forbs	Cultural Grasslands
Upland Field - Shrub/Old Field	Cultural Grasslands
Non-Vegetated	N/A

Table 2. Mapped plant communities within the Utility Drive rail transload property

Cover Type	Acres	Percent
Forest Matrix		
Northern Hardwoods	6.81	18.7
Palustrine - Swamp Hardwoods	0.68	1.9
Nonforested Matrix		
Palustrine - Shallow Marsh	4.41	12.1
Palustrine – Deep Marsh	1.54	4.2
Palustrine - Shrub Swamp	0.15	0.4
Upland Field - Grass/Forbs	18.73	51.4
Upland Field - Shrub/Old Field	3.00	8.2
Non-Vegetated	1.14	3.1
Grand Total	***36.46***	***100.0***

*Cover types follow those of DeGraaf and Yamasaki (2001).

Table 3. Mapped plant communities within the Woods Pond Spur rail transload property

Cover Type	Acres	Percent
Nonforested Matrix		
Upland Field - Shrub/Old Field	1.15	27.7
Non-Vegetated	3.00	72.3
Grand Total	***4.15***	***100.0***

*Cover types follow those of DeGraaf and Yamasaki (2001).

Table 4. Vascular plant species observed at the Utility Drive rail transload property

Scientific Name	Common Name	Scientific Name	Common Name
Herbaceous Sedges, Rushes, Grasses and Forbs		**Herbaceous (cont.)**	
Achillea millefolium	common yarrow	*Schoenoplectus tabernaemontani*	softstem bulrush
Agrostis stolonifera	spreading bent	*Scirpus cyperinus*	woolgrass
^{INV}*Alliaria petiolata*	garlic mustard	*Scirpus hattorianus*	mosquito bulrush
Anthoxanthum odoratum	large sweet vernal grass	*Scutellaria galericulata*	hooded skullcap
Arctium minus	lesser burdock	*Scutellaria lateriflora*	mad-dog skullcap
Asclepias syriaca	common milkweed	*Securigera varia*	crown vetch
Berteroa incana	hoary alyssum	*Setaria pumila*	yellow bristle grass
Bidens frondosa	devil's-pitchfork	*Silene vulgaris*	bladder campion
Bromus inermis	smooth brome	*Solidago altissima*	tall goldenrod
Calystegia sepium	hedge false bindweed	*Solidago caesia*	wreath goldenrod
Carex annectens	yellow-fruit sedge	*Solidago canadensis*	Canada goldenrod
Carex argyrantha	silvery-flowered sedge	*Solidago gigantea*	giant goldenrod
Carex cephaloidea	thin-leaf sedge	*Solidago nemoralis*	gray goldenrod
Carex lacustris	lakebank sedge	*Solidago rugosa*	wrinkleleaf goldenrod
Carex lurida	sallow sedge	*Sparganium americanum*	American bur-reed
^{LNV}*Centaurea stoebe*	spotted knapweed	*Sparganium eurycarpum*	broad-fruit bur-reed
Cirsium arvense	Canada thistle	*Spirodela polyrrhiza*	common duckmeal
Clematis virginiana	Virginia Virgin's-Bower	*Stellaria graminea*	grass-leaf starwort
Comarum palustre	spotted Coralroot	*Stellaria media*	common chickweed
Cryptotaenia canadensis	purple marshlocks	*Thelypteris palustris*	marsh fern
^{INV}*Cynanchum louiseae*	black swallow-wort	*Thymus pulegioides*	lemon thyme
Dactylis glomerata	orchard grass	*Tragopogon pratensis*	yellow goat's-beard
Daucus carota	Queen Anne's lace	*Trifolium pratense*	red clover
Dianthus armeria	deptford pink	*Trifolium repens*	white clover
Dichanthelium clandestinum	deer-tongue rosette grass	*Turritus glabra*	tower mustard
Echinocystis lobata	wild cucumber	*Typha angustifolia*	narrow-leaf cattail

Scientific Name	**Common Name**	**Scientific Name**	**Common Name**
Epilobium coloratum	purple-leaf willowherb	*Typha latifolia*	broad-leaf cattail
Erigeron philadelphicus	Philadelphia fleabane	*Urtica dioica*	stinging nettle
^{LINV}*Euphorbia cyparissias*	cypress spurge	*Valeriana officinalis*	garden valerian
Festuca ovina	sheep fescue	*Verbascum thapsus*	great mullein
Festuca rubra	red fescue	*Veronica chamaedrys*	germander speedwell
Fragaria virginiana	Virginia strawberry	*Vicia cracca*	Cow Vetch
Galium aparine	cleavers	*Zizia aurea*	golden Alexanders
Galium mollugo	whorled bedstraw	**Woody Shrubs**	
Glechoma hederacea	ground ivy	*Cornus alba*	red osier
^{INV}*Hesperis matronalis*	dame's rocket	*Cornus amomum*	silky dogwood
Hieracium caespitosum	yellow hawkweed	*Cornus racemosa*	gray dogwood
Hypericum perforatum	common St. John's-Wort	^{INV}*Elaeagnus umbellata*	autumn olive
Impatiens capensis	Jewleweed	^{INV}*Frangula alnus*	glossy buckthorn
^{INV}*Iris pseudacorus*	pale-yellow iris	^{INV}*Lonicera ×bella*	showy honeysuckle
Iris versicolor	harlequin blueflag	^{INV}*Lonicera morrowii*	Morrow's honeysuckle
Juncus effusus	soft rush	^{INV}*Rhamnus cathartica*	European buckthorn
Juncus tenuis	lesser poverty rush	*Ribes americanum*	wild black currant
Lepidium virginicum	poorman's-pepperwort	^{INV}*Rosa multiflora*	multiflora rose
Linaria vulgaris	butter-and-eggs	*Rubus allegheniensis*	Allegheny blackberry
Lychnis flos-cuculi	ragged robin	*Sambucus nigra*	black elder
Lysimachia ciliata	fringed yellow-loosestrife	*Spiraea alba*	white meadowsweet
^{INV}*Lythrum salicaria*	purple loosestrife	*Viburnum dentatum*	southern arrow-wood
Melilotus officinalis	yellow sweet-clover	**Trees**	
Mentha arvensis	American wild mint	*Acer negundo*	box elder
Oenothera biennis	common evening-primrose	*Crataegus punctata*	dotted hawthorn
Onoclea sensibilis	sensitive fern	*Crataegus macracantha*	long-thorned hawthorn
Origanum vulgare	wild oregano	*Euonymus europaeus*	European spindle tree
Osmunda spectabilis	Royal Fern	*Fagus grandifolia*	American beech
Oxalis stricta	upright yellow wood-sorrel	*Fraxinus americana*	white ash
Parthenocissus quinquefolia	Virginia Creeper	*Fraxinus pennsylvanica*	green ash

Scientific Name	Common Name	Scientific Name	Common Name
Pastinaca sativa	wild parsnip	*Populus deltoides*	eastern cottonwood
Persicaria sagittata	arrow-leaf tearthumb	*Populus tremuloides*	quaking aspen
^{INV}*Phalaris arundinacea*	reed canary grass	*Prunus pensylvanica*	fire cherry
^{INV}*Phragmites australis*	common reed	*Prunus serotina*	black cherry
Phleum pratense	timothy	^{LNV}*Pyrus calleryana*	callery pear
Plantago lanceolata	english plantain	*Quercus alba*	white oak
Plantago major	common plantain	*Quercus rubra*	northern red oak
Potentilla norvegica	Norway cinquefoil	*Rhus typhina*	staghorn sumac
Potentilla simplex	oldfield cinquefoil	*Salix alba*	white willow
Ranunculus acris	tall buttercup	*Salix nigra*	black willow
Rubus flagellaris	whiplash dewberry	*Tilia americana*	American Basswood
Rudbeckia laciniata	green-head coneflower	**Woody Vines**	
Rumex acetosella	sheep sorrel	*Calystegia sepium*	hedge false bindweed
Rumex crispus	curly dock	^{INV}*Celastrus orbiculatus*	Asiatic bittersweet
Schizachyrium scoparium	little false bluestem	*Echinocystis lobata*	wild cucumber
		Fallopia scandens	Climbing Black-Bindweed
		Parthenocissus quinquefolia	Virginia creeper
		Toxicodendron radicans	poison ivy

INV = Listed by MIPAG as invasive species

LNV = Listed by MIPAG as likely invasive species

Table 5. Ranked IV_{ave} values for the Utility Drive rail transload property

Scientific Name	Common Name	# Plots	D_R	F_R	IV_{ave}
^{INV}*Lonicera morrowii*	Morrow's honeysuckle	9	17.29	8.82	13.06
Panicum virgatum	switchgrass	4	13.60	3.92	8.76
^{INV}*Rhamnus cathartica*	common buckthorn	8	8.66	7.84	8.25
Galium mollugo	whorled bedstraw	9	4.90	8.82	6.86
Crataegus punctata	dotted hawthorn	5	8.81	4.90	6.85
Acer negundo	boxelder	3	8.87	2.94	5.91
Thymus pulegioides	lemon thyme	8	3.75	7.84	5.80
Solidago gigantea	giant goldenrod	4	5.92	3.92	4.92
^{LNV}*Centaurea stoebe*	spotted knapweed	3	6.51	2.94	4.73
Calamagrostis canadensis	bluejoint grass	3	4.26	2.94	3.60
Solidago canadensis	Canada goldenrod	3	2.42	2.94	2.68
Impatiens capensis	jewelweed	3	2.11	2.94	2.53
Prunus serotina	black cherry	3	2.11	2.94	2.53
Calystegia sepium	hedge bindweed	4	0.49	3.92	2.21
Festuca rubra	red fescue	2	2.40	1.96	2.18
Linaria vulgaris	butter-and-eggs	2	1.68	1.96	1.82
Veronica americana	speedwell	3	0.68	2.94	1.81
Cornus racemosa	gray dogwood	3	0.57	2.94	1.76
^{INV}*Alliaria petiolata*	garlic mustard	3	0.37	2.94	1.65
^{INV}*Celastrus orbiculata*	Asian bittersweet	3	0.37	2.94	1.65
Vicia cracca	bird vetch	3	0.37	2.94	1.65
Parthenocissus quinquefolia	Virginia creeper	2	0.86	1.96	1.41
Rhus hirta	staghorn sumac	2	0.86	1.96	1.41
Rubus occidentalis	black raspberry	2	0.55	1.96	1.26
Rumex acetosella	sheep sorrel	2	0.55	1.96	1.26
Solidago rugosa	wrinkleleaf goldenrod	2	0.55	1.96	1.26
Asclepias syriaca	common milkweed	2	0.25	1.96	1.10
Eutrochium maculatum	Joe-pye-weed	2	0.25	1.96	1.10

INV = Listed by MIPAG as invasive species

LNV = Listed by MIPAG as likely invasive species

Table 6. Vegetation percent cover for palustrine cover types at the Utility Drive rail transload property

Scientific Name	Common Name	Wetland Indicator Status	Percent Cover
Acer negundo	boxelder	FAC	2
Alnus incana	speckled alder	FACW	7
Betula lenta	black birch	FACU	2
Bidens frondosa	Devil's beggar-ticks	FACW	20
Carex spp.	sedges	N/A	30
Carex stricta	tussock sedge	OBL	20
Comarum palustre	purple marsh-locks	OBL	23
Cornus amomum	silky dogwood	FACW	15
Epilobium coloratum	purple-leaf willowherb	OBL	20
Eutrochium maculatum	spotted Joe-Pye-weed	OBL	15
Juncus effusus	soft rush	OBL	23
Impatiens capensis	jewelweed	FACW	27
^{INV}*Lonicera morrowii*	Morrow’s honeysuckle	FACU	10
^{INV}*Lythrum salicaria*	purple loosestrife	OBL	75
Onoclea sensibilis	sensitive fern	FACW	35
Persicaria sagittata	arrow-leaved tearthumb	OBL	40
^{INV}*Phragmites australis*	common reed	FACW	2
Populus deltoides	eastern cottonwood	FAC	2
^{INV}*Rhamnus cathartica*	common buckthorn	FAC	10
^{INV}*Rosa multiflora*	multiflora rose	FACU	7
Solidago gigantea	giant goldenrod	FACW	30
Solidago rugosa	wrinkle-leaf goldenrod	FAC	55
Sparganium americanum	American bur-reed	OBL	40
Typha angustifolia	narrow-leaf cattail	OBL	80
Typha latifolia	broad-leaf cattail	OBL	80

FAC = Facultative 34-66% occurrence in wetlands.
FACW = Facultative Wetland 67-99% occurrence in wetlands.
OBL = Obligate 99% occurrence in wetlands.
FACU = Facultative Upland 1-33% occurrence in wetlands.
INV = Listed by MIPAG as invasive species
LNV = Listed by MIPAG as likely invasive species

Table 7. Ranked IV_{ave} values for Upland Field at the Utility Drive rail transload property

Scientific Name	Common Name	# Plots	D_R	F_R	IV_{ave}
Panicum virgatum	switchgrass	4	27.59	7.02	17.30
Galium mollugo	whorled bedstraw	8	9.06	14.04	11.55
Thymus pulegioides	lemon thyme	8	7.60	14.04	10.82
^{LNV}*Centaurea stoebe*	spotted knapweed	3	13.21	5.26	9.24
Calamagrostis canadensis	bluejoint grass	3	8.64	5.26	6.95
Solidago gigantea	giant goldenrod	2	7.98	3.51	5.74
Festuca rubra	red fescue	2	4.86	3.51	4.18
Calystegia sepium	hedge bindweed	4	1.00	7.02	4.01
Solidago canadensis	Canada goldenrod	2	4.03	3.51	3.77
Linaria vulgaris	butter-and-eggs	2	3.41	3.51	3.46
^{INV}*Lonicera morrowii*	Morrow's honeysuckle	2	3.41	3.51	3.46
Veronica americana	speedwell	3	1.37	5.26	3.32
Cornus racemosa	gray dogwood	3	1.16	5.26	3.21
^{INV}*Rhamnus cathartica*	common buckthorn	2	2.58	3.51	3.04
Vicia cracca	bird vetch	3	0.75	5.26	3.01
Rubus occidentalis	black raspberry	2	1.12	3.51	2.32
Rumex acetosella	sheep sorrel	2	1.12	3.51	2.32
Solidago rugosa	wrinkleleaf goldenrod	2	1.12	3.51	2.32

INV = Listed by MIPAG as invasive species

LNV = Listed by MIPAG as likely invasive species

Table 8. Ranked IV_{ave} values for Northern Hardwood Forest at the Utility Drive rail transload property

Scientific Name	Common Name	# Plots	D_R	F_R	IV_{ave}
^{INV}*Lonicera morrowii*	Morrow's honeysuckle	5	37.33	22.58	29.96
Crataegus punctata	dotted hawthorn	3	21.07	16.13	18.60
^{INV}*Rhamnus cathartica*	common buckthorn	4	17.69	19.35	18.52
Acer negundo	boxelder	2	11.61	6.45	9.03
Prunus serotina	black cherry	2	5.05	9.68	7.36
Solidago gigantea	giant goldenrod	2	4.75	6.45	5.60
Impatiens capensis	jewelweed	2	1.32	6.45	3.89
^{INV}*Alliaria petiolata*	garlic mustard	2	0.59	6.45	3.52
^{INV}*Celastrus orbiculatus*	Asiatic bittersweet	2	0.59	6.45	3.52

INV = Listed by MIPAG as invasive species

Table 9. Vascular plant species observed at the Woods Pond Spur rail transload property

Scientific Name	Common Name	Scientific Name	Common Name
Herbaceous Sedges, Rushes, Grasses and Forbs		**Woody Shrubs**	
Artemisia vulgaris	mugwort	^{LNV}*Berberis vulgaris*	common barberry
Asclepias syriaca	common milkweed	*Carya glabra*	pignut hickory
^{LNV}*Centaurea stoebe*	spotted knapweed	*Cornus amomum*	silky dogwood
^{INV}*Fallopia japonica*	Japanese knotweed	^{INV}*Lonicera morrowii*	Morrow's honeysuckle
Impatiens capensis	jewelweed	*Phytolacca americana*	pokeweed
^{INV}*Lythrum salicaria*	purple loosestrife	^{INV}*Rhamnus cathartica*	common buckthorn
^{INV}*Phragmites australis*	common reed	^{INV}*Rosa multiflora*	multiflora rosa
Solidago canadensis	Canada goldenrod	*Rubus allegheniensis*	Allegheny blackberry
Solidago gigantea	giant goldenrod	*Salix bebbiana*	Bebb's willow
Solidago rugosa	wrinkleleaf goldenrod	*Spirea alba*	meadowsweet
Vicia cracca	cow vetch	**Woody Vines**	
Trees		^{INV}*Celastrus orbiculatus*	Asiatic bittersweet
Acer rubrum	red maple	*Parthenocissus quinquefolia*	Virginia creeper
Acer saccharum	sugar maple		
Populus deltoides	cottonwood		
Populus grandidentata	large-tooth aspen		
Quercus rubra	red oak		
Rhus hirta	staghorn sumac		
Salix alba	weeping willow		

INV = Listed by MIPAG as invasive species

LNV = Listed by MIPAG as likely invasive species

Table 10. Vegetation percent cover at the Woods Pond Spur rail transload property

Scientific Name	Common Name	Percent Cover
Acer rubrum	red maple	10
Acer saccharum	sugar maple	5
Artemisia vulgaris	mugwort	30
Asclepias syriaca	common milkweed	12
INV*Berberis vulgaris*	common barberry	2
Carya glabra	pignut hickory	5
INV*Celastrus orbiculatus*	Asiatic bittersweet	7
LNV*Centaurea stoebe*	spotted knapweed	10
Cornus amomum	silky dogwood	20
INV*Fallopia japonica*	Japanese knotweed	5
Impatiens capensis	jewelweed	2
INV*Lonicera morrowii*	Morrow's honeysuckle	15
INV*Lythrum salicaria*	purple loosestrife	20
Parthenocissus quinquefolia	Virginia creeper	3
INV*Phragmites australis*	common reed	2
Phytolacca americana	pokeweed	5
Populus deltoides	eastern cottonwood	5
Populus grandidentata	large-tooth aspen	5
Quercus rubra	red oak	5
INV*Rhamnus cathartica*	common buckthorn	12
Rhus hirta	staghorn sumac	7
INV*Rosa multiflora*	multiflora rosa	12
Rubus allegheniensis	Allegheny blackberry	7
Salix alba	Weeping willow	15
Salix bebbiana	Bebb’s willow	2
Solidago canadensis	Canada goldenrod	10
Solidago gigantea	giant goldenrod	10
Solidago rugosa	wrinkleleaf goldenrod	10
Spirea alba	meadowsweet	2
Vicia cracca	vetch	10

INV = Listed by MIPAG as invasive species

LNV = Listed by MIPAG as likely invasive species

Table 11. Observed and potential bird species presence at the Utility Drive rail transload property

		Northern Hardwoods[1]		Upland Field[2]		Palustrine Wetland[3]	
Common Name	**Scientific Name**	**Obsv**	**Potn**	**Obsv**	**Potn**	**Obsv**	**Potn**
Large Wading Birds							
Great Blue Heron	*Ardea herodias*					■	□
Green Heron	*Butorides virescens*		□				■
Ducks and Geese							
Wood Duck	*Aix sponsa*		□				■
Raptors							
American Kestrel	*Falco sparverius*		□				□
Turkey Vulture	*Cathartes aura*				■		
Bald Eagle	*Haliaeetus leucocephalus*		□	□			
Red-shouldered Hawk	*Buteo lineatus*		□				■
Broad-winged Hawk	*Buteo platypterus*		■		■		■
Red-tailed Hawk	*Buteo jamaicensis*						■
Game Birds							
Ring-necked Pheasant	*Phasianus colchicus*				■		
Ruffed Grouse	*Bonasa umbellus*						□
Wild Turkey	*Meleagris gallopavo*						□
Northern Bobwhite	*Colinus virginianus*				■		
American Woodcock	*Scolopax minor*		■		■		■
Shorebirds							
Killdeer	*Charadrius vociferus*				■		
Non-passerine Perching Birds							
Mourning Dove	*Zenaida macroura*		□				□
Black-billed Cuckoo	*Coccyzus erthropthalmus*		□		□		□
Yellow-billed Cuckoo	*Coccyzus americanus*		□				□
Chimney Swift	*Chaetura pelagica*				□		
Ruby-throated Hummingbird	*Archilochus colubris*						■
Owls							

		Northern Hardwoods[1]		Upland Field[2]		Palustrine Wetland[3]	
Common Name	**Scientific Name**	**Obsv**	**Potn**	**Obsv**	**Potn**	**Obsv**	**Potn**
Eastern Screech Owl	*Otus asio*		☐		☐		■
Great Horned Owl	*Bubo virginianus*		☐		☐		■
Barred Owl	*Strix varia*		■		☐		■
Woodpeckers							
Downy Woodpecker	*Picoides pubescens*		■		☐		■
Hairy Woodpecker	*Picoides villosus*		☐		☐		■
Northern Flicker	*Colaptes auratus*		■		■		☐
Tyrant Flycatchers							
Eastern Wood-pewee	*Contopus virens*		☐				☐
Least Flycatcher	*Empidonax minimus*		■				■
Eastern Pheobe	*Sayornis pheobe*		☐		☐		☐
Great Crested Flycatcher	*Myiarchus crinitus*		☐				☐
Eastern Kingbird	*Tyrannus tyrannus*		☐		☐		
Swallows							
Tree Swallow	*Tachycineta bicolor*		☐		☐		■
Bank Swallow	*Riparia riparia*				■		
Barn Swallow	*Hirundo rustica*				■		
Corvids							
Blue Jay	*Cyanocitta cristata*		☐		☐		☐
American Crow	*Corvus brachyrhynchos*		☐				☐
Titmice							
Black-capped Chickadee	*Poecile atricapillus*		■		☐		■
Tufted Titmouse	*Baeolophus bicolor*		☐		☐		☐
Nuthatches & Creepers							
Red-breasted nuthatch	*Sitta canadensis*		■				
White-breasted Nuthatch	*Sitta carolinensis*		■		☐		☐
Brown Creeper	*Certhia americana*		☐				☐
Wrens							

Common Name	Scientific Name	Northern Hardwoods[1]		Upland Field[2]		Palustrine Wetland[3]	
		Obsv	Potn	Obsv	Potn	Obsv	Potn
Carolina Wren	*Thryothorus ludovicianus*				☐		■
House Wren	*Troglodytes aedon*		☐		☐		☐
Gnatcatchers							
Blue-gray Gnatcatcher	*Polioptila caerulea*		☐		☐		■
Thrushes							
Eastern Bluebird	*Sialia sialis*		■				
Wood Thrush	*Hylocichla mustelina*						☐
American Robin	*Turdus migratorius*		☐		☐		☐
Mimic Thrushes							
Gray Catbird	*Dumetella carolinensis*		■				■
Northern Mockingbird	*Mimus polyglottos*				■		■
Brown Thrasher	*Toxostoma rufum*				■		
Waxwings							
Cedar Waxwing	*Bombycilla cedrorum*		☐		☐		■
Starlings							
European Starling	*Sturnus vulgaris*		☐		■		☐
Vireos							
Yellow-throated Vireo	*Vireo flavifrons*		☐				■
Warbling Vireo	*Vireo gilvus*		☐				■
Red-eyed Vireo	*Vireo olivaceus*						☐
Wood Warblers							
Blue-winged Warbler	*Vermivora pinus*				■		☐
Yellow Warbler	*Dendroica petechia*				☐		■
Chestnut-sided Warbler	*Dendroica pensylvanica*				☐		
Yellow-rumped Warbler	*Dendroica coronata*		☐		☐		☐
Black-throated Green Warbler	*Dendroica virens*		■				☐
Blackburnian Warbler	*Dendroica fusca*		☐				
Prairie Warbler	*Dendroica discolor*				■		

		Northern Hardwoods[1]		Upland Field[2]		Palustrine Wetland[3]	
Common Name	**Scientific Name**	**Obsv**	**Potn**	**Obsv**	**Potn**	**Obsv**	**Potn**
Black-and-white Warbler	*Mniotilta varia*		■		□		□
American Redstart	*Setophaga ruticilla*		□		□		□
Ovenbird	*Seiurus aurocapillus*						□
Northern Waterthrush	*Seiurus noveboracensis*		□				■
Louisiana Waterthrush	*Seiurus motacilla*						■
Common Yellowthroat	*Geothlypis trichas*		□		■		
Tanagers							
Scarlet Tanager	*Piranga olivacea*		■				□
Cardinals & Grosbeaks							
Northern Cardinal	*Cardinalis cardinalis*				□		■
Rose-breasted Grosbeak	*Pheucticus ludovicianus*		□		□		□
Indigo Bunting	*Passerina cyanea*				■		□
Sparrows							
Rufus-sided Towhee	*Pipilo erythrophthalmus*				□		□
Chipping Sparrow	*Spizella passerina*				□		
Field Sparrow	*Spizella pusilla*				■		
Song Sparrow	*Melospiza melodia*		□				
Icterids							
Red-winged Blackbird	*Agelaius phoeniceus*				■	■	
Common Grackle	*Quiscalus quiscula*						□
Brown-headed Cowbird	*Molothrus ater*		□		■		□
Orioles							
Baltimore Oriole	*Icterus galbula*		□		□		□
Finches							
Purple Finch	*Carpodacus purpureus*		□		□		□
American Goldfinch	*Cardeulis tristis*		□		□		□
Old World Sparrows							
House Sparrow	*Passer domesticus*				■		

Obsv = observed; Potn = potential

■ Preferred Habitat; □ Utilized Habitat

1. Cover type categories based on DeGraaf and Yamasaki (2001).

2. Upland field category includes forbs, grasses, and shrub-old field.

3. Palustrine wetland category includes swamp hardwood-red maple, shrub swamp, shallow marsh, and deep marsh.

Table 12. Observed and potential amphibian, reptile, and mammal presence at the Utility Drive rail transload property

		Northern Hardwoods[1]		Upland Field[2]		Palustrine Wetland[3]	
Common Name	**Scientific Name**	**Obsv**	**Potn**	**Obsv**	**Potn**	**Obsv**	**Potn**
Amphibians							
Spotted salamander	*Ambystoma maculatum*		☐				■
Red-spotted newt	*Notophthalmus v. viridescens*		☐				☐
Redback salamander	*Plethodon cinereus*		☐				☐
Northern two-lined salamander	*Eurycea bislineata*						☐
American toad	*Anaxyrus americanus*		☐		☐		☐
Spring peeper	*Pseudacris crucifer*		☐				■
Gray tree frog	*Dryophytes versicolor*	☐	☐			☐	■
Green frog	*Lithobates clamitans*					☐	
Bullfrog	*Lithobates catesbeiana*					■	
Pickerel frog	*Lithobates palustris*		☐		☐		
Wood frog	*Lithobates sylvaticus*	■				■	
Reptiles (snakes and turtles)							
Painted turtle	*Chrysemys picta*		☐				☐
Common snapping turtle	*Chelydra s. serpentina*						☐
Spotted turtle	*Clemmys guttata*						■
Wood turtle	*Glyptemys insculpta*		☐		☐		☐
Northern redbelly snake	*Storeria occipitomaculata*		■		☐		■
Eastern garter snake	*Thamnophis s. sirtalis*		☐	☐		☐	
Ribbon snake	*Thamnophis sauritus*		☐				■
Eastern milksnake	*Lampropeltis triangulum*		☐		☐		
Ring-necked snake	*Diadophis punctatus*		☐		☐		■
Northern black racer	*Coluber constrictor*		☐				☐
Northern Water snake	*Nerodia Sipedon*						■
Mammals							
Virginia opossum	*Didelphus virginiana*				☐		■
Masked shrew	*Sorex cinereus*		☐		☐		☐

Common Name	Scientific Name	Northern Hardwoods[1]		Upland Field[2]		Palustrine Wetland[3]	
		Obsv	Potn	Obsv	Potn	Obsv	Potn
Short-tailed shrew	*Blarina brevicauda*		☐		☐		☐
Eastern mole	*Scolophus aquaticus*				■		☐
Star-nosed mole	*Condylura cristata*		☐				☐
Eastern cottontail	*Sylvilagus floridanus*			■			
Eastern chipmunk	*Tamias striatus*		☐		☐		☐
Woodchuck	*Marmota monax*		☐		■		☐
Gray squirrel	*Sciurus carolinensis*		☐				☐
Red squirrel	*Tamasciurus hudsonicus*		☐		☐		☐
Beaver	*Castor canadensis*		■			■	
Deer mouse	*Peromyscus maniculatus*		☐		☐		☐
White footed mouse	*Peromyscus luecopus*		■		■		☐
Meadow vole	*Microtus pennsylvanicus*				■		
Muskrat	*Ondatra zibethicus*					■	
Meadow jumping mouse	*Zapus hudsonius*		☐	■	■		☐
Woodland jumping mouse	*Napaeozapus insignis*		■		☐		■
Northern long-eared bat	*Myotis septentrionalis*		☐		☐		■
Tricolored bat	*Perimyotis subflavus*						
Big brown bat	*Eptesicus fuscus*		☐		☐		■
Hoary bat	*Lasiurus cinereus*		☐		☐		■
Porcupine	*Erethizon dorsatum*		■		☐		☐
Coyote	*Canis latrans*	☐		☐			☐
Red fox	*Vulpes vulpes*		☐		■		☐
Gray fox	*Urocyon cinereoargenteus*		■		☐		■
Black bear	*Ursus americanus*	■			☐	■	
Raccoon	*Procyon lotor*		☐		■		■
Striped skunk	*Mephitis mephitis*		☐		■		☐
White-tailed deer	*Odocoileus virginianus*	☐		■		☐	

Obsv = observed; Potn = potential

■ Preferred Habitat; □ Utilized Habitat

1. Cover type categories based on DeGraaf and Yamasaki (2001).

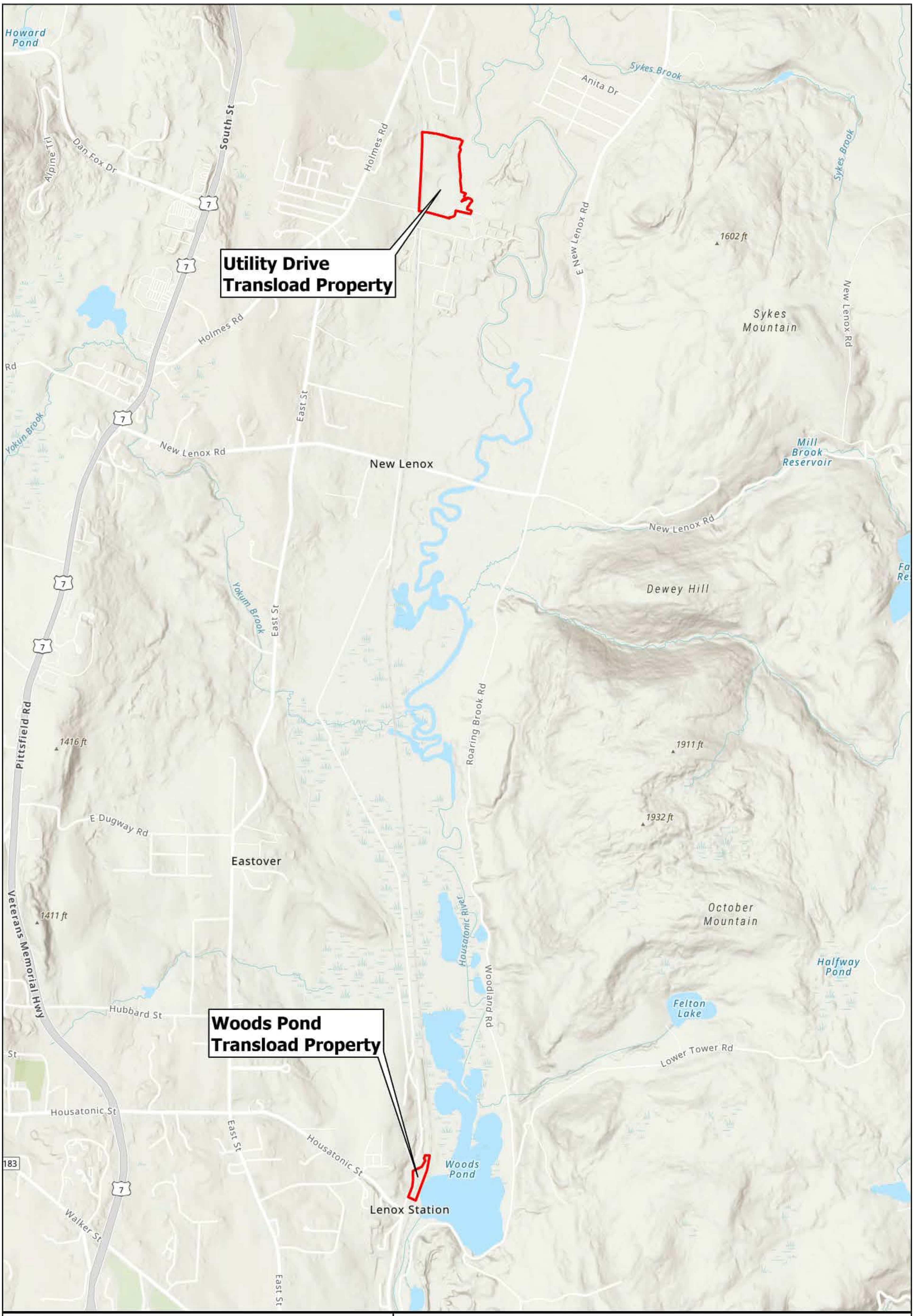
2. Upland field category includes forbs, grasses, and shrub-old field.

3. Palustrine wetland category includes swamp hardwood-red maple, shrub swamp, shallow marsh, and deep marsh.

Table 13: Potential rare butterfly host plants identified at the Utility Drive rail transload property in 2025

Scientific Name	Common Name	Potential Host Plant for:
INV*Alliaria petiolata*	Garlic Mustard	Mustard White, but known to reduce Mustard White growth and development
Barbarea vulgaris	Yellow Rocket	Mustard White
Berteroa incana	Hoary Alyssum	Mustard White
Asclepias incarnata	Swamp Milkweed	Monarch Butterfly
Asclepias syriaca	Common Milkweed	Monarch Butterfly
Brassica juncea	Chinese Mustard	Mustard White
Brassica nigra	Black Mustard	Mustard White
LNV*Cardamine impatiens*	Narrow-Leaved Bittercress	Mustard White
Cardamine pensylvanica	Pennsylvania Bittercress	Mustard White
Cardamine pratensis	Cuckoo Flower	Mustard White
Erysimum cheiranthoides	Worm-Seed Wallflower	Mustard White
Hesperis matronalis	Dame’s-Rocket	Mustard White
Lepidium virginicum	Poorman’s-Pepper	Mustard White
Rorippa sylvestris	Creeping Yellowcress	Mustard White
Turritus glabra	Tower Mustard	Mustard White

Figures



0 1,000 2,000 4,000
Feet

N

Esri, NASA, NGA, USGS, FEMA, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

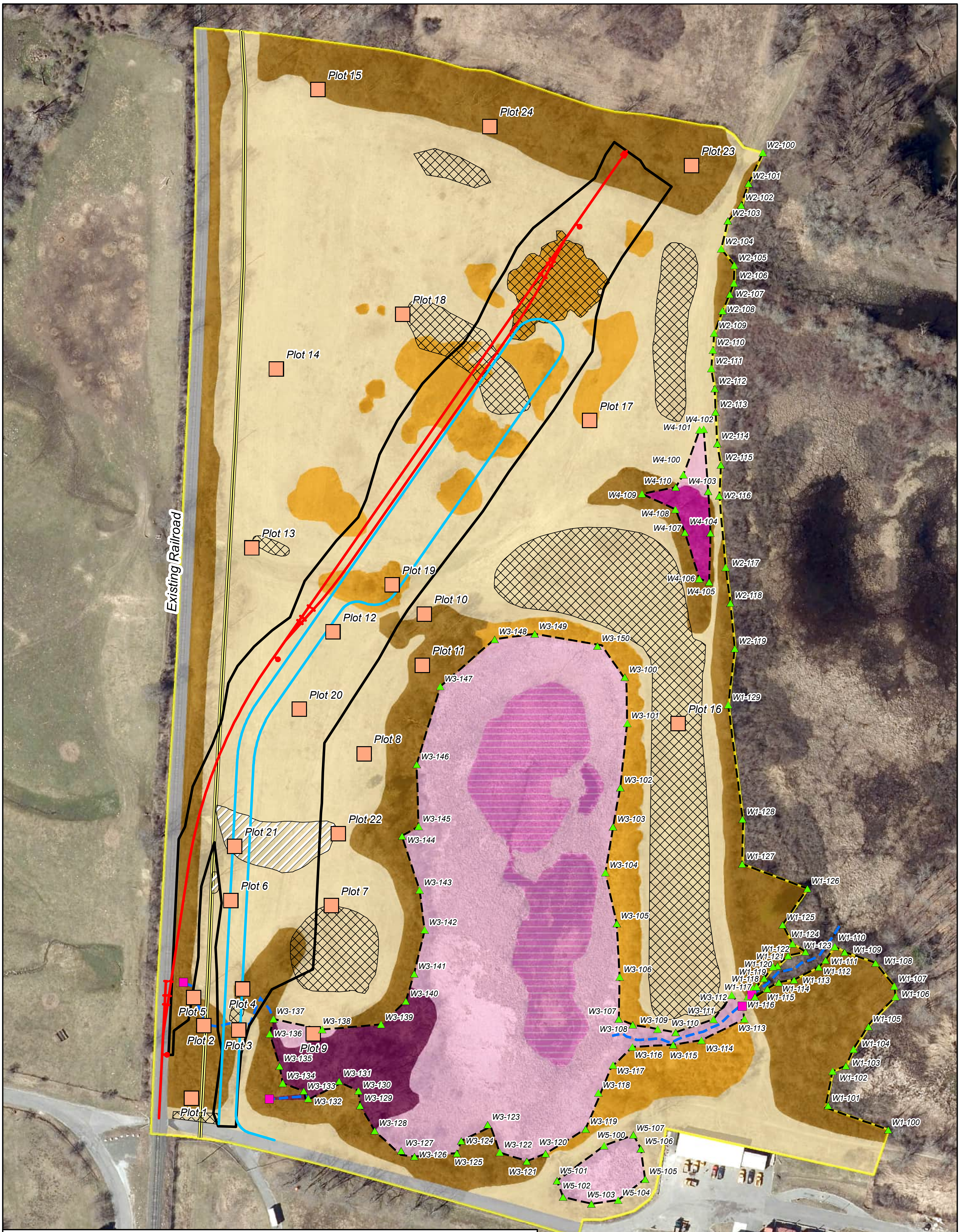
Site Locus

Rail Transload Properties in
River Reaches 5A and 6

SCALE	DATE	PROJECT NO.
1:24,000	2/5/2026	60681577

AECOM

Figure
1



Legend

- Upland Field - Grass / Forbs
- Upland Field - Shrub / Old Field
- Northern Hardwoods
- Palustrine Shallow Marsh
- Palustrine Deep Marsh
- Palustrine Shrub Swamp
- Swamp Hardwood
- Non-Vegetated
- Site Boundary
- Vegetation Plot
- ▲ Delineated Wetland Flags
- Field Delineated Wetland
- Intermittent Stream
- ▨ Invasive Plant Species Dominant
- ▨ Milkweed
- Approximate Limit of Proposed Earthwork
- Loading/Unloading Zone
- Potential Rail Spur
- Powerline
- ■ Culvert

N

0 75 150 300 Feet

Habitat Cover Types

Utility Drive Rail
Transload Property

SCALE	DATE	PROJECT NO.
1:1,800	2/18/2026	60681577

AECOM

Figure
2

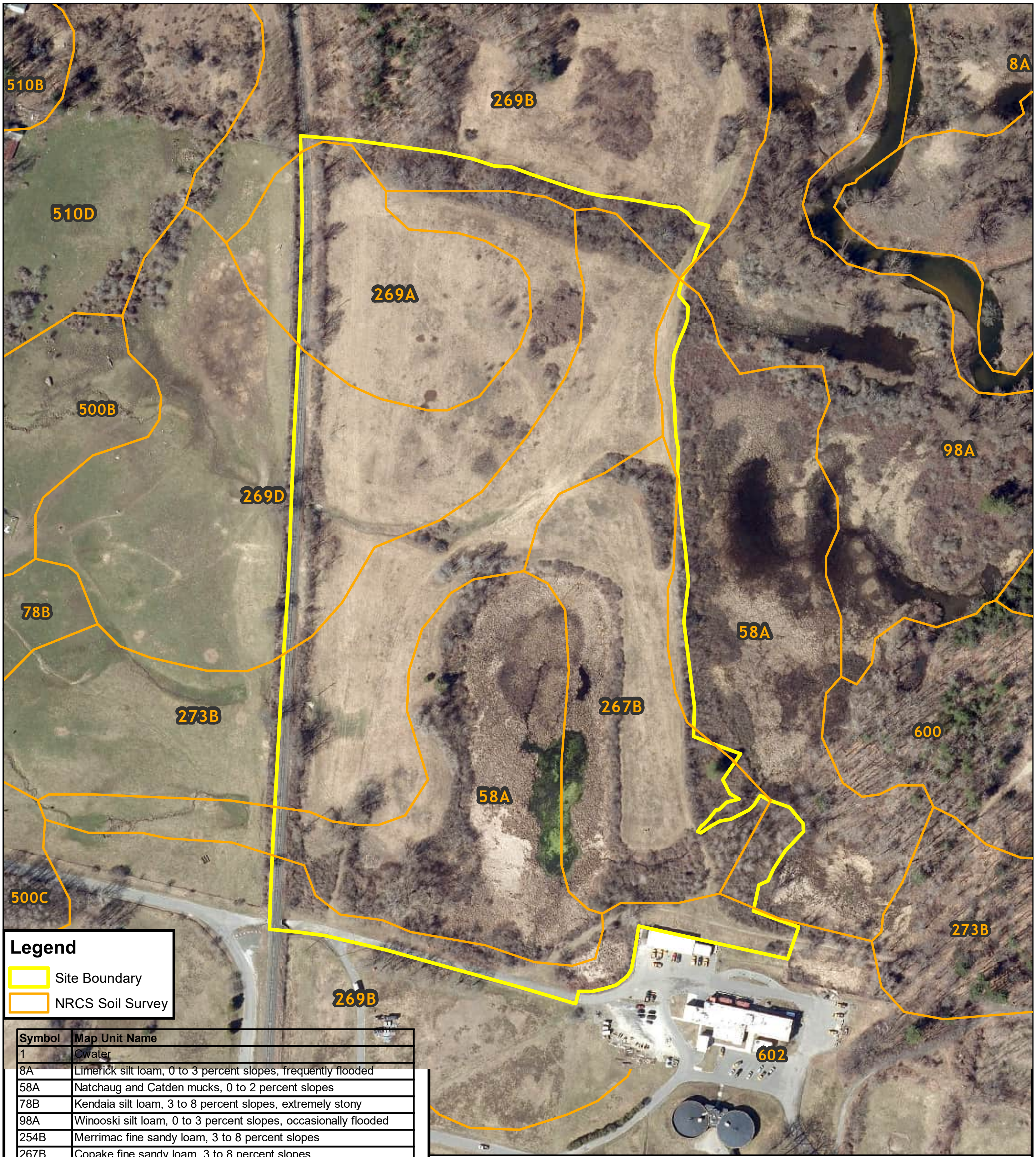
Habitat Cover Types

Woods Pond Rail
Transload Property

SCALE	DATE	PROJECT NO.
1:1,200	2/18/2026	60681577

AECOM

Figure
3



Symbol	Map Unit Name
1	Cwater
8A	Limerick silt loam, 0 to 3 percent slopes, frequently flooded
58A	Natchaug and Catden mucks, 0 to 2 percent slopes
78B	Kendaia silt loam, 3 to 8 percent slopes, extremely stony
98A	Winooski silt loam, 0 to 3 percent slopes, occasionally flooded
254B	Merrimac fine sandy loam, 3 to 8 percent slopes
267B	Copake fine sandy loam, 3 to 8 percent slopes
269A	Groton gravelly sandy loam, 0 to 3 percent slopes
269B	Groton gravelly sandy loam, 3 to 8 percent slopes
269D	Groton gravelly sandy loam, 15 to 25 percent slopes
273B	Oakville loamy sand, 3 to 8 percent slopes
500B	Amenia silt loam, 3 to 8 percent slopes
500C	Amenia silt loam, 8 to 15 percent slopes
500D	Amenia silt loam, 15 to 25 percent slopes
510B	Pittsfield loam, 3 to 8 percent slopes
510D	Pittsfield loam, 15 to 25 percent slopes
600	Pits, gravel
602	Urban land
632C	Copake-Urban land complex, 0 to 15 percent slopes

NRCS Soils

Utility Drive Rail
Transload Property

SCALE	DATE	PROJECT NO.
1:3,600	2/5/2026	60681577

AECOM

Figure

4

Symbol	Map Unit Name
1	Cwater
34A	Fredon fine sandy loam, 0 to 3 percent slopes
35A	Halsey fine sandy loam, 0 to 3 percent slopes
58A	Natchaug and Catden mucks, 0 to 2 percent slopes
108E	Farmington-Rock outcrop complex, 15 to 35 percent slopes
501C	Amenia silt loam, 8 to 15 percent slopes, very stony
505C	Nellis loam, 8 to 15 percent slopes
514E	Pittsfield and Nellis loams, 25 to 35 percent slopes, extremely stony
651	Udorthents, smoothed

NRCS Soils

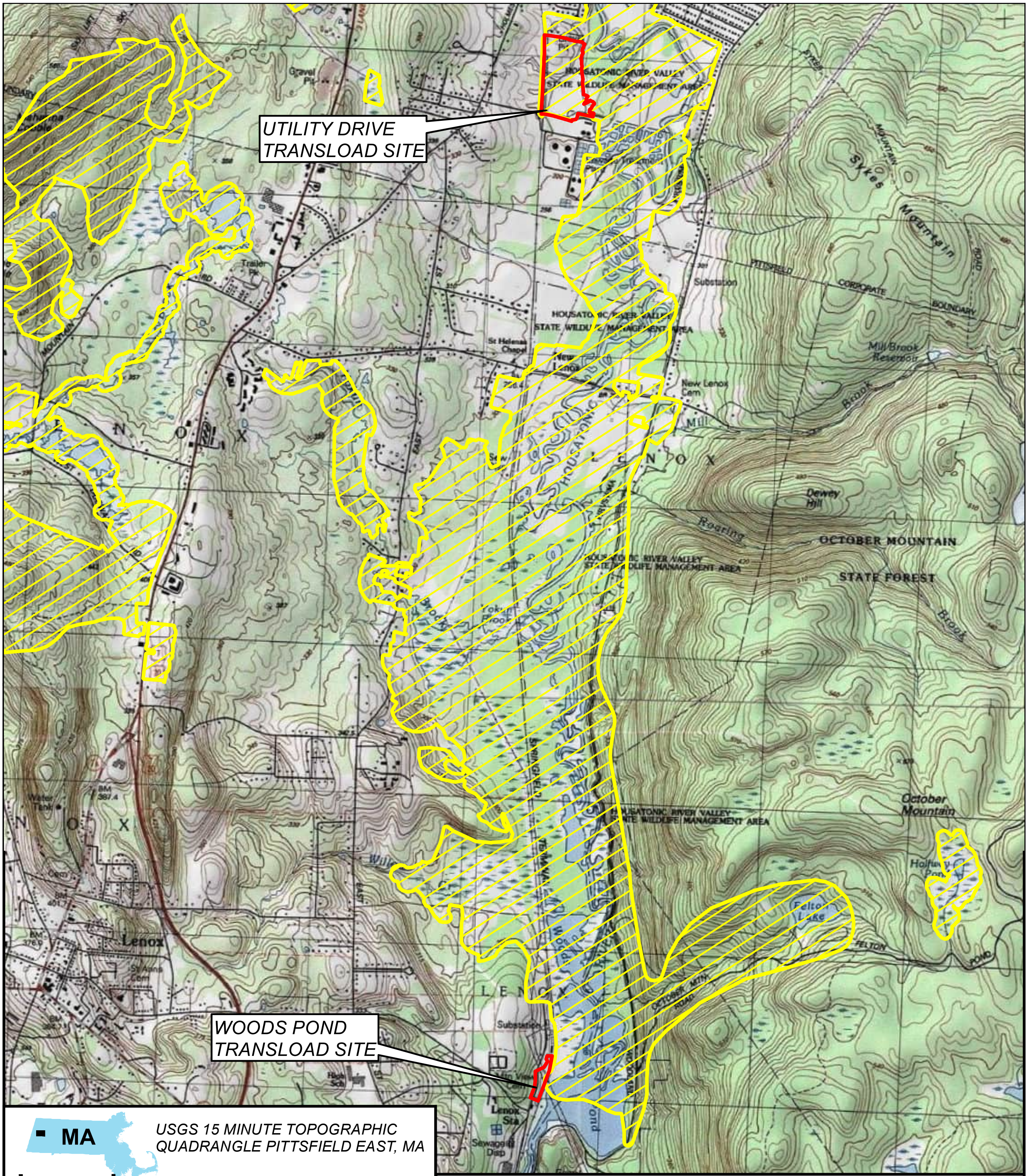
Woods Pond Rail
Transload Property

SCALE	DATE	PROJECT NO.
1:1,600	2/5/2026	60681577

AECOM

Figure

5



USGS 15 MINUTE TOPOGRAPHIC QUADRANGLE PITTSFIELD EAST, MA

Legend

🟥 Study Area Site Boundary

▨ NHESP Priority Habitats

0 1,0002,000 4,000 Feet

N

NHESP PRIORITY HABITATS:

Rail Transload Properties in Reaches 5A and 6

SCALE	DATE	PROJECT NO.
1:36,000	2/5/2026	60681577

AECOM

Figure Number

6

Attachment C-1

Representative Photographs

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Housatonic River – Rail Transload Areas	Utility Drive, Pittsfield, Massachusetts	60778161

Photo No. 1 **Date:** 8/5/2025

Description: Plot 1: Utility Drive Transload Site view northwest.

Photo No. 2 **Date:** 8/5/2025

Description: Plot 2: Utility Drive Transload Site view south.

Photo No. 3 **Date:** 8/5/2025

Description: Plot 3: Utility Drive Transload Site view west.

Photo No. 4 **Date:** 8/5/2025

Description: Plot 4: Utility Drive Transload Site view northeast.

Photo No. 5	**Date:** 8/5/2025	**Photo No. 6**	**Date:** 8/5/2025
Description: Plot 5: Utility Drive Transload Site view west.		**Description:** Plot 6: Utility Drive Transload Site view north.	
			

Photo No. 7	**Date:** 8/5/2025	**Photo No. 8**	**Date:** 8/5/2025
Description: Plot 7: Utility Drive Transload Site view southeast.		**Description:** Plot 8: Utility Drive Transload Site view west.	
			

PHOTOGRAPHIC LOG

Client Name:	**Site Location:**	**Project No.**
Housatonic River – Rail Transload Areas	Utility Drive, Pittsfield, Massachusetts	60778161

Photo No. 9 **Date:**

Description: Plot 9: Utility Drive Transload Site View southwest

Photo No. 10 **Date:** 8/6/2025

Description: Plot 10: Utility Drive Transload Site view southwest.

Photo No. 11 **Date:** 8/6/2025

Description: Plot 11: Utility Drive Transload Site view north.

Photo No. 12 **Date:** 8/6/2025

Description: Plot 12: Utility Drive Transload Site view west.

Client Name:	**Site Location:**	**Project No.**
Housatonic River – Rail Transload Areas	Utility Drive, Pittsfield, Massachusetts	60778161

Photo No. 13	**Date:** 8/6/2025	**Photo No. 14**	**Date:** 8/6/2025

Description: Plot 13: Utility Drive Transload Site view west.

Description: Plot 14: Utility Drive Transload Site view north.

Photo No. 15	**Date:** 8/6/2025	**Photo No. 16**	**Date:** 8/6/2025

Description: Plot 15: Utility Drive Transload Site view north.

Description: Plot 16: Utility Drive Transload Site view west.

Photo No. 17 **Date:** 8/6/2025

Description: Plot 17: Utility Drive Transload Site view west.

Photo No. 18 **Date:** 8/6/2025

Description: Plot 18: Utility Drive Transload Site view west.

Photo No. 19 **Date:** 8/6/2025

Description: Plot 19: Utility Drive Transload Site view west.

Photo No. 20 **Date:** 8/6/2025

Description: Plot 20: Utility Drive Transload Site view southwest.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Housatonic River – Rail Transload Areas	Utility Drive, Pittsfield, Massachusetts	60778161

Photo No. 21 **Date:** 8/20/2025

Description: Plot 21: General area of Plot 21, view southwest.

Photo No. 22 **Date:** 8/20/2025

Description: Plot 22: General area of Plot 21, view southwest

Photo No. 23 **Date:** 8/21/2025

Description: Plot 23: Utility Drive Transload Site view west northwest.

Photo No. 24 **Date:** 8/21/2025

Description: Plot 24: Utility Drive Transload Site view northwest.

Photo No. 25	**Date:** 8/6/2025	**Photo No. 26**	**Date:** 8/6/2025
Description: Utility Drive Transload Site central portion of upland field view east.		**Description:** Utility Drive Transload Site northeastern portion of upland field view southeast.	
			

Photo No. 27	**Date:** 8/6/2025	**Photo No. 28**	**Date:** 8/1/2025
Description: Utility Drive Transload Site western portion of upland field view northeast.		**Description:** Utility Drive Transload Site Wetland 3 view north.	
			

Client Name: Housatonic River – Rail Transload Areas	**Site Location:** Woods Pond, Lenox, Massachusetts	**Project No.** 60778161

Photo No. 29	**Date:** 7/30/2025	**Photo No. 30**	**Date:** 7/30/2025
Description: Woods Pond Transload Site southern portion view north.		**Description:** Woods Pond Transload Site photo taken from the central portion viewing north of utility structures and overhead line located in the northern portion of the site.	

Photo No. 31	**Date:** 7/30/2025	**Photo No. 32**	**Date:** 7/30/2025
Description: Woods Pond Transload Site central portion view south of non-vegetated cover type (gravel access road and hardpacked low groundcover with herbaceous, Upland Field cover type at the right of photo.		**Description:** Woods Pond Transload Site northern portion view north of non-vegetated gravel access adjacent to railroad tracks.	

Photo No. 33	**Date:** 7/30/2025	**Photo No. 34**	**Date:** 7/30/2025

Description: Woods Pond Transload Site northern portion view southwest of steep slope transition between railroad tracks gravel access road and utility structures. Invasive honeysuckle (*Lonicera morrowii*) patch.

Description: Woods Pond Transload Site central portion view east of shrub hedgerow, at the site's western border and adjacent to Willow Creek Road. Weeping willow (*Salix babylonica*).

Photo No. 35	**Date:** 7/30/2025	**Photo No. 36**	**Date:** 7/30/2025

Description: Woods Pond Transload Site central portion view west. Patch of milkweed (*Asclepias* sp.).

Description: Woods Pond Transload Site northern portion, new north of utility ROW and hardpack gravel access road in the northern portion of the site.

Attachment C-2
US Army Corps of Engineers
Wetland Determination Forms for Utility Drive Rail Transload Property

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Housatonic River Restoration/Utility Drive Rail Spur City/County: Pittsfield, MA/Berkshire County Sampling Date: 7/31/2025
Applicant/Owner: General Electric State: MA Sampling Point: W1/W2
Investigator(s): Julia Stearns; Adam Clark; Luke Peplowski Section, Township, Range: Pittsfield, MA
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.411906 Long: -73.242009 Datum: WGS84
Soil Map Unit Name: Natchaug and Catden Mucks NWI classification: PSS/PEM
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are “Normal Circumstances” present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID: Wetland W2

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- X Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes X No ___ Depth (inches): 8
Saturation Present? Yes X No ___ Depth (inches): surface
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W1/W2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Lythrum salicaria*	40	Yes	OBL
2. *Salix nigra*	85	Yes	OBL
3.			
4.			
5.			
6.			
7.			
	125 =Total Cover		

Herb Stratum (Plot size: 5')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Lycopus americanus*	5	No	OBL
2. *Silene flos-cuculi*	30	Yes	FACU
3. *Eutrochium maculatum*	15	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	145	x 1 =	145
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	175	(A)	265 (B)

Prevalence Index = B/A = 1.51

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1/W2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 2/1	95	10YR 4/4	5	C	PL	Loamy/Clayey	Very Fine Sandy Loam
15-22	10YR 3/2	95	10YR 4/4	5	C	M	Sandy	Very Fine Sandy Loam

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
X Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
X Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
X Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
X Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Housatonic River Restoration/Utility Drive Rail Spur City/County: Pittsfield, MA/Berkshire County Sampling Date: 7/31/2025

Applicant/Owner: General Electric State: MA Sampling Point: W1/W2

Investigator(s): Julia Stearns; Adam Clark; Luke Peplowski Section, Township, Range: Pittsfield, MA

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex Slope (%): 3-8

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.410996 Long: -73.241816 Datum: WGS84

Soil Map Unit Name: Cokape fine sandy loam NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are “Normal Circumstances” present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? Yes ____ No X Depth (inches): ____

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W1/W2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Cornus amomoum*	60	Yes	FACW
2. *Crataegus punctata*	15	No	UPL
3. *Salix nigra*	20	Yes	OBL
4.			
5.			
6.			
7.			
	95	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Onoclea sensibilis*	50	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	145	(A)	315 (B)

Prevalence Index = B/A = 2.17

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1/W2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2							Fine sandy loam
6-21	10YR 4/3							Loamy sand

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Housatonic River Restoration/Utility Drive Rail Spur City/County: Pittsfield, MA/Berkshire County Sampling Date: 8/06/2025
Applicant/Owner: General Electric State: MA Sampling Point: W3
Investigator(s): Julia Stearns; Adam Clark; Steve (HDR) Section, Township, Range: Pittsfield, MA
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex Slope (%): 0-2
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.415853 Long: -73.241701 Datum: WGS84
Soil Map Unit Name: Winooksi Silt Loam NWI classification: ____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** X **No** ____
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
____ High Water Table (A2)
X Saturation (A3)
____ Water Marks (B1)
____ Sediment Deposits (B2)
____ Drift Deposits (B3)
____ Algal Mat or Crust (B4)
____ Iron Deposits (B5)
____ Inundation Visible on Aerial Imagery (B7)
____ Sparsely Vegetated Concave Surface (B8)
____ Water-Stained Leaves (B9)
____ Aquatic Fauna (B13)
____ Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
____ Oxidized Rhizospheres on Living Roots (C3)
____ Presence of Reduced Iron (C4)
____ Recent Iron Reduction in Tilled Soils (C6)
____ Thin Muck Surface (C7)
____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

____ Surface Soil Cracks (B6)
____ Drainage Patterns (B10)
____ Moss Trim Lines (B16)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ Shallow Aquitard (D3)
____ Microtopographic Relief (D4)
____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____
Water Table Present? Yes X No ____ Depth (inches): surface
Saturation Present? Yes X No ____ Depth (inches): surface
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. *Cornus amomum*	15	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15 =Total Cover		

Herb Stratum (Plot size: 5')			
1. *Typha angustifolia*	5	No	OBL
2. *Sparangium americanum*	20	Yes	OBL
3. *Impatiens capensis*	3	No	FACW
4. *Lythrum salicaria*	35	Yes	OBL
5. *Onoclea sensibilis*	3	No	FACW
6. *Ribes americanum*	2	No	FACW
7. *Solidago gigantea*	3	No	FACW
8. *Thelypteris palustris*	2	No	FACW
9. *Bidens frondosa*	5	No	FACW
10. *Comarum palustre*	15	No	OBL
11. *Persicaria sagittata*	2	No	OBL
12. *Epilobium coloratum*	5	No	OBL
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	82	x 1 =	82
FACW species	33	x 2 =	66
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115	(A)	148 (B)

Prevalence Index = B/A = 1.29

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24 +								Histosol

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
X Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Housatonic River Restoration/Utility Drive Rail Spur City/County: Pittsfield, MA/Berkshire County Sampling Date: 8/06/2025
Applicant/Owner: General Electric State: MA Sampling Point: W3
Investigator(s): Julia Stearns; Adam Clark; Steve (HDR) Section, Township, Range: Pittsfield, MA
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex Slope (%): 0-2
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.415346 Long: -73.242474 Datum: WGS84
Soil Map Unit Name: Oakville loamy sand NWI classification: ______
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. *Lonicera morrowii*	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	

Herb Stratum (Plot size: 5')			
1. *Solidago gigantea*	90	Yes	FACW
2. *Rubus occidentalis*	20	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110	=Total Cover	

Woody Vine Stratum (Plot size:)			
1. *Clematis ligusticfolia*	8	Yes	FAC
2.			
3.			
4.			
	8	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	95	x 2 =	190
FAC species	28	x 3 =	84
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	128	(A)	294 (B)

Prevalence Index = B/A = 2.30

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2							Course Loam
16-20 +	10YR 3/3							Fine Sandy Loam

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Attachment C-3

USDA NRCS Soils Mapping and Descriptions for Rail Transload Properties

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Berkshire County, Massachusetts

Utility Drive Transload Property

January 8, 2026

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

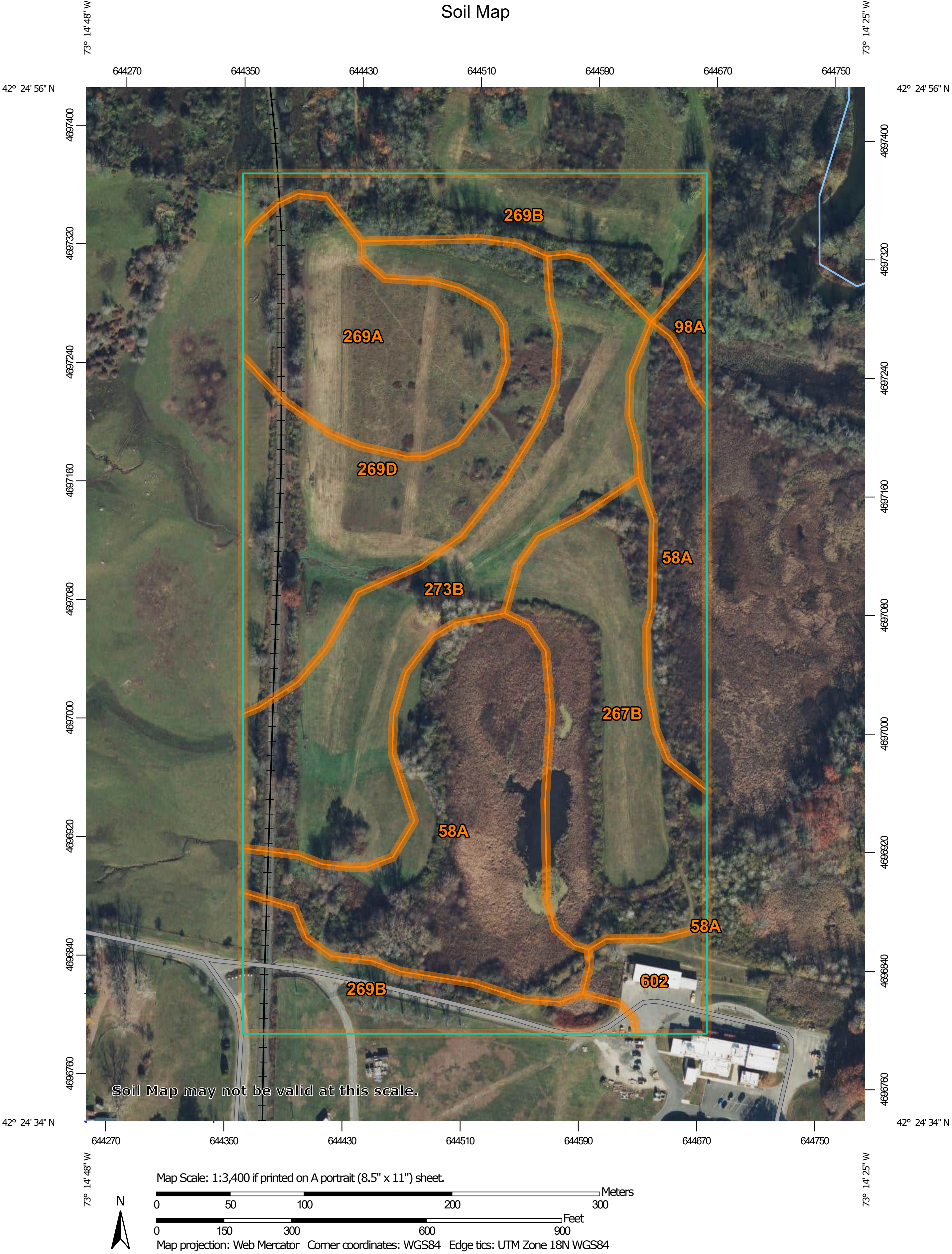
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map



Map Scale: 1:3,400 if printed on A portrait (8.5" x 11") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

☐ Area of Interest (AOI)

Soils

☐ Soil Map Unit Polygons

〰 Soil Map Unit Lines

■ Soil Map Unit Points

Special Point Features

◎ Blowout

☒ Borrow Pit

✱ Clay Spot

◇ Closed Depression

✕ Gravel Pit

∴ Gravelly Spot

◉ Landfill

⋀ Lava Flow

⩛ Marsh or swamp

⚒ Mine or Quarry

◎ Miscellaneous Water

○ Perennial Water

∨ Rock Outcrop

+ Saline Spot

⁙ Sandy Spot

⊖ Severely Eroded Spot

◇ Sinkhole

⋗ Slide or Slip

ø Sodic Spot

≋ Spoil Area

● Stony Spot

●● Very Stony Spot

ψ Wet Spot

△ Other

╌ Special Line Features

Water Features

〰 Streams and Canals

Transportation

┼┼┼ Rails

〰 Interstate Highways

〰 US Routes

〰 Major Roads

〰 Local Roads

Background

▩ Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Berkshire County, Massachusetts
Survey Area Data: Version 20, Sep 5, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
58A	Natchaug and Catden mucks, 0 to 2 percent slopes	10.4	23.1%
98A	Winooski silt loam, 0 to 3 percent slopes, occasionally flooded	0.4	0.9%
267B	Copake fine sandy loam, 3 to 8 percent slopes	6.5	14.4%
269A	Groton gravelly sandy loam, 0 to 3 percent slopes	5.2	11.4%
269B	Groton gravelly sandy loam, 3 to 8 percent slopes	6.8	14.9%
269D	Groton gravelly sandy loam, 15 to 25 percent slopes	7.1	15.6%
273B	Oakville loamy sand, 3 to 8 percent slopes	7.8	17.2%
602	Urban land	1.1	2.5%
Totals for Area of Interest		**45.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Berkshire County, Massachusetts

58A—Natchaug and Catden mucks, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w670
Elevation: 650 to 1,240 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Natchaug and similar soils: 50 percent
Catden and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Natchaug

Setting

Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till

Typical profile

Oa1 - 0 to 12 inches: muck
Oa2 - 12 to 31 inches: muck
2Cg1 - 31 to 39 inches: silt loam
2Cg2 - 39 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.01 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 17.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144BY302ME - Mucky Swamp
Hydric soil rating: Yes

Description of Catden

Setting

Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed herbaceous organic material and/or highly decomposed woody organic material

Typical profile

Oa1 - 0 to 2 inches: muck
Oa2 - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144BY210ME - Marsh Wetland Complex
Hydric soil rating: Yes

Minor Components

Halsey

Percent of map unit: 5 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Lyons

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

98A—Winooski silt loam, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2zvd4
Elevation: 560 to 1,300 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Winooski and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Winooski

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-silty alluvium

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 64 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 22 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F145XY002MA - Silty Low Floodplain
Hydric soil rating: No

Minor Components

Hadley

Percent of map unit: 6 percent
Hydric soil rating: No

Limerick

Percent of map unit: 2 percent
Landform: Alluvial flats
Hydric soil rating: Yes

Saco

Percent of map unit: 2 percent
Landform: Alluvial flats
Hydric soil rating: Yes

267B—Copake fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 98ss
Elevation: 560 to 1,390 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Copake and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Copake

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Friable coarse-loamy eolian deposits over loose sandy and gravelly glaciofluvial deposits derived from limestone and/or loose sandy glaciofluvial deposits derived from limestone

Typical profile

H1 - 0 to 4 inches: fine sandy loam
H2 - 4 to 26 inches: gravelly fine sandy loam
H3 - 26 to 64 inches: stratified gravelly loamy fine sand to very gravelly coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144BY506ME - Semi-rich Till Slope
Hydric soil rating: No

Minor Components

Groton

Percent of map unit: 5 percent
Hydric soil rating: No

Hero

Percent of map unit: 3 percent
Hydric soil rating: No

Fredon

Percent of map unit: 2 percent
Landform: Terraces
Hydric soil rating: Yes

269A—Groton gravelly sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 98t3
Elevation: 640 to 1,180 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Groton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Groton

Setting

Landform: Terraces
Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Friable coarse-loamy eolian deposits over loose sandy and gravelly glaciofluvial deposits derived from limestone

Typical profile

H1 - 0 to 6 inches: gravelly sandy loam
H2 - 6 to 15 inches: gravelly sandy loam
H3 - 15 to 64 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY021MA - Semi-Rich Dry Outwash
Hydric soil rating: No

Minor Components

Copake

Percent of map unit: 10 percent
Hydric soil rating: No

Hero

Percent of map unit: 4 percent
Hydric soil rating: No

Fredon

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

269B—Groton gravelly sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 98t4
Elevation: 670 to 1,180 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Groton and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Groton

Setting

Landform: Terraces
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Friable coarse-loamy eolian deposits over loose sandy and gravelly glaciofluvial deposits derived from limestone

Typical profile

H1 - 0 to 6 inches: gravelly sandy loam
H2 - 6 to 15 inches: gravelly sandy loam
H3 - 15 to 64 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Copake

Percent of map unit: 10 percent
Hydric soil rating: No

269D—Groton gravelly sandy loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 98t6
Elevation: 640 to 1,510 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Groton and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Groton

Setting

Landform: Terraces
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Friable coarse-loamy eolian deposits over loose sandy and gravelly glaciofluvial deposits derived from limestone

Typical profile

H1 - 0 to 6 inches: gravelly sandy loam
H2 - 6 to 15 inches: gravelly sandy loam
H3 - 15 to 64 inches: very gravelly sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Copake

Percent of map unit: 5 percent
Hydric soil rating: No

273B—Oakville loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 98vg
Elevation: 600 to 1,200 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Oakville and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oakville

Setting

Landform: Terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loose sandy glaciofluvial deposits

Typical profile

H1 - 0 to 8 inches: loamy sand
H2 - 8 to 27 inches: sand
H3 - 27 to 64 inches: coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Copake
Percent of map unit: 5 percent
Hydric soil rating: No

Groton
Percent of map unit: 5 percent
Hydric soil rating: No

602—Urban land

Map Unit Setting
National map unit symbol: 98wd
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Farmland classification: Not prime farmland

Map Unit Composition
Urban land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

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United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Berkshire County, Massachusetts

Woods Pond Spur Transload Property

February 3, 2026

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map

Map Scale: 1:1,780 if printed on A portrait (8.5" x 11") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Berkshire County, Massachusetts
Survey Area Data: Version 20, Sep 5, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
35A	Halsey fine sandy loam, 0 to 3 percent slopes	0.0	0.2%
651	Udorthents, smoothed	4.1	99.8%
Totals for Area of Interest		**4.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Berkshire County, Massachusetts

35A—Halsey fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 98t9
Elevation: 660 to 1,490 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Halsey and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Halsey

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Friable coarse-loamy eolian deposits over loose sandy glaciofluvial deposits derived from slate and/or loose sandy and gravelly glaciofluvial deposits derived from slate

Typical profile

H1 - 0 to 10 inches: fine sandy loam
H2 - 10 to 20 inches: fine sandy loam
H3 - 20 to 64 inches: stratified very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144AY030NY - Semi-Rich Very Wet Outwash
Hydric soil rating: Yes

Minor Components

Palms

Percent of map unit: 5 percent
Landform: Bogs
Hydric soil rating: Yes

Fredon

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Hero

Percent of map unit: 5 percent
Hydric soil rating: No

651—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 98wc
Elevation: 640 to 1,620 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 120 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, smoothed and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Smoothed

Setting

Anthropogenic Feature: Leveled land
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Excavated and filled land over loose glaciofluvial deposits derived from igneous and metamorphic rock and/or friable basal till derived from igneous and metamorphic rock

Properties and qualities

Depth to restrictive feature: More than 80 inches
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

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Attachment C-4

IPaC Results

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 3301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: 10/07/2025 16:09:55 UTC
Project Code: 2026-0002124
Project Name: Housatonic River - Utility Drive Rail Spur

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (**Updated 4/12/2023**) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

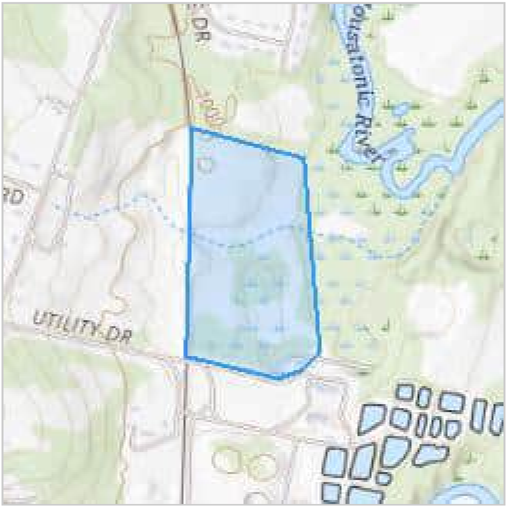
This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 3301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2026-0002124
Project Name: Housatonic River - Utility Drive Rail Spur
Project Type: Acquisition of Lands
Project Description: Potential material storage and transloading on an approximate 34-acre site.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.4125473,-73.24364733410988,14z



Counties: Berkshire County, Massachusetts

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:	AECOM
Name:	Julia Stearns
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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 3301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: 10/07/2025 16:03:08 UTC
Project Code: 2026-0002116
Project Name: Housatonic River - Woods Pond Rail Spur

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (**Updated 4/12/2023**) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 3301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2026-0002116

Project Name: Housatonic River - Woods Pond Rail Spur

Project Type: Acquisition of Lands

Project Description: Approximately 7-acre site for potential material storage area adjacent to Woods Pond in Lenox, MA.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.3520558,-73.2438767736673,14z

Counties: Berkshire County, Massachusetts

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:	Private Entity
Name:	Julia Stearns
Address:	10 Orms Street
Address Line 2:	Suite 400
City:	Providence
State:	RI
Zip:	02904
Email	julia.stearns@aecom.com
Phone:	5084045512

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Environmental Protection Agency

Appendix D

Cultural Resources Survey Report for Rail Transload Areas in Reaches 5 and 6

February 2026
Housatonic River – Rest of River

Phase IB Cultural Resources Survey Report for Rail Transload Areas in Reaches 5 and 6

Prepared for
General Electric Company
1 Plastics Avenue
Pittsfield, Massachusetts 01201

Prepared by
AECOM
500 Enterprise Drive
Rocky Hill, Connecticut 06067

Prepared for General Electric Company
Pittsfield, Massachusetts

February 2026
Housatonic River – Rest of River

Phase IB Cultural Resources Survey Report for Rail Transload Areas in Reaches 5 and 6

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ABBREVIATIONS

APE	Area of Potential Effects
ARARs	Applicable or Relevant and Appropriate Requirements
bgs	below ground surface
CD	Consent Decree for GE=Pittsfield/Housatonic River Site
cm	centimeter
CRA	Cultural Resources Assessment
CRS	Cultural Resources Survey
EPA	U.S. Environmental Protection Agency
GE	General Electric Company
MACRIS	Massachusetts Cultural Resources Inventory System
NRHP	National Register of Historic Places
PCBs	polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act
Revised Final Permit	Revised Final Resource Conservation and Recovery Act Permit Modification
ROR	Rest of River
SRHP	State Register of Historic Places
STP	shovel test pit

Abstract

On behalf of the General Electric Company (GE), AECOM conducted a Phase IB Cultural Resources Survey (CRS) of planned rail transload areas at Utility Drive in Pittsfield (Reach 5A) and the Woods Pond Spur in Lenox (Reach 6) in accordance with work plans approved by the U.S. Environmental Protection Agency (EPA). These facilities will be used to support remediation activities to address polychlorinated biphenyls (PCBs) in the Housatonic River under a revised final permit issued by EPA in 2020. The Phase IB CRS was conducted in July 2025 and included archaeological surveys as well as historic architectural surveys.

The archaeological surveys included systematic pedestrian inspection and subsurface testing of the Utility Drive and Woods Pond Spur rail transload areas as shown in the approved work plans. The archaeological survey of the Utility Drive rail transload area encompassed a total of 1.65 hectares (4.08 acres) and involved the excavation of 159 shovel test pits (STPs); 24 proposed STPs were excluded due to disturbance or slope. No archaeological sites were identified during this survey. Three post-contact artifacts were recovered from this area, but these were classified as isolated field scatter and not designated as an archaeological site. The archaeological survey of the Woods Pond Spur rail transload area was conducted as part of the Reach 6 CRS and was previously described in a Phase IB CRS Report for Reach 6, submitted in January 2026. It did not identify any archaeological sites or artifacts.

The historical architectural surveys included background review and field surveys of the Utility Drive and Woods Pond Spur rail transload areas. The survey at the Utility Drive area did not identify any resources listed in or eligible for the National Register of Historic Places (NRHP) or any other previously identified or new historic architectural resources. The historic architectural survey of the Woods Pond Spur rail transload area, which was also part of the Reach 6 CRS and described in the January 2026 Reach 6 CRS Report, resulted in the identification of one previously identified NRHP-listed resource and four newly identified resources. It was determined that the NRHP-listed resource would not be adversely affected by the remediation project and that the four newly identified resources do not meet the eligibility criteria for the NRHP.

Based on the results of these Phase IB CRS activities, no additional archaeological or historic architectural investigations are recommended for these rail transload areas under the configurations presented in the work plans. However, the layout of these rail transload areas has recently been expanded, and the expanded portions will be subject to additional CRS investigations, as described in this report.

1 Introduction and Background

1.1 Introduction

On December 16, 2020, pursuant to the 2000 Consent Decree (CD) for the GE Pittsfield/ Housatonic River Site, the U.S. Environmental Protection Agency (EPA) issued to the General Electric Company (GE) a final revised modification of GE's Resource Conservation and Recovery Act (RCRA) Corrective Action Permit (Revised Permit, EPA 2020) for the Housatonic Rest of River (ROR). The Revised Permit required GE to implement a Remedial Action selected by EPA to address polychlorinated biphenyls (PCBs) in the ROR.

Under the Revised Permit, GE is required to evaluate the ROR areas that will be subject to remediation and support activities for the potential presence of cultural resources in areas that contain or have a high potential to contain such resources. As a result, GE has submitted a number of deliverables to EPA that propose and report on its cultural resource evaluation activities. These have included a Revised Supplemental Phase IA Cultural Resources Assessment (CRA) Report (Revised Phase IA CRA Report; AECOM 2023), a Revised Phase IB Cultural Resources Survey (CRS) Report for Reach 5A (Revised Reach 5A CRS Report; AECOM 2025), a Phase IB CRS Work Plan for Reach 6 (Reach 6 CRS Work Plan; AECOM 2024), and a Phase IB CRS Report for Reach 6 (Reach 6 CRS Report; AECOM 2026).

On October 15, 2024, in accordance with the Revised Permit, GE submitted a Revised On-Site and Off-Site Transportation and Disposal Plan (Revised T&D Plan; Arcadis 2024), which described GE's plans for the transportation and disposal of excavated material from the ROR. In that Revised T&D Plan, GE proposed to use rail transport for some of the materials removed during the remediation, and to support that mode of transport, it proposed the construction of two rail loading and/or unloading areas (referred to herein as rail transload areas) at the following locations within Reaches 5 and 6 of the ROR:

- Utility Drive, located adjacent to Reach 5A in the City of Pittsfield, near the Pittsfield Wastewater Treatment Plant;
- Woods Pond Spur, located adjacent to Reach 6 in the Town of Lenox, at a railway museum property.

On April 29, 2025, EPA issued a conditional approval letter for the Revised T&D Plan. That letter approved the above-described locations for rail transload areas. It also directed GE to submit a pre-design investigation (PDI) work plan to describe the necessary investigations to support the design of these rail transload areas.

In response, on May 15, 2025, GE submitted a Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6 (Rail Transload PDI Work Plan; Arcadis and AECOM 2025). That work plan presented preliminary layouts of the Utility Drive and Woods Pond Spur rail transload areas, which are shown in Figures 1.1. and 1.2, respectively; and it proposed certain PDI activities for them. Those PDI activities included the performance of cultural resource survey activities in these rail transload areas as shown in the work plan. The work plan described the proposed CRS activities for the Utility Drive rail transload area in some detail and noted that the CRS activities for the Woods Pond Spur rail transload area had already been presented and approved in the prior Reach 6 CRS Work Plan. The Rail Transload PDI Work Plan was conditionally approved by EPA on July 24, 2025.

On GE's behalf, AECOM conducted the Phase IB CRS activities at the Utility Drive and Woods Pond Spur rail transload areas (as shown in Figures 1.1. and 1.2) in July 2025. This report presents the results of the Utility Drive area survey, and it summarizes the results of the Woods Pond Spur area survey, which have already been presented in more detail in the Reach 6 CRS Report, which was submitted on January 22, 2026. In the meantime, the configuration of both of these rail transload areas has been revised and expanded and will require additional survey activities for potential cultural resources. A proposal for such additional CRS activities in the expanded portions of these rail transload areas is presented in Section 6 of this report.

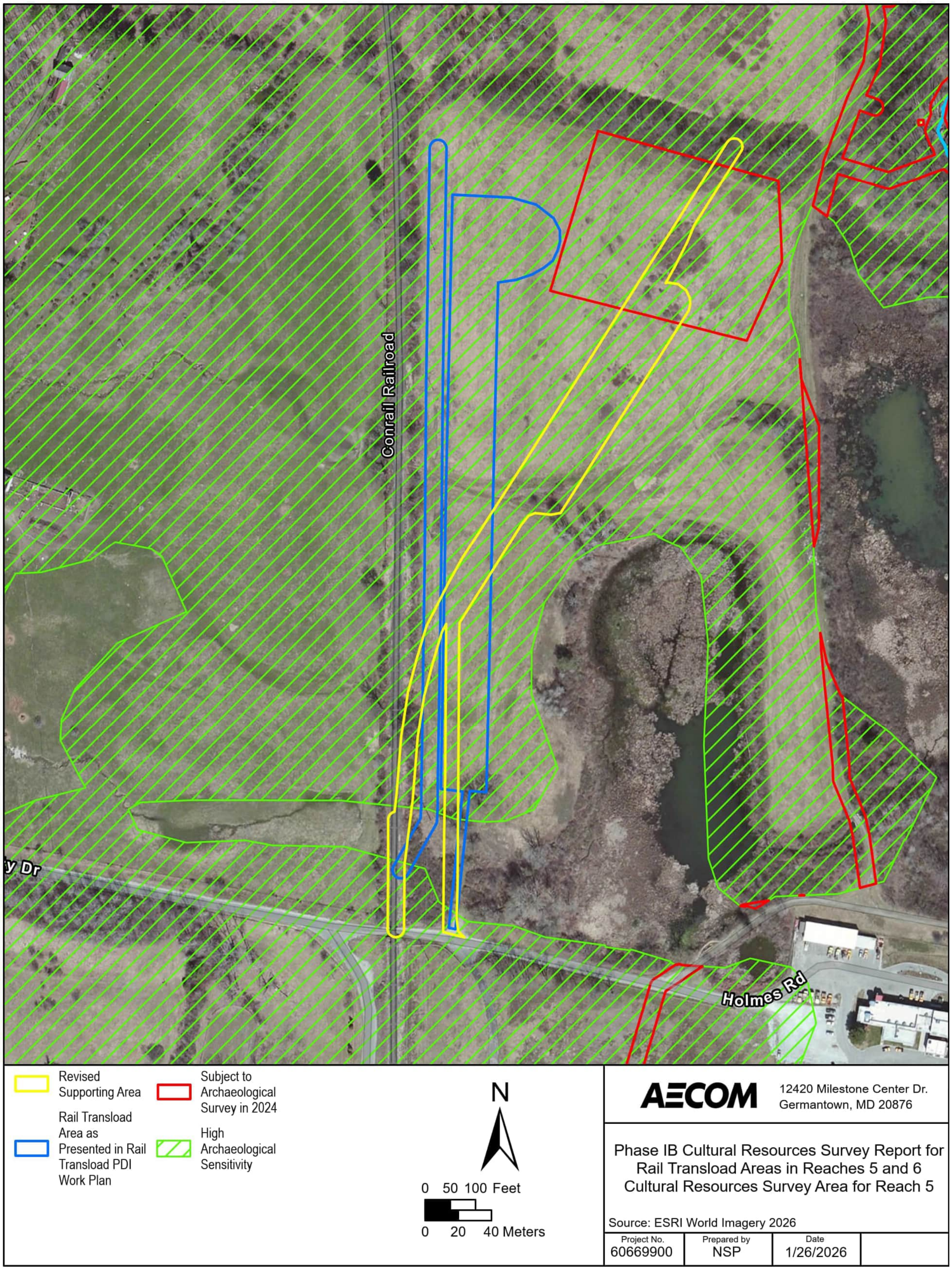

Figure 1.1: Utility Drive Transload Area for Cultural Resource Survey.

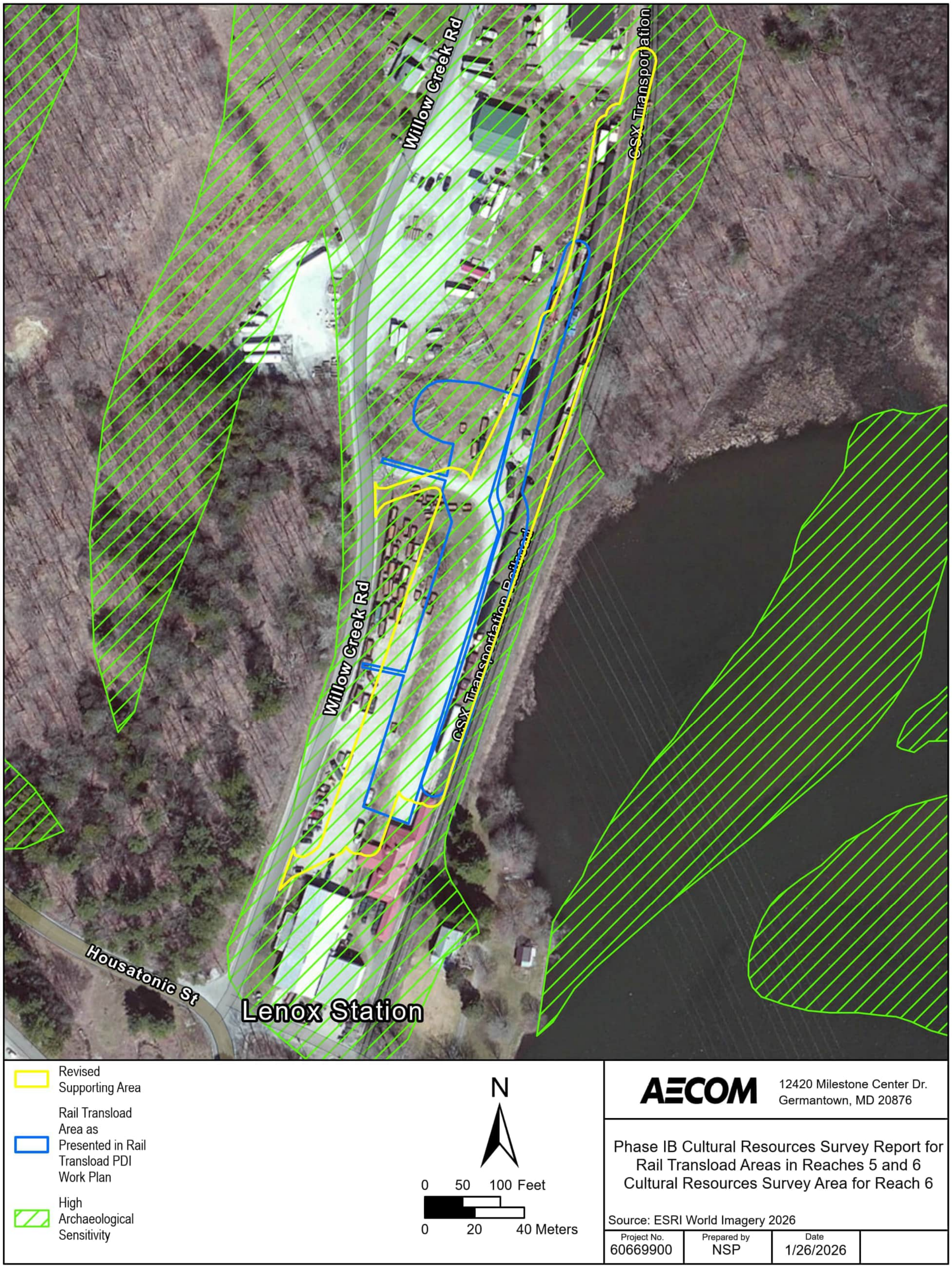

Figure 1.2: Woods Pond Spur Transload Area for Cultural Resource Survey.

1.2 Objective and Requirements

The objective of this Phase IB CRS Report for Rail Transload Areas is to describe the results of the field survey investigations, that were conducted to determine whether and the extent to which potentially significant cultural resources could be impacted by remediation support activities in the Utility Drive and Woods Pond Spur rail transload areas. For purposes of the Phase IB CRS, potentially significant cultural resources consist of archaeological and historic architectural resources in Reaches 5 and 6 that are subject to the Applicable or Relevant and Appropriate Requirements (ARARs) relating to such resources, as listed in Attachment C to the Revised Permit – namely, the National Historic Preservation Act and its regulations, the federal Archaeological and Historic Preservation Act of 1974 (AHPA), and the Massachusetts Historical Commission Act (950 CMR 70.00) and the Massachusetts Historical Resources Protections Act (950 CMR 71.00) and its regulations. Significant cultural resources are defined, for purposes of this project, as resources that are listed or meet the eligibility criteria for listing on the National Register of Historic Places (NRHP), resources that are listed on the Massachusetts State Register of Historic Places (SRHP) and included on the State Inventory of Historic and Archaeological Assets, and other significant scientific, pre-contact, post-contact, or archaeological data subject to the Archaeological and Historic Preservation Act.

As shown in Figures 1.1 and 1.2, all or nearly all of the Utility Drive and Woods Pond Spur rail transload areas are located within areas of high archaeological sensitivity (i.e., areas with a high potential to contain cultural resources), as had been mapped for the ROR, including Reaches 5 and 6, in the Revised Phase IA CRA Report and later updated to cover all anticipated areas subject to support activities.

As described in the Reach 6 CRS Work Plan and the Rail Transload PDI Work Plan, the Archaeological Area of Potential Effects (APE) for each transload area encompassed the proposed rail spur or siding and associated operational areas. The Historic Architectural APE included adjacent historic structures that could be indirectly affected by rail transload facility construction and operation, including (for the Woods Pond Spur transload area) the Lenox Railroad Station, a property listed in the NRHP.

1.3 Report Organization

The remainder of this Phase IB CRS Report is organized into the following sections:

- Section 2 contains a description of the methods used for the Phase IB surveys of the rail transload areas. It should be noted that the regional pre-contact and post-contact cultural contexts and summaries of previous studies in the region were provided in the Revised Phase IA CRA Report and are not duplicated in this report.
- Section 3 provides descriptions of the archaeological survey areas where Phase IB CRS efforts were conducted in 2025 and the results of the surveys in those areas. This section provides a

detailed description of the survey at the Utility Drive transload area, but only a brief summary of the survey at the Woods Pond Spur transload area, since a more detailed description of the survey in that area was presented in the Reach 6 CRS Report.

- Section 4 provides the results of the historic architectural survey activities assessing above-ground potential historic structures in both areas.
- Section 5 provides a summary of the CRS activities conducted at these rail transload areas.
- Section 6 provides a proposed work plan for additional CRS activities in the portions of these rail transload areas that were not covered by the 2025 survey activities.
- Section 7 lists the references cited in this report.

Supplemental material is included in the appendices to this report. Appendix A contains shovel test pit (STP) logs and Appendix B provides an inventory of artifacts found.

2 Phase IB Archaeological Survey Research Areas and Methods

Phase IB CRS activities were conducted at the Utility Drive rail transload area adjacent to Reach 5A and at the Woods Pond Spur rail transload area adjacent to Reach 6. The methodology for these CRS activities was presented in the Rail Transload PDI Work Plan for the Utility Drive transload area and in the Reach 6 CRS Work Plan for the Woods Pond Spur transload area.

2.1 Phase IB Methodology

Phase IB CRS activities in the rail transload areas were conducted to determine whether the areas contained potentially significant cultural resources that could be affected by the rail transload area construction and operation. All field work was conducted in accordance with Massachusetts Historical Commission archaeological guidelines (950 CMR 70.00). The remainder of this section focuses on the methodology for the CRS at the Utility Drive rail transload area, since the methodology for the CRS at the Woods Pond Spur rail transload area was described in the Reach 6 CRS Report,

The archaeological field work for the Utility Drive rail transload area began with a pedestrian inspection of the areas proposed for survey to visually assess environmental characteristics, search for visible above-ground cultural resources, and assess evidence of prior disturbances and land modifications within areas designated as having high archaeological sensitivity, as shown on Figure 1.1. In addition, the boundaries of the archaeologically sensitive zones were ground-truthed during a visual field assessment for the presence of disturbance areas, saturated soils, landforms, etc. prior to performing more detailed investigations.

The standard approach for this area was to excavate 50-centimeter (cm)-square STPs, excavated within 10-cm) arbitrary levels within natural soil strata into undisturbed subsoils or into the first C-horizon, but in no case deeper than three feet. STPs were spaced at 10-meter intervals throughout the area. Based on this spacing and the layout of the rail transload area, up to approximately 183 total STPs were pre-plotted to investigate the areas to be used for a rail spur/siding and a rail operational area at Utility Drive.

All excavated soil was screened through 1/4-inch mesh hardware cloth for systematic artifact recovery. All artifacts were bagged and labeled by provenience, including the STP number, soil horizon, level, depth, date, and excavator initials. Each bag was given a field specimen number for tracking purposes and was documented on a field specimen log. Following excavation, STPs were completely backfilled, and the backfill was compacted, and the sod replaced if present.

All STPs were recorded using field site forms that documented stratigraphic profiles, including a description of the soil type, texture, and color using the Munsell color chart. Measurements were provided in metric units. Artifacts recovered were also documented by excavated level and characterized. The locations of all STPs and identified surface features were mapped using a hand-held, sub-meter accurate GPS unit.

Potential archaeological site boundaries were defined by excavating short-interval STPs at five-meter (16.4-foot) intervals in a cruciform pattern to the exterior boundaries of the transload area until two consecutive negative STPs were encountered. A distinction was made between post-contact field scatters and artifacts that may indicate the presence of a definitive post-contact archaeological site. For the purposes of the Phase IB CRS of this area, a field scatter is defined as a low-density distribution of post-contact artifacts, either isolated or in small, dispersed concentrations. No temporary site numbers were assigned to isolated post-contact artifacts that were categorized as field scatter.

Photographs documenting the work were taken. These included photographs of sample STPs. Field photography conformed to the state archaeologist's memorandum on improving photography and cartography (Simon 2014). This includes the use of a north arrow, a metric scale, and sign board in all plan view and profile photographs. Photos were taken in consistent lighting, whenever possible, with any distracting items removed from the surrounding area. General photographs of the project area, however, were taken without horizontal or vertical scales or sign boards to provide an overall view of the conditions of the area at the time of the archaeological investigations.

2.2 Laboratory Analysis and Curation

All archaeological artifacts recovered from Phase IB CRS activities at the Utility Drive rail transload area were returned to the AECOM laboratory for professional analysis and cataloging. (No artifacts were found at the Woods Pond Spur transload area.) Artifacts were cleaned and labeled. After the artifacts were dried, they were separated by class and placed in individual four-mil polyethylene bags, labeled with provenience information in permanent marker. The individual bags were placed within a large bag for the entire provenience. All bags were labeled and were pierced for air circulation.

At a minimum, the basic analyses performed on these artifacts included the identification of key characteristics for each object, including general form and function (e.g., nail – architectural), material composition (ceramic, glass, metal, etc.), and manufacturing technique.

Artifacts recovered and project records will be prepared for permanent curation with a qualified curation facility. All artifacts will be delivered in an archivally stable Hollinger Record Storage Box or an equivalent. Artifacts within the box will be packaged in labeled, vented, zipper-sealed polyethylene bags. Along with the artifact collection and a paper catalog, an electronic format copy of the final catalog will be provided. In addition, all notes, photographs, drawings, maps, and both original and duplicate copies (photo-reproduced onto acid-free paper) of all field documentation and notes will be curated.

3 Results of Phase IB Archaeological Surveys

Phase IB terrestrial archaeological survey efforts at the rail transload areas were conducted in July 2025. The field crew consisted of five AECOM archaeologists, including a field director and four technicians. All fieldwork was observed by an EPA-contracted archaeologist. The following sections discuss the testing results and environmental conditions encountered during the Phase IB archaeological surveys. Comprehensive STP logs are provided in Appendix A, and an artifact catalog is provided in Appendix B.

3.1 Utility Drive Rail Transload Area

The rail transload area at Utility Drive encompasses the anticipated rail spur or siding, the operational area, and a preliminary access road to the public road. An archaeological survey was conducted previously at the Utility Drive access road (along with an associated staging area), as described in the Revised Reach 5A CRS Report, so the results reported in this document include only the rail spur/siding and the rail operational area. In the layout presented in the Rail Transload PDI Work Plan, this area covers a total of 1.65 hectares (4.08 acres).[1] The Utility Drive rail transload area was investigated as a single supporting area, labeled with the prefix STG followed by a three-digit numerical suffix (Figure 3.1). STG-011 was situated largely within the area of high archaeological sensitivity. It is described below.

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[1] As noted above, the configuration of this transload area has since been expanded, and the expanded portions will be subject to additional CRS activities, as described in Section 6.

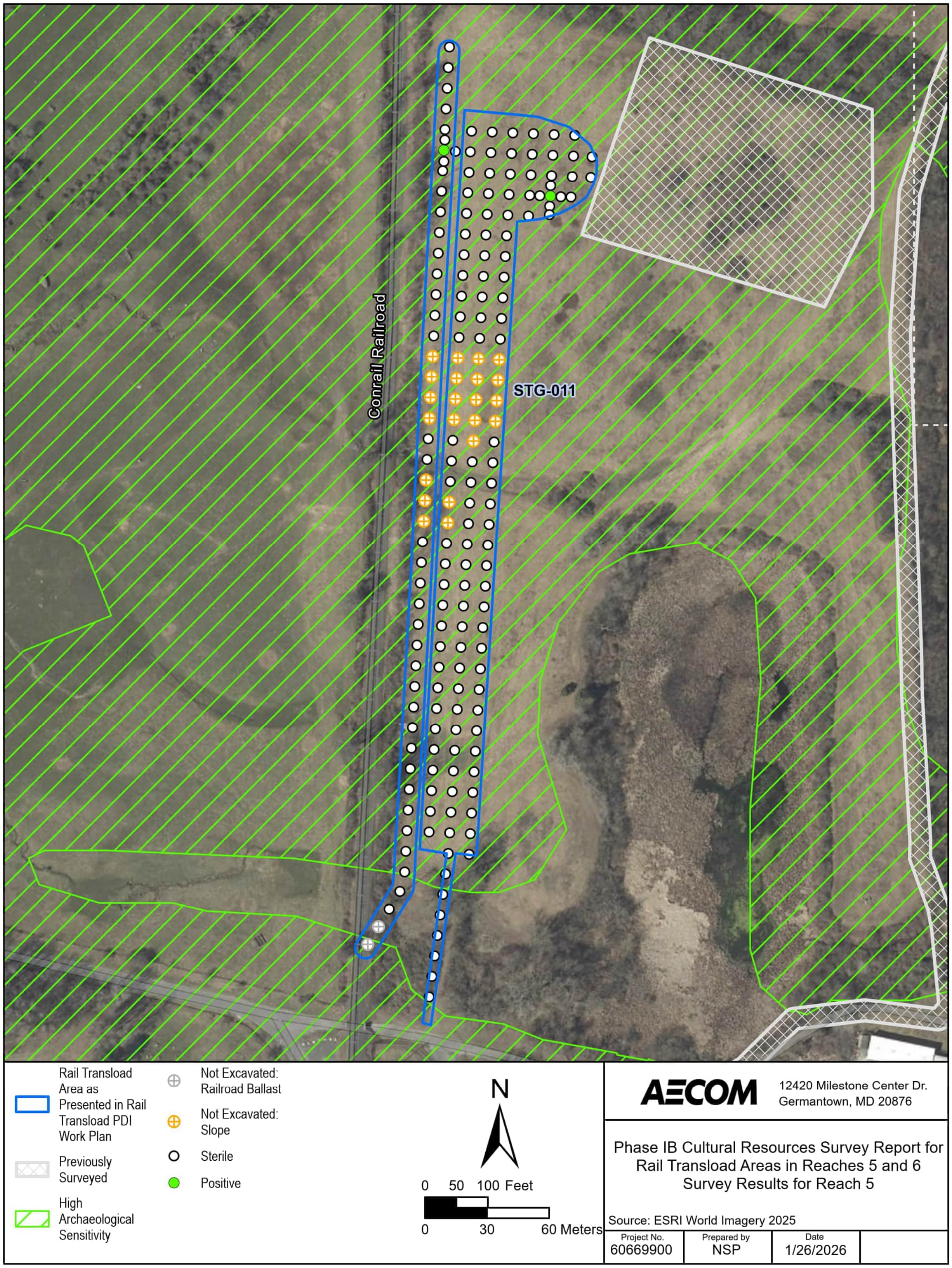


Figure 3.1: Survey Coverage Map for Utility Drive Rail Transload Area.

Supporting area STG-011 occupies 1.65 hectares (4.08 acres) and is located approximately 265 meters (869 feet) west from the western bank of the Housatonic River, located within George Darey Housatonic Valley Wildlife Management Area in southern portion of Reach 5A (Figure 3.1). Under the layout presented in the Rail Transport PDI Work Plan, STG-011's westernmost portion (Transect A) would serve as a as a rail transport area and the remaining eastern portion (Transects B – H) would serve as a as a rail loading and unloading area. The northern portion consists of level terrain covered in tall grasses and shrubbery that descends into a steep southern slope (STPs A16 – A19, B16 – B19, C16 – C19, D16 – D19) leading into a drainage channel (Photographs 3.1 and 3.2). The central portion consists of slightly elevated, level terrain with gentle southeast-facing slopes, vegetated with grasses and shrubbery, and contains a low-lying drainage channel (Photograph 3.3). The southern portion includes a low-lying, level deciduous forest with pockets of dense underbrush (Photograph 3.4). Ground surface visibility was less than 10 percent at the time of the archaeological survey. A total of 159 STPs were excavated in STG-011, and 24 proposed STPs were excluded due to slopes exceeding 15 percent and obvious prior disturbances.

Three post-contact artifacts were recovered from the Ap horizon in two STPs. These artifacts consisted of two aqua glass shards from STP F8 and one whiteware sherd was from STP A6, as described in Appendix B. Short-interval testing did not recover any additional artifacts. The artifacts found were classified as post-contact field scatter and are not considered to represent an archaeological site.

STPs exhibited variable stratigraphy and included areas of deflated Ap horizons, relatively shallow stratified soil sequences, colluvial deposits, and deep A horizons overlying a poorly drained or scoured subsoil. STPs that exhibited a deflated Ap horizon typically consisted of a 0.25-meter (0.82-foot) thick brown (10YR 4/3) sandy loam Ap horizon overlying an olive brown (2.5Y 4/3) coarse sand C horizon (Photograph 3.5). STPs revealing a shallow stratified soil sequence typically consisted of 0.3-meter (0.98-foot) thick brown (10YR 4/3) sandy loam Ap horizon overlying a dark yellowish brown (10YR 4/6) sandy loam Bw horizon and terminating at a light olive brown (2.5Y 5/4) coarse sand C horizon (Photograph 3.6, Figure 3.2). Colluvial deposits are typified by STP A21, which included three strata. Stratum I extended to 0.40 meters (1.31 feet) below ground surface (bgs) and was a very dark gray (10YR 3/1) sandy loam A1 horizon with 20 percent subangular gravel. Stratum II extended to 0.65 meters (2.13 feet) bgs and was a dark brown (10YR 3/3) sandy loam A2 horizon with 20 percent subangular gravel. Stratum III was excavated to 1.02 meters (3.34 feet) bgs and was a very dark brown (10YR 2/2) mixed with a brown (10YR 4/3) sandy loam A3 horizon with 20 percent subangular gravel (Photograph 3.7, Figure 3.2). STPs with deep A horizons overlying a poorly drained and or scoured subsoil typically consisted of 0.15-meter (0.49-foot) thick brown (10YR 4/3) sandy loam A1 horizon overlying a brown (10YR 3/2) mixed with an olive brown (2.5Y 4/3) A2 horizon with minor scouring terminating at an olive brown (2.5Y 4/3) mixed with a gray (2.5Y 5/1) C horizon with coarse sand inclusions (Photograph 3.8).

No archaeological sites were identified within STG-011.

Photograph 3.1: Overview of STG-011, facing south from STP C5.

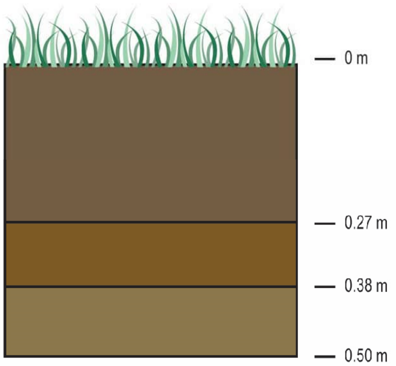
Photograph 3.2: Overview of STG-011, facing west from Near STP D23.

Photograph 3.3: Overview of STG-011, facing south from STP C30.

Photograph 3.4: Overview of STG-011, facing north from STP C25.

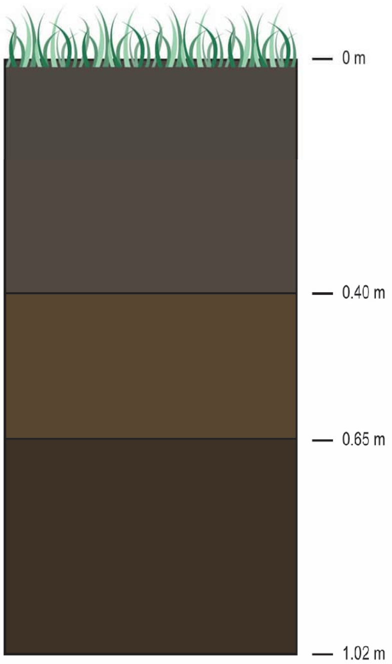
Photograph 3.5: STG-011 west profile of STP A6.

Photograph 3.6: STG-011 south profile of STP F8.



STG-011 A6

0-0.27m	Stratum I: Brown (10YR 4/3) sandy loam Ap horizon with 30% subangular gravel
0.27-0.38m	Stratum II: Dark yellowish brown (10YR 4/6) loamy sand Bw horizon with 40% subangular gravel
0.38-0.50m	Stratum III: Light olive brown (2.5Y 5/4) coarse sand C horizon with 50% subangular gravel



STG-011 A21

0-0.40m	Stratum I: Very dark gray (10YR 3/1) sandy loam A1 horizon with 20% subangular gravel
0.40-0.65m	Stratum II: Dark brown (10YR 3/3) sandy loam A2 with 20% subangular gravel
0.65-1.02m	Stratum III: Very dark brown (10YR 2/2) mixed with a brown (10YR 4/3) sandy loam A3 with 20% subangular gravel

AECOM

Phase IB Cultural Resources Survey Report
for Rail Transload Areas in Reaches 5 and 6
Representative Shovel Test Profiles

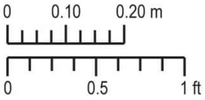


Figure 3.2: Representative Profiles, STPs A6 and A21 in survey area STG-011.

Photograph 3.7: STG-011 south wall of STP A21.

Photograph 3.8: STG-011 west wall profile of STP C44.

3.2 Woods Pond Spur Rail Transload Area

The archaeological survey of the Woods Pond Spur rail transload area was conducted as part of the overall Reach 6 CRS survey activities. The survey of this transload area included the excavation of 58STPs. The results of this survey were included in the Reach 6 CRS Report submitted on January 22, 2026. As discussed in that report, this archaeological survey did not identify any archaeological sites or recover any artifacts.

4 Historic Architectural Surveys

4.1 Survey of Utility Drive Rail Transload Area

4.1.1 Historic Architectural Survey Methods

Prior to a field visit, AECOM architectural historians conducted a review of the Massachusetts State and National Registers of Historic Places (SRHP/NRHP) files available on the Massachusetts Cultural Resource Information System (MACRIS), including an investigation of previously documented resources. The team also conducted a review of historic aerial photography and USGS topographic maps to locate buildings aged 50 years or older and referenced historic maps and atlases to identify possible historic districts or historic resources. This review focused on areas within 0.5 miles of the Utility Drive rail transload area. Further background research was considered within and adjacent to those areas for any potential additional historic resources to be surveyed during the field effort.

On-site data collection was performed in late August 2025 by a team of two 36 CFR 61-qualified architectural historians. Field reconnaissance consisted of a windshield and pedestrian survey to inventory any architectural properties 50 years of age or older within 0.5 miles of the transload area, to characterize the general conditions of the developed environment in the transload area, and to assess the potential impacts of the transload area construction or operation on historic properties.

As a result of the foregoing efforts, an updated Historic Architectural APE was defined generally as the area around the Utility Drive transload area with potential to be indirectly affected by noise, vibration, or visual intrusions associated with the construction and operation of the transload area and (consistent with established practices) extending to the boundaries of the parcels involved. The resulting updated Historic Architectural APE at the Utility Drive rail transload area occupies the space east of the Conrail Railroad line and north of Holmes Road, as shown on Figure 4.1. Except for the rail line and residential corridor, the APE is undeveloped and contains no extant buildings or structures.

4.1.2 Results of Historic Architectural Survey

The historic architectural survey described above showed that there are no NRHP-listed or eligible resources, previously identified historic architectural resources, or any other historic architectural resources within the boundaries of the Historic Architectural APE for the Utility Drive rail transload area.

4.2 Survey of Woods Pond Spur Rail Transload Area

The historic architectural survey at the Woods Spur rail transload area was conducted as part of the overall historic architectural survey of Reach 6. That survey is described in Section 4 of the January 2026 Reach 6 CRS Report. As discussed there, the survey resulted in the identification of one previously identified resource and four newly identified resources in the Historic Architectural APE. The previously identified resource, the Lenox Railroad Station, was previously listed in the NRHP. After consideration of the nature and length of the remediation project, including the transload area, AECOM found that there would be no adverse effect of that project on this NRHP-listed resource. The report also showed that none of the four newly identified resources meets the eligibility criteria for listing in the NRHP or is otherwise significant, and therefore potential effects on those resources were not assessed.

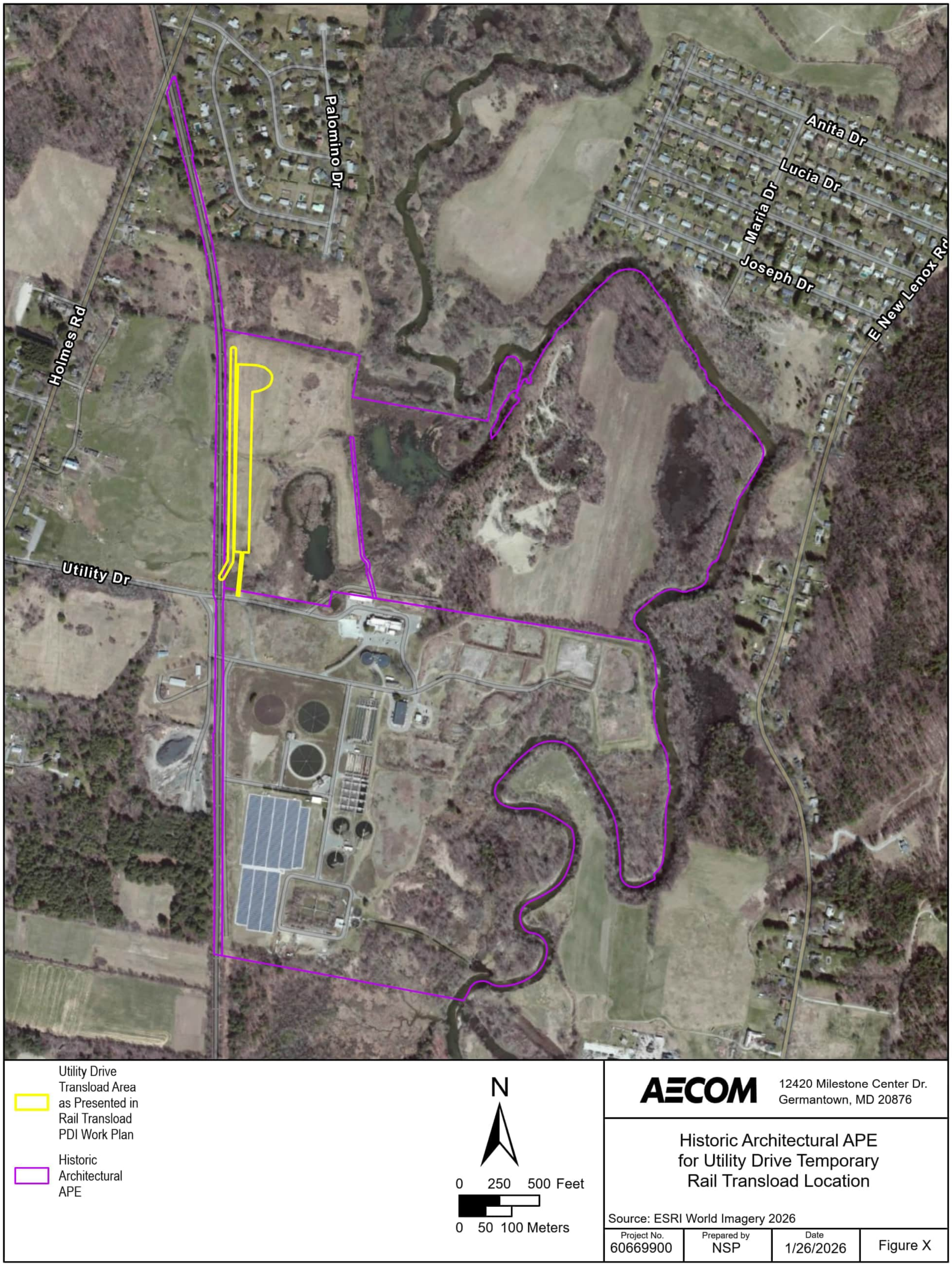


Figure 4.1: Updated Historic Architectural APE for Utility Drive Rail Transload Area.

5 Summary

AECOM conducted a Phase IB CRS on behalf of GE for the Utility Drive and Woods Pond Spur rail transload areas, using the layouts shown in the approved work plans. The Phase IB archaeological survey at the Utility Drive area encompassed a total of 1.65 hectares (4.08 acres) and involved the excavation of 159 STPs. The Phase IB survey did not identify any archaeological sites. Three post-contact artifacts were recovered, but were determined to be post-contact field scatter, and not to represent an archaeological site. An historic architectural survey of the Utility Drive rail transload area resulted in the identification of no NRHP-listed or eligible resources, previously identified historic architectural resources, or any other historic architectural resources.

The Phase IB CRS at the Woods Pond Spur rail transload area was described in the January 2026 Reach 6 CRS Report. The archaeological survey there did not identify any archaeological sites or artifacts. The historic architectural survey resulted in the identification of one previously identified resource, which would not be adversely affected by transload activities, and four newly identified resources, which did not meet the NRHP eligibility criteria.

Due to the recent expansions of the configuration of these rail transload areas, additional CRS survey activities will be conducted in the expanded portions of those areas that were not accessed in 2025. A work plan for those additional CRS activities is provided in Section 6.

6 Work Plan for Additional Cultural Resource Survey in Expanded Transload Areas

Subsequent to the initial layout for the rail transload areas, GE revised the configuration of both the Utility Drive and Woods Pond Spur rail transload areas. The added areas based on the revised layouts are depicted on Figure 6.1 and Figure 6.2. As a result of these modifications, the archaeological APEs has been expanded by an additional 3.07 acres. The Utility Drive revision includes an additional 1.9 acres, of which, 1.7 acres are in areas categorized as having high archaeological sensitivity. The Woods Pond Spur rail transload area revised supporting areas includes an additional 1.1 acres, all of which is considered as having high archaeological sensitivity. In total, the revised supporting areas include 2.8 acres designated as having high archaeological sensitivity.

6.1 Archaeological Survey Methodology

As discussed in the Rail Transload PDI Work Plan, AECOM developed a comprehensive methodology for investigation of the rail transload areas. The same approved Phase IB CRS methodology will be applied to the expanded portions of the Archaeological APEs for the rail transload areas. The archaeological survey of the revised and expanded APEs will begin with a pedestrian inspection of the additional areas to visually assess environmental characteristics, search for visible above-ground cultural resources, assess evidence of prior disturbances, and land modifications within areas designated as having high archaeological sensitivity. In addition, the boundaries of the archaeologically sensitive zones will be ground-truthed during a visual field assessment for the presence of disturbed areas and saturated soils.

Once the limits of areas requiring a systematic survey are more precisely defined in the field, the standard approach will be to excavate STPs measuring 50 cm by 50 cm, spaced at 10-meter intervals across the additional areas added to the APEs, with an approximate 50 STPs per acre. Based on this spacing and the additional areas added to the APEs, approximately 117 STPs additional STPs will be excavated in the transload areas, with 69 at the Utility Drive transload area and 48 at the Woods Pond transload area. Each STP will be excavated in arbitrary 10-cm levels within natural soil strata into undisturbed subsoils or into the first C-horizon, but in no case deeper than three feet.

If potential cultural features are encountered, they will be cleaned and documented in plan-view drawings and in photographs. In such cases, excavations will be halted and the STP backfilled for feature preservation for potential future archaeological investigation if needed. All excavated soil will be screened through 1/4-inch mesh hardware cloth for systematic artifact recovery. Any artifacts found will be bagged and labeled by provenience, including STP number, soil horizon, level, depth, date, and excavator initials. Each bag will be given a field specimen number for tracking purposes and will be documented on a field specimen log. Following excavations, STPs will be completely backfilled, and

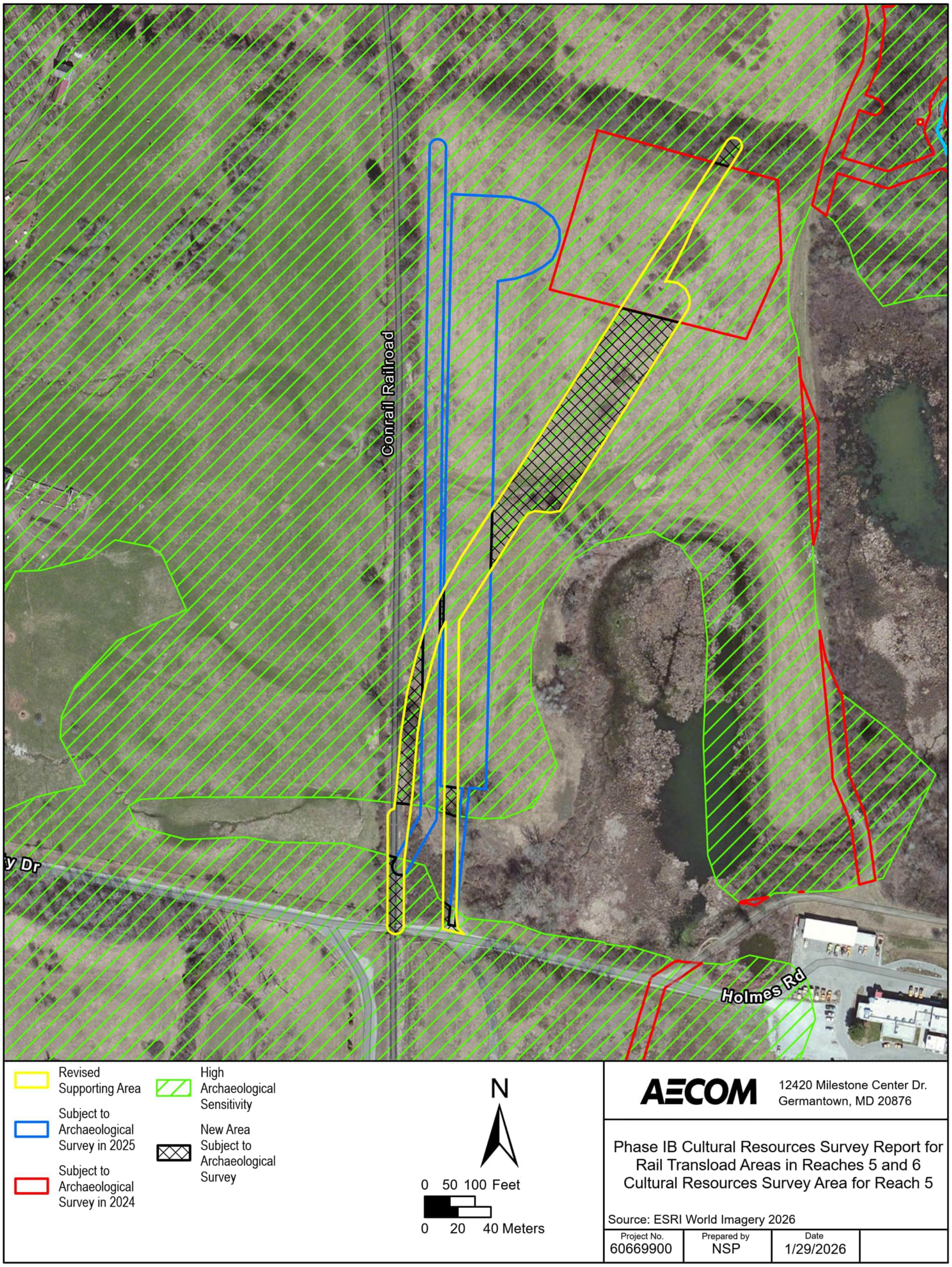


Figure 6.1: Proposed 2026 survey coverage map for Utility Drive Rail Transload Area.

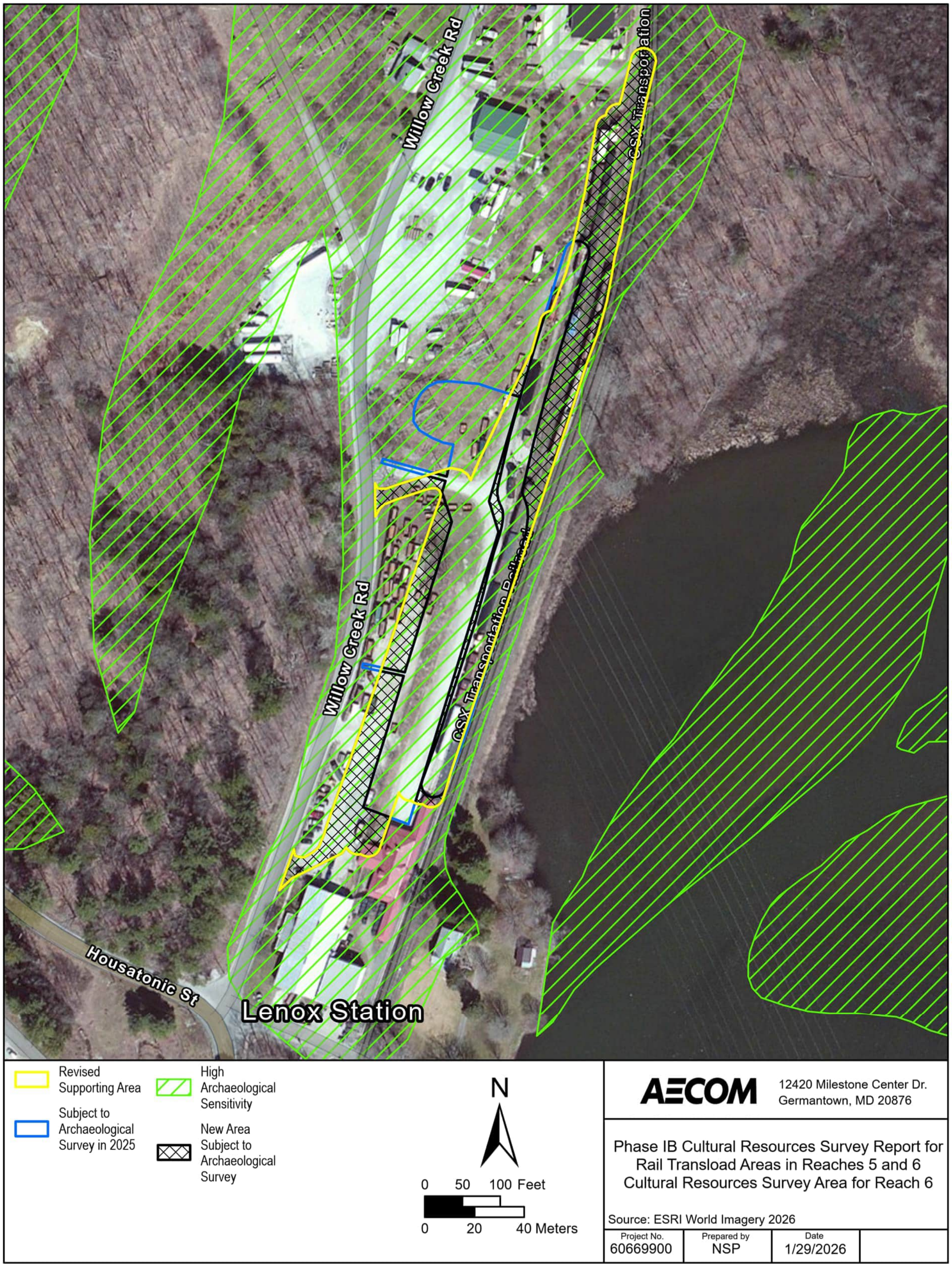


Figure 6.2: Proposed 2026 survey coverage map for Woods Pond Spur Transload Area.

the backfill will be compacted, the sod replaced (if present), and the area revegetated (if it was previously vegetated).

If artifacts or cultural materials are encountered, short-interval testing will be conducted to assess the horizontal extent, density, and integrity of cultural deposits. This will consist of excavating additional STPs at five-meter (16.4-foot) intervals in a cruciform pattern extending outward from the positive STP location until two consecutive negative STPs are encountered in each direction, or until the limits of the APE are reached. A distinction will be made between post-contact field scatter and artifacts that may indicate the presence of a definitive post-contact archaeological site. For the purposes of this additional Phase IB CRS, a field scatter is defined as a low-density distribution of post-contact artifacts, either isolated or occurring in small, dispersed concentrations that lack integrity, spatial coherence, or contextual association. Isolated post-contact artifacts or field scatters will not be designated as archaeological sites and will not be assigned site numbers.

All STPs will be documented using field site forms to record stratigraphic profiles, including a description of the soil type, and any artifacts recovered. Photographic documentation will be conducted in accordance with the Massachusetts State Archaeologist’s memorandum on improving technical photography and cartography (Simon 2014), described above. This will include the use of a north arrow, metric scale, and sign board in all plan-view and profile photographs. Photographs will be taken in consistent lighting conditions where possible, with distracting elements removed from the surrounding area. General overview photographs of the project area will also be taken to document environmental and field conditions at the time of survey.

6.2 Historic Architectural Resources

A review of any historical architectural resources in the historic architectural APEs will be undertaken based on the revised APEs shown on Figure 6.1 and Figure 6.2, but a new historic architectural survey will not be conducted. Any historic structures that could be negatively affected by the rail transloading and associated activities in the expanded areas area will be identified.

6.3 Schedule and Reporting

These additional CRS activities will be conducted in the spring or summer of 2026, subject to EPA approval of this work plan. The results will be presented in an Addendum to this Phase IB CRS Report on the Rail Transload Areas, to be submitted with the Final Design Plan for the Rail Transload Areas.

7 References

AECOM, 2023. *Revised Supplemental Phase IA Cultural Resource Assessment Report for the Housatonic Rest of River*. Prepared for General Electric Company, Pittsfield, Massachusetts. March 2023.

AECOM, 2024. *Phase IB Cultural Resources Survey Work Plan for Reach 6.* Prepared for General Electric Company, Pittsfield, MA. November 2024.

AECOM 2025. *Revised Phase IB Cultural Resources Survey Report for Reach 5A.* Prepared for General Electric Company, Pittsfield, MA. June 2025.

AECOM 2026. *Phase IB Cultural Resources Survey Report for Reach 6.* Prepared for General Electric Company, Pittsfield, MA. January 2026.

Arcadis. 2024. *Revised On-Site and Off-Site Transportation and Disposal Plan*. Prepared for General Electric Company, Pittsfield, Massachusetts. October 2024.

Arcadis and AECOM. 2025. *Pre-Design Investigation Work Plan for Rail Transload Areas in Reaches 5 and 6.* Prepared for General Electric Company, Pittsfield, Massachusetts. May 2025.

Simon, Brona, 2014. *Improving Technical Photography and Cartography.* Memorandum from the Massachusetts State Archaeologist.

Appendices

Appendix A: Shovel Test Pit Logs

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
STG-011	**A1**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	4	30-39	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	39-50	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**A2**	I	1	0-11	Ap	10YR 4/3	Silt Loam	None	30% subrounded gravel	
		II	1	11-21	Bw	2.5Y 5/4	Loamy Sand	None	40% subrounded gravel	
		II	2	21-27	Bw	2.5Y 5/4	Loamy Sand	None	40% subrounded gravel	
		III	1	27-37	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
		III	2	37-40	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**A3**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	23-33	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	2	33-43	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	3	43-53	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	4	53-58	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		III	2	58-68	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**A4**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-22	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	22-32	Bw	2.5Y 5/4	Sandy Loam	None	50% subangular gravel	
		II	2	32-42	Bw	2.5Y 5/4	Sandy Loam	None	50% subangular gravel	
		III	1	42-52	C	2.5Y 4/3	Coarse Sand	None	60% subangular gravel	
STG-011	**A5**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-28	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	28-39	Bw	2.5Y 5/4	Sandy Loam	None	50% subangular gravel	
		III	1	39-49	C	2.5Y 4/3	Coarse Sand	None	60% subangular gravel	
STG-011	**A6**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	1 whiteware sherd	30% subangular gravel	
		II	1	27-38	Bw	10YR 4/6	Loamy Sand	None	40% subrounded gravel	
		III	1	38-48	C	2.5Y 5/4	Coarse Sand	None	50% subrounded gravel	
		III	2	48-50	C	2.5Y 5/4	Coarse Sand	None	50% subrounded gravel	
STG-011	**A7**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	27-37	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	2	37-47	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	3	47-54	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		III	1	54-64	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**A8**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-28	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	28-33	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		III	1	33-43	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**A9**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		II	1	30-40	Bw	2.5Y 5/4	Sandy Loam	None	30% subrounded gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	40% subrounded gravel	
STG-011	**A10**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	4	30-34	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	34-44	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
		II	1	44-50	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**A11**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-19	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	19-30	Bw	2.5Y 5/6	Loamy Sand	None	40% subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		III	1	30-40	C	2.5Y 4/3	Coarse Sand	None	60% subrounded gravel	
STG-011	**A12**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	4	30-35	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	35-45	Bw	2.5Y 5/4	Sandy Loam	None	40% subrounded gravel	
		III	1	45-55	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**A13**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	26-35	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		III	1	35-45	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**A14**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	30-40	C	2.5Y 4/3	Coarse Sand	None	60% subangular gravel	
STG-011	**A15**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	26-36	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	2	36-46	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	3	46-56	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	4	56-60	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		III	1	60-70	C	2.5Y 4/3	Coarse Sand	None	40% subangular gravel	
STG-011	**A16**	No Test: Slope								
STG-011	**A17**	No Test: Slope								
STG-011	**A18**	No Test: Slope								
STG-011	**A19**	No Test: Slope								
STG-011	**A20**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		II	1	30-40	Bw1	10YR 3/6	Sandy Loam	None	20% subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	2	40-49	Bw1	10YR 3/6	Sandy Loam	None	20% subangular gravel	
		III	1	49-59	Bw2	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		III	2	59-69	Bw2	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		III	3	69-75	Bw2	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		IV	1	75-85	C	2.5Y 4/3	Coarse Sand	None	35% subangular gravel	
STG-011	**A21**	I	1	0-10	A1	10YR 3/1	Sandy Loam	None	20% subangular gravel	
		I	2	20-20	A1	10YR 3/1	Sandy Loam	None	20% subangular gravel	
		I	3	20-30	A1	10YR 3/1	Sandy Loam	None	20% subangular gravel	
		I	4	30-40	A1	10YR 3/1	Sandy Loam	None	20% subangular gravel	
		II	1	40-50	A2	10YR 3/3	Sandy Loam	None	20% subangular gravel	
		II	2	50-60	A2	10YR 3/3	Sandy Loam	None	20% subangular gravel	
		II	3	60-65	A2	10YR 3/3	Sandy Loam	None	20% subangular gravel	
		III	1	65-75	A3	10YR 2/2 m/w 10YR 4/3	Sandy Loam	None	20% subangular gravel	
		III	2	75-85	A3	10YR 2/2 m/w 10YR 4/3	Sandy Loam	None	20% subangular gravel	
		III	3	85-95	A3	10YR 2/2 m/w 10YR 4/3	Sandy Loam	None	20% subangular gravel	
		III	4	95-102	A3	10YR 2/2 m/w 10YR 4/3	Sandy Loam	None	20% subangular gravel	
STG-011	**A22**	No Test: Slope								
STG-011	**A23**	No Test: Slope								
STG-011	**A24**	No Test: Slope								
STG-011	**A25**	No Test: Slope								
STG-011	**A26**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	3	20-24	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		II	1	24-34	C	2.5Y 4/3	Fine Sand	None	10% Subangular gravel	
STG-011	**A27**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	3	20-29	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		II	1	29-36	Bw	10YR 5/6	Loamy Sand	None	20% subangular gravel	
		III	1	36-46	C	2.5Y 5/6	Fine Sand	None	10% Subangular gravel	
STG-011	**A28**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		II	1	30-40	Bw	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		II	2	40-50	Bw	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		II	3	50-65	Bw	10YR 5/6	Sandy Loam	None	20% subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		III	1	65-75	C	2.5Y 5/6	Fine Sand	None	5% subrounded gravel	
STG-011	**A30**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		II	1	27-37	Bw	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		II	2	37-44	Bw	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		III	1	44-54	C	2.5Y 5/6	Fine Sand	None	5% subrounded gravel	
		III	2	54-63	C	2.5Y 5/6	Fine Sand	None	5% subrounded gravel	
STG-011	**A31**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		II	1	25-35	C	2.5Y 5/6	Fine Sand	None	5% subrounded gravel	
STG-011	**A32**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		I	3	20-29	Ap	10YR 4/3	Sandy Loam	None	20% subangular gravel	
		II	1	29-40	Bw	10YR 5/6	Sandy Loam	None	20% subangular gravel	
		III	1	40-50	C	2.5Y 5/4	Fine Sand	None	5% subrounded gravel	
STG-011	**A33**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	1	30-41	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		II	1	41-48	Bw	10YR 5/6	Sandy Loam	None	5% subangular gravel	
		III	1	48-58	C	2.5Y 5/4	Fine Sand	None	5% subrounded gravel	
STG-011	**A34**	I	1	0-10	A1	10YR 2/1 m/w 2.5Y 7/1	Sandy Loam	None	20% rounded gravel	
		I	2	10-20	A1	10YR 2/1 m/w 2.5Y 7/1	Sandy Loam	None	20% rounded gravel	
		I	3	20-30	A1	10YR 2/1 m/w 2.5Y 7/1	Sandy Loam	None	20% rounded gravel	
		I	4	30-32	A1	10YR 2/1 m/w 2.5Y 7/1	Sandy Loam	None	20% rounded gravel	
		II	1	32-42	A2	2.5Y 5/1	Loamy Sand	None	25% rounded gravel	
		II	2	42-52	A2	2.5Y 5/1	Loamy Sand	None	25% rounded gravel	
		II	3	52-62	A2	2.5Y 5/1	Loamy Sand	None	25% rounded gravel	
		III	1	62-67	Bw	10YR 5/6	Sandy Loam	None	15% subrounded gravel	
		III	2	67-77	Bw	10YR 5/6	Sandy Loam	None	15% subrounded gravel	
		III	3	77-86	Bw	10YR 5/6	Sandy Loam	None	15% subrounded gravel	
		IV	1	86-96	C	2.5Y 5/4	Fine Sand	None	5% rounded gravel	
STG-011	**A35**	I	1	0-10	A1	10YR 2/1	Sandy Loam	None	<5% gravel	
		I	2	10-20	A1	10YR 2/1	Sandy Loam	None	<5% gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	3	20-27	A1	10YR 2/1	Sandy Loam	None	<5% gravel	
		II	1	27-37	A2	2.5Y 5/1	Sandy Loam	None	10% Subangular gravel	
		II	2	37-47	A2	2.5Y 5/1	Sandy Loam	None	10% Subangular gravel	
		II	3	47-52	A2	2.5Y 5/1	Sandy Loam	None	10% Subangular gravel	
		III	1	52-62	Bw	10YR 5/6	Sandy Loam	None	<5% gravel	
		III	2	62-70	Bw	10YR 5/6	Sandy Loam	None	<5% gravel	
		IV	1	70-80	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
STG-011	**A36**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	3	20-24	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		II	1	24-34	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
		II	2	34-40	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
STG-011	**A37**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	5% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	5% subangular gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	5% subangular gravel	
		II	1	23-33	Bw	10YR 5/6	Sandy Loam	None	<5% gravel	
		II	2	33-43	Bw	10YR 5/6	Sandy Loam	None	<5% gravel	
		II	3	43-47	Bw	10YR 5/6	Sandy Loam	None	<5% gravel	
		III	1	47-57	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
STG-011	**A38**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		I	3	20-22	Ap	10YR 4/3	Sandy Loam	None	10% subangular gravel	
		II	1	22-32	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
STG-011	**A39**	I	1	0-10	Ap	10YR 3/2	Sandy Loam	None	<5% subangular gravel	
		I	2	10-20	Ap	10YR 3/2	Sandy Loam	None	<5% subangular gravel	
		II	1	20-27	Bw	10YR 4/6	Sandy Loam	None	<5% subangular gravel	
		III	1	27-37	C	2.5Y 5/4	Fine Sand	None	<5% subangular gravel	
		III	2	37-42	C	2.5Y 5/4	Fine Sand	None	<5% subangular gravel	
STG-011	**A40**	I	1	0-10	Ap	10YR 3/1	Sandy Loam	None	5% subangular gravel	
		I	2	10-20	Ap	10YR 3/1	Sandy Loam	None	5% subangular gravel	
		I	3	20-30	Ap	10YR 3/1	Sandy Loam	None	5% subangular gravel	
		I	4	30-41	Ap	10YR 3/1	Sandy Loam	None	5% subangular gravel	
		II	1	41-51	C	2.5Y 5/6	Coarse Sand	None	15% subangular gravel	
STG-011	**A41**	I	1	0-10	Ap	10YR 3/1	Sandy Loam	None	5% subangular gravel	
		I	2	10-20	Ap	10YR 3/1	Sandy Loam	None	5% subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	3	20-30	Ap	10YR 3/1	Sandy Loam	None	5% subangular gravel	
		II	1	30-40	C	2.5Y 5/6	Coarse Sand	None	15% subangular gravel	
		II	2	40-51	C	2.5Y 5/6	Coarse Sand	None	15% subangular gravel	
STG-011	**A42**	I	1	0-10	Ap	10YR 3/2	Sandy Loam	None	10% Subangular gravel	
		I	2	10-20	Ap	10YR 3/2	Sandy Loam	None	10% Subangular gravel	
		I	3	20-30	Ap	10YR 3/2	Sandy Loam	None	10% Subangular gravel	
		II	1	030-40	C	2.5Y 3/2	Coarse Sand	None	60% subangular gravel	
		II	2	40-41	C	2.5Y 3/2	Coarse Sand	None	60% subangular gravel	
STG-011	**A43**	I	1	0-10	A	10YR 2/1	Silt Loam	None	<5% subangular gravel	
		I	2	10-20	A	10YR 2/1	Silt Loam	None	<5% subangular gravel	
		I	3	20-30	A	10YR 2/1	Silt Loam	None	<5% subangular gravel	
		I	4	30-35	A	10YR 2/1	Silt Loam	None	<5% subangular gravel	
		II	1	35-45	Cg	10YR 4/1	Silt Loam	None	FeO2 inclusions and <5% gravel	
		II	2	45-55	Cg	10YR 4/1	Silt Loam	None	FeO2 inclusions and <5% gravel	
		II	3	55-65	Cg	10YR 4/1	Silt Loam	None	FeO2 inclusions and <5% gravel	
		II	4	65-70	Cg	10YR 4/1	Silt Loam	None	FeO2 inclusions and <5% gravel	
STG-011	**A44**	No Test: Disturbed								
STG-011	**A45**	No Test: Disturbed								
STG-011	**A6+5E**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	27-37	Bw	2.5Y 5/4	Sandy Loam	None	50% subangular gravel	
		II	2	37-47	Bw	2.5Y 5/4	Sandy Loam	None	50% subangular gravel	
		II	3	47-50	Bw	2.5Y 5/4	Sandy Loam	None	50% subangular gravel	
		III	1	50-60	C	2.5Y 4/3	Coarse Sand	None	60% subangular gravel	
STG-011	**A6+5S**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-24	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	24-30	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	2	30-40	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**A6+5N**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	26-36	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		II	2	36-40	Bw	2.5Y 5/4	Sandy Loam	None	40% subangular gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**B5**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-31	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	31-41	Bw	2.5Y 5/4	Sandy Loam	None	30% subangular gravel	
		III	1	41-52	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**B6**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	4	30-32	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	32-42	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**B7**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-29	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	29-40	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**B8**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	30% subangular gravel	
		II	1	27-37	Bw	2.5Y 5/3	Sandy Loam	None	40% subrounded gravel	
		II	2	37-40	Bw	2.5Y 5/3	Sandy Loam	None	40% subrounded gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**B9**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		I	4	30-32	Ap	10YR 4/3	Sandy Loam	None	40% subangular gravel	
		II	1	32-42	C	2.5Y 4/3	Coarse Sand	None	50% subangular gravel	
STG-011	**B10**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		II	1	26-36	C	2.5Y 4/3	Coarse Sand	None	60% rounded gravel	
STG-011	**B11**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		II	1	27-37	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
		II	2	37-41	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**B12**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% subrounded gravel	
		II	1	20-30	Bw	10YR 5/6	Sandy Loam	None	30% subrounded gravel	
		II	2	30-35	Bw	10YR 5/6	Sandy Loam	None	30% subrounded gravel	
		III	1	35-45	C	2.5Y 4/3	Sandy Loam	None	40% subrounded gravel	
STG-011	**B13**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		I	3	20-22	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		II	1	22-32	C	2.5Y 4/3	Sandy Loam	None	40% subrounded gravel	
		II	2	32-42	C	2.5Y 4/3	Sandy Loam	None	40% subrounded gravel	
STG-011	**B14**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	30% subrounded gravel	
		II	1	23-33	C	2.5Y 4/3	Coarse Sand	None	40% subrounded gravel	
STG-011	**B15**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subrounded gravel	
		II	1	20-30	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
		II	2	30-40	C	2.5Y 4/3	Coarse Sand	None	50% subrounded gravel	
STG-011	**B16**	No Test: Slope								
STG-011	**B17**	No Test: Slope								
STG-011	**B18**	No Test: Slope								
STG-011	**B19**	No Test: Slope								
STG-011	**B20**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% subrounded gravel	
		II	1	30-40	Bw1	2.5Y 5/4 m/w 10YR 5/6	Sandy Loam	None	20% subrounded gravel	
		III	1	40-50	Bw2	10YR 5/4	Sandy Loam	None	20% subrounded gravel	
		III	2	50-61	Bw2	10YR 5/4	Sandy Loam	None	20% subrounded gravel	
		IV	1	61-71	C	2.5Y 6/4	Sandy Loam	None	40% subrounded gravel	
STG-011	**B21**	I	1	0-10	A1	10YR 4/4	Silt Loam	None	5% subrounded gravel	
		I	2	10-20	A1	10YR 4/4	Silt Loam	None	5% subrounded gravel	
		I	3	20-30	A1	10YR 4/4	Silt Loam	None	5% subrounded gravel	
		I	4	30-40	A1	10YR 4/4	Silt Loam	None	5% subrounded gravel	
		I	5	40-50	A1	10YR 4/4	Silt Loam	None	5% subrounded gravel	
		I	6	50-60	A1	10YR 4/4	Silt Loam	None	5% subrounded gravel	
		I	7	60-71	A1	10YR 4/4	Silt Loam	None	5% subrounded gravel	
		II	1	71-81	A2	10YR 3/1	Sandy Loam	None	5% subrounded gravel	
		II	2	81-91	A2	10YR 3/1	Sandy Loam	None	5% subrounded gravel	
		III	1	91-100	C	2.5Y 5/4	Fine Sand	None	5% subrounded gravel	
STG-011	**B22**	I	1	0-10	A	10YR 4/4	Silt Loam	None	10% subrounded gravel	
		I	2	10-20	A	10YR 4/4	Silt Loam	None	10% subrounded gravel	
		I	3	20-30	A	10YR 4/4	Silt Loam	None	10% subrounded gravel	
		I	4	30-40	A	10YR 4/4	Silt Loam	None	10% subrounded gravel	
		I	5	40-50	A	10YR 4/4	Silt Loam	None	10% subrounded gravel	
		I	6	50-58	A	10YR 4/4	Silt Loam	None	10% subrounded gravel	
		II	1	58-68	Bw	2.5Y 5/6	Sandy Loam	None	10% subrounded gravel	
		II	2	68-78	Bw	2.5Y 5/6	Sandy Loam	None	10% subrounded gravel	
		II	3	78-80	Bw	2.5Y 5/6	Sandy Loam	None	10% subrounded gravel	
		III	1	80-90	C	2.5Y 6/3	Fine Sand	None	30% subrounded gravel	
STG-011	**B23**	No Test: Slope								
STG-011	**B24**	No Test: Slope								
STG-011	**B25**	I	1	0-10	Ap	10YR 4/4	Sandy Loam	None	10% subrounded gravel	
		I	2	10-20	Ap	10YR 4/4	Sandy Loam	None	10% subrounded gravel	
		I	3	20-25	Ap	10YR 4/4	Sandy Loam	None	10% subrounded gravel	
		II	1	25-35	Bw	2.5Y 5/4	Sandy Loam	None	20% subrounded gravel	
		III	1	35-46	C	2.5Y 5/2	Sandy Loam	None	40% subrounded gravel	
STG-011	**B26**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	1	30-40	Bw	10YR 5/6	Sandy Loam	None	10% rounded gravel	
		II	2	40-42	Bw	10YR 5/6	Sandy Loam	None	10% rounded gravel	
		III	1	42-52	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
STG-011	**B27**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	30-41	Bw	10YR 5/6	Sandy Loam	None	10% small subrounded gravel	
		III	1	41-52	C	2.5Y 5/6	Fine Sand	None	5% small subrounded gravel	
STG-011	**B28**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-22	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	22-32	Bw	10YR 5/6	Sandy Loam	None	10% small subrounded gravel	
		III	1	32-42	C	2.5Y 5/6	Fine Sand	None	5% small subrounded gravel	
STG-011	**B29**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	23-28	Bw	10YR 5/6	Sandy Loam	None	10% small subrounded gravel	
		III	1	28-39	C	2.5Y 5/6	Fine Sand	None	5% small subrounded gravel	
STG-011	**B30**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravels	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravels	
		II	1	20-25	Bw	10YR 5/6	Sandy Loam	None	10% small subrounded gravels	
		III	1	25-35	C	2.5Y 5/6	Fine Sand	None	10% small subrounded gravels	
		III	2	35-40	C	2.5Y 5/7	Fine Sand	None	5% small subrounded gravels	
STG-011	**B31**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% rounded gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	20% rounded gravel	
		II	1	25-35	Bw	10YR 5/6	Sand	None	10% rounded gravel	
		II	2	35-45	Bw	10YR 5/6	Sand	None	10% rounded gravel	
		II	3	45-55	Bw	10YR 5/6	Sand	None	10% rounded gravel	
		III	1	55-65	C	2.5Y 5/6	Fine Sand	None	<5% rounded gravel	
STG-011	**B32**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	15% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	15% small subrounded gravel	
		I	3	20-31	Ap	10YR 4/3	Sandy Loam	None	15% small subrounded gravel	
		II	1	31-41	Bw	10YR 5/6	Sandy Loam	None	30% small subrounded gravel	
		II	2	41-50	Bw	10YR 5/6	Sandy Loam	None	30% small subrounded gravel	
		III	1	50-61	C	2.5Y 5/6	Fine Sand	None	10% small subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
STG-011	**B33**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		II	1	23-33	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
		II	2	33-43	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
		II	3	43-53	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
		II	4	53-59	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
STG-011	**B34**	I	1	0-10	A1	10YR 2/1	Sandy Loam	None	20% small round gravel	
		I	2	10-18	A1	10YR 2/1	Sandy Loam	None	20% small round gravel	
		II	1	18-28	A2	2.5Y 2.5/1	Loamy Sand	None	15% small round gravel	
		II	2	28-38	A2	2.5Y 2.5/1	Loamy Sand	None	15% small round gravel	
		II	3	38-48	A2	2.5Y 2.5/1	Loamy Sand	None	15% small round gravel	
		II	4	48-51	A2	2.5Y 2.5/1	Loamy Sand	None	15% small round gravel	
		III	1	51-61	Bw	10YR 5/6	Sandy Loam	None	10% small round gravel	
		III	2	61-71	Bw	10YR 5/6	Sandy Loam	None	10% small round gravel	
		III	3	71-73	Bw	10YR 5/6	Sandy Loam	None	10% small round gravel	
		IV	1	73-83	C	2.5Y 5/4	Fine Sand	None	<5% small round gravel	
STG-011	**B35**	I	1	0-10	A1	10YR 2/1	Sandy Loam	None	<5% small subangular gravel	
		I	2	10-20	A1	10YR 2/1	Sandy Loam	None	<5% small subangular gravel	
		I	3	20-30	A1	10YR 2/1	Sandy Loam	None	<5% small subangular gravel	
		I	4	30-40	A1	10YR 2/1	Sandy Loam	None	<5% small subangular gravel	
		II	1	40-50	A2	2.5Y 2.5/1	Sandy Loam	None	10% small subangular gravel; sand inclusion 2.5Y 6/1	
		II	2	50-60	A2	2.5Y 2.5/1	Sandy Loam	None	<5% small subangular gravel	
		II	3	60-70	A2	2.5Y 2.5/1	Sandy Loam	None	<5% small subangular gravel	
		II	4	70-72	A2	2.5Y 2.5/1	Sandy Loam	None	<5% small subangular gravel	
		III	1	72-82	Bw	10YR 5/6	Sandy Loam	None	<5% small subangular gravel	
		III	2	82-90	Bw	10YR 5/6	Sandy Loam	None	<5% small subangular gravel	
		IV	1	90-100	C	2.5Y 5/6	Sand	None	<5% small subangular gravel	
STG-011	**B36**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		I	4	30-39	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		II	1	39-50	Bw	10YR 5/6	Sandy Loam	None	5% small subangular gravel	
		III	1	50-60	C	2.5Y 5/4	Fine Sand	None	<5% small subangular gravel	
STG-011	**B37**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small round gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small round gravel	
		I	3	20-22	Ap	10YR 4/3	Sandy Loam	None	10% small round gravel	
		II	1	22-32	C	2.5Y 5/4	Fine Sand	None	<5% small round gravel	
		II	2	32-35	C	2.5Y 5/4	Fine Sand	None	<5% small round gravel	
STG-011	**B38**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small round gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small round gravel	
		I	3	20-22	Ap	10YR 4/3	Sandy Loam	None	10% small round gravel	
		II	1	22-32	C	2.5Y 5/4	Fine Sand	None	<5% small round gravel	
		II	2	32-35	C	2.5Y 5/4	Fine Sand	None	<5% small round gravel	
STG-011	**B39**	I	1	0-10	Ap	10YR 3/2	Sandy Loam	None	<5% small subangular gravel	
		I	2	10-20	Ap	10YR 3/2	Sandy Loam	None	<5% small subangular gravel	
		I	3	20-30	Ap	10YR 3/2	Sandy Loam	None	<5% small subangular gravel	
		I	4	30-36	Ap	10YR 3/2	Sandy Loam	None	<5% small subangular gravel	
		II	1	36-46	Bw	10YR 4/6	Sandy Loam	None	<5% small subangular gravel	
		II	2	46-53	Bw	10YR 4/6	Sandy Loam	None	<5% small subangular gravel	
		III	1	53-63	C	2.5Y 4/4	Fine Sand	None	<5% small subangular gravel	
STG-011	**B40**	I	1	0-10	A	10YR 3/1	Sandy Loam	None	5% small subangular gravel	
		I	2	10-20	A	10YR 3/1	Sandy Loam	None	5% small subangular gravel	
		I	3	20-30	A	10YR 3/1	Sandy Loam	None	5% small subangular gravel	
		I	4	30-40	A	10YR 3/1	Sandy Loam	None	5% small subangular gravel	
		I	5	40-47	A	10YR 3/1	Sandy Loam	None	5% small subangular gravel	
		II	1	47-57	Bw	10YR 5/6	Sandy Loam	None	<5% small subangular gravel	
		II	2	57-63	Bw	10YR 5/6	Sandy Loam	None	<5% small subangular gravel	
		III	1	63-73	C	2.5Y 5/4	Fine Sand	None	<5% small subangular gravel	
STG-011	**C5**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	4	30-35	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	35-42	Bw	2.5Y 5/4	Sandy Loam	None	40% small subangular gravel	
		III	1	42-52	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
STG-011	**C6**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	4	30-36	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	1	36-46	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
		II	2	46-50	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
STG-011	**C7**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		I	4	30-32	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		II	1	32-42	C	2.5Y 4/3	Coarse Sand	None	70% rounded gravel	
		II	2	42-50	C	2.5Y 4/3	Coarse Sand	None	70% rounded gravel	
STG-011	**C8**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-29	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	29-34	Bw	2.5Y 5/4	Sandy Loam	None	40% small subangular gravel	
		III	1	34-44	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
STG-011	**C9**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% small subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	40% small subangular gravel	
		II	1	26-36	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
STG-011	**C10**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	30-40	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
		II	2	40-45	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
STG-011	**C11**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	30-40	Bw	10YR 3/6	Loamy Sand	None	40% small subrounded gravel	
		II	2	40-45	Bw	10YR 3/6	Loamy Sand	None	40% small subrounded gravel	
		III	1	45-55	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**C12**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	26-36	C	2.5Y 4/3	Coarse Sand	None	40% small subangular gravel	
STG-011	**C13**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-31	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	31-41	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**C14**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	30-40	C	2.5Y 4/3	Loamy Sand	None	50% small subrounded gravel	
STG-011	**C15**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	25-35	Bw	2.5Y 5/6	Loamy Sand	None	40% small subrounded gravel	
		II	2	35-41	Bw	2.5Y 5/6	Loamy Sand	None	40% small subrounded gravel	
		III	1	41-51	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**C16**	No test: Slope								
STG-011	**C17**	No test: Slope								
STG-011	**C18**	No test: Slope								
STG-011	**C19**	No test: Slope								
STG-011	**C20**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		II	1	26-36	Bw	2.5Y 5/4	Sandy Loam	None	30% small subangular gravel	
		III	1	36-46	C	2.5Y 4/4	Coarse Sand	None	40% small subangular gravel	
		III	2	46-50	C	2.5Y 4/4	Coarse Sand	None	40% small subangular gravel	
STG-011	**C21**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	4	30-40	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	5	40-50	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	6	50-60	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	7	60-65	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		II	1	65-75	Bw	2.5Y 5/4	Sandy Loam	None	30% small subangular gravel	
		II	2	75-78	Bw	2.5Y 5/4	Sandy Loam	None	30% small subangular gravel	
		III	1	78-88	C	2.5Y 6/4 m/w 2.5Y 5/3	Coarse Sand	None	20% small subangular gravel	
		III	2	88-98	C	2.5Y 6/4 m/w 2.5Y 5/3	Coarse Sand	None	20% small subangular gravel	
		III	3	98-100	C	2.5Y 6/4 m/w 2.5Y 5/3	Coarse Sand	None	20% small subangular gravel	
STG-011	**C22**	I	1	0-10	A1	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		I	2	10-18	A1	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		II	1	18-28	A2	10YR 3/4	Sandy Loam	None	20% small subangular gravel	
		II	2	28-38	A2	10YR 3/4	Sandy Loam	None	20% small subangular gravel	
		II	3	38-48	A2	10YR 3/4	Sandy Loam	None	20% small subangular gravel	
		III	1	48=57	A3	10YR 4/4	Sandy Loam	None	20% small subangular gravel	
		III	2	57-67	A3	10YR 4/4	Sandy Loam	None	20% small subangular gravel	
		III	3	67-77	A3	10YR 4/4	Sandy Loam	None	20% small subangular gravel	
		III	4	77-87	A3	10YR 4/4	Sandy Loam	None	20% small subangular gravel	
		III	5	87-90	A3	10YR 4/4	Sandy Loam	None	20% small subangular gravel	
		IV	1	90-100	A4	10YR 2/1	Sandy Loam	None	20% small subangular gravel	
STG-011	**C23**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	4	30-32	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		II	1	32-42	Bw	2.5Y 5/4	Sandy Loam	None	20% small subangular gravel	
		II	2	42-52	Bw	2.5Y 5/4	Sandy Loam	None	20% small subangular gravel	
		II	3	52-62	Bw	2.5Y 5/4	Sandy Loam	None	20% small subangular gravel	
		II	4	62-72	Bw	2.5Y 5/4	Sandy Loam	None	20% small subangular gravel	
		II	5	72-76	Bw	2.5Y 5/4	Sandy Loam	None	20% small subangular gravel	
		III	1	76-86	C	2.5Y 4/4	Fine Sand	None	10% small subangular gravel	
		III	2	86-96	C	2.5Y 4/4	Fine Sand	None	10% small subangular gravel	
		III	3	96-100	C	2.5Y 4/4	Fine Sand	None	10% small subangular gravel	
STG-011	**C24**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		II	1	26-36	Bw	2.5Y 5/4	Sandy Loam	None	20% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	2	36-42	Bw	2.5Y 5/4	Sandy Loam	None	20% small subangular gravel	
		III	2	42-52	C	2.5Y 4/4	Fine Sand	None	10% small subangular gravel	
STG-011	**C25**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small round gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small round gravel	
		I	3	20-28	Ap	10YR 4/3	Sandy Loam	None	20% small round gravel	
		II	1	28-38	Bw	2.5Y 5/4	Sandy Loam	None	20% small round gravel	
		II	2	38-48	Bw	2.5Y 5/4	Sandy Loam	None	20% small round gravel	
		III	1	48-58	C	2.5Y 4/4	Fine Sand	None	10% small round gravel	
		III	2	58-64	C	2.5Y 4/4	Fine Sand	None	10% small round gravel	
STG-011	**C26**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	27-37	C	2.5Y 5/4	Fine Sand	None	5% small subrounded gravel	
		II	2	37-47	C	2.5Y 5/4	Fine Sand	None	5% small subrounded gravel	
STG-011	**C27**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	23-33	C	2.5Y 5/4	Fine Sand	None	5% small subrounded gravel	
STG-011	**C28**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	<5% gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	<5% gravel	
		I	3	20-24	Ap	10YR 4/3	Sandy Loam	None	<5% gravel	
		II	1	24-32	Ap 2	10YR 5/1	Sand	None	Root burn at top of strat III 15inches thick, 2.5Y 6/1 m/w 10YR 7/1 Fine Sand; Charcoal inclusions no ash; <5% gravels	
		III	1	32-42	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
		III	2	42-52	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
STG-011	**C29**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	27-37	C	2.5Y 5/4	Fine Sand	None	5% small subrounded gravel	
STG-011	**C30**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-29	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	29-32	Bw	10YR 5/6	Sandy Loam	None	10% small subrounded gravel	
		III	1	32-43	C	2.5Y 5/6	Fine Sand	None	5% small subrounded gravel	
STG-011	**C31**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	4	30-35	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	35-45	Bw	10YR 5/6	Loamy Sand	None	25% small subrounded gravel	
		II	2	45-55	Bw	10YR 5/6	Loamy Sand	None	25% small subrounded gravel	
		II	3	55-64	Bw	10YR 5/6	Loamy Sand	None	25% small subrounded gravel	
		III	1	64-74	C	2.5Y 5/6	Fine Sand	None	10% small subrounded gravel	
STG-011	**C32**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		II	1	30-40	C	2.5Y 5/4 m/w 2.5Y 5/1	Fine Sand	None	Scoured pockets of Coarse Sand (40%); 5% small subangular gravel	
		II	2	40-45	C	2.5Y 5/4 m/w 2.5Y 5/1	Fine Sand	None	Scoured pockets of Coarse Sand (40%); 5% small subangular gravel	
STG-011	**C33**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		I	3	20-31	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		II	1	31-41	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		II	2	41-46	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		III	1	46-56	C	2.5Y 5/4	Fine Sand	None	5% small subangular gravel	
STG-011	**C34**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		I	4	30-40	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		I	5	40-46	Ap	10YR 4/3	Sandy Loam	None	15% small subangular gravel	
		II	1	46-56	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		II	2	56-66	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		III	1	66-70	C	2.5Y 5/4	Fine Sand	None	10% small subangular gravel	
STG-011	**C35**	I	1	0-10	A1	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		I	2	10-20	A1	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		I	3	20-30	A1	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		I	4	30-40	A1	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		I	5	40-45	A1	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		II	1	45-55	A2	2.5Y 2.5/1	Loamy Sand	None	15% small subangular gravel	
		II	2	55-65	A2	2.5Y 2.5/2	Loamy Sand	None	15% small subangular gravel	
		II	3	65-75	A2	2.5Y 2.5/3	Loamy Sand	None	15% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	4	75-82	A2	2.5Y 2.5/4	Loamy Sand	None	15% small subangular gravel	
		III	1	82-93	C	2.5Y 5/4	Fine Sand	None	5% small subangular gravel	
STG-011	**C36**	I	1	0-10	Ap	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		I	2	10-20	Ap	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		I	3	20-25	Ap	10YR 2/2	Sandy Loam	None	10% small subangular gravel	
		II	1	25-35	Bw	2.5Y 2.5/1	Sandy Loam	None	20% small subangular gravel	
		II	2	35-45	Bw	2.5Y 2.5/1	Sandy Loam	None	20% small subangular gravel	
		II	3	45-55	Bw	2.5Y 2.5/1	Sandy Loam	None	20% small subangular gravel	
		III	1	55-65	C	2.5Y 5/4	Fine Sand	None	<5% small subangular gravel	
STG-011	**C37**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		I	2	10-21	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		II	1	21-31	C	2.5Y 5/4	Sand	None	5% small subangular gravel	
		II	2	31-40	C	2.5Y 5/4	Sand	None	5% small subangular gravel	
STG-011	**C38**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		I	2	10-14	Ap	10YR 4/3	Sandy Loam	None	5% small subangular gravel	
		II	1	14-24	Bw	10YR 5/6	Sandy Loam	None	5% small subangular gravel	
		II	2	24-29	Bw	10YR 5/6	Sandy Loam	None	5% small subangular gravel	
		III	1	29-40	C	2.5Y 5/4	Fine Sand	None	<5% small subangular gravel	
STG-011	**C39**	I	1	0-10	Ap	10YR 3/3	Sandy Loam	None	<5% small subangular gravel	
		I	2	10-20	Ap	10YR 3/3	Sandy Loam	None	<5% small subangular gravel	
		I	3	20-30	Ap	10YR 3/3	Sandy Loam	None	<5% small subangular gravel	
		I	4	30-34	Ap	10YR 3/3	Sandy Loam	None	<5% small subangular gravel	
		II	1	34-40	Btg1	10YR 3/2	Sandy Loam	None	<5% small subangular gravel	
		III	1	40-50	Btg2	10YR 4/6	Sandy Loam	None	5% small subangular gravel	
STG-011	**C40**	I	1	0-10	A	10YR 2/1	Silt Loam	None	<5% small subangular gravel	
		I	2	10-20	A	10YR 2/1	Silt Loam	None	<5% small subangular gravel	
		I	3	20-30	A	10YR 2/1	Silt Loam	None	<5% small subangular gravel	
		II	1	30-40	Bw	2.5Y 5/6	Sandy Loam	None	10% small subangular gravel	
		II	2	40-51	Bw	2.5Y 5/6	Sandy Loam	None	10% small subangular gravel	
		III	1	51-62	C	2.5Y 5/6 m/w 2.5Y 4/3	Sand	None	10% small subangular gravel	
STG-011	**C41**	I	1	0-10	A	10YR 3/2	Sandy Loam	None	5% small subangular gravel	
		I	2	10-20	A	10YR 3/2	Sandy Loam	None	5% small subangular gravel	
		I	3	20-31	A	10YR 3/2	Sandy Loam	None	5% small subangular gravel	
		II	1	31-41	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		III	1	41-52	C	2.5Y 5/4	Fine Sand	None	5% small subangular gravel	
STG-011	**C42**	I	1	0-10	A	10YR 3/2	Sandy Loam	None	20% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	A	10YR 3/2	Sandy Loam	None	Coarse sand inclusion (2.5Y 4/2) w/ 30% small gravel; 20% small subangular gravel	
		II	1	20-30	C	2.5Y 4/4 m/w 2.5Y 6/1	Sandy Loam	None	<5% small subangular gravel	
		II	2	30-35	C	2.5Y 4/4 m/w 2.5Y 6/1	Sandy Loam	None	<5% small subangular gravel	
STG-011	**C43**	I	1	0-10	A1	10YR 3/1	Silt Loam	None	10% rounded gravel	
		I	2	10-23	A1	10YR 3/1	Silt Loam	None	10% rounded gravel	
		II	1	23-30	A2	2.5Y 4/1	Silt Loam	None	10% rounded gravel	
		II	2	30-40	A2	2.5Y 4/1	Silt Loam	None	10% rounded gravel	
		II	3	40-52	A2	2.5Y 4/1	Silt Loam	None	10% rounded gravel	
		III	1	52-62	C	10YR 4/1	Silt Loam	None	10% rounded gravel	
STG-011	**C44**	I	1	0-10	A1	10YR 3/2	Sandy Loam	None	20% small round gravels	
		I	2	10-20	A1	10YR 3/2	Sandy Loam	None	20% small round gravels	
		I	3	20-22	A1	10YR 3/2	Sandy Loam	None	20% small round gravels	
		II	1	22-32	A2	10YR 3/2 m/w 2.5Y 4/3	Loamy Sand	None	30% small round gravels; some scouring	
		II	2	32-42	A2	10YR 3/2 m/w 2.5Y 4/3	Loamy Sand	None	30% small round gravels; some scouring	
		II	3	42-52	A2	10YR 3/2 m/w 2.5Y 4/3	Loamy Sand	None	30% small round gravels; some scouring	
		II	4	52-56	A2	10YR 3/2 m/w 2.5Y 4/3	Loamy Sand	None	30% small round gravels; some scouring	
		III	1	56-66	Cg	2.5Y 4/3 m/w 2.5Y 5/1	Fine Sand	None	C is heavily scoured w/ 2.5Y 5/1; <5% small round gravel	
STG-011	**C45**	I	1	0-9	A	10YR 3/2	Sandy Loam	None	10% small subangular gravel	
		II	1	9-19	Fill	10YR 4/1	Sandy Loam	None	35% small subangular gravel	
STG-011	**C46**	I	1	0-10	A	10YR 3/2	Sandy Loam	None	20% small subangular gravel	
		I	2	10-20	A	10YR 3/2 m/w 2.5Y 6/1	Sandy Loam	None	20% small subangular gravel; coarse sand inclusions (2.5Y 6/1)	
		II	1	20-22	C	2.5Y 5/6	Coarse Sand	None	40% small subangular gravels	
		II	2	22-32	C	2.5Y 5/6	Coarse Sand	None	40% small subangular gravels	
STG-011	**C47**	I	1	0-10	A	10YR 3/2	Sandy Loam	None	10% small subangular gravel	
		I	2	10-19	A	10YR 3/2	Sandy Loam	None	10% small subangular gravel	
		II	1	19-30	C	2.5Y 4/3	Coarse Sand	None	20% small subangular gravel	
STG-011	**D5**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% gravel	
		I	2	10-20	Ap	10YR 4/4	Sandy Loam	None	40% gravel	
		I	3	20-30	Ap	10YR 4/5	Sandy Loam	None	40% gravel	
		II	1	30-40	Bw	10YR 3/6	Loamy Sand	None	50% gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	2	40-45	Bw	10YR 3/7	Loamy Sand	None	50% gravel	
		III	1	45-55	C	2.5Y 4/3	Coarse Sand	None	60% gravel	
		III	2	55-63	C	2.5Y 4/3	Coarse Sand	None	60% gravel	
STG-011	**D6**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% gravel	
		I	3	20-28	Ap	10YR 4/3	Sandy Loam	None	40% gravel	
		II	1	28-38	Bw	10YR 3/6	Loamy Sand	None	50% gravel	
		II	2	38-40	Bw	10YR 3/6	Loamy Sand	None	50% gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	60% gravel	
STG-011	**D7**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		II	1	25-35	Bw	2.5Y 5/3	Sand	None	60% rounded gravel	
		III	1	35-45	C	2.5Y 4/3	Coarse Sand	None	70% rounded gravel	
STG-011	**D8**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravels	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravels	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravels	
		II	1	25-35	Bw	2.5Y 5/3	Sand	None	40% rounded gravels	
		III	1	35-45	C	2.5Y 4/3	Coarse Sand	None	60% rounded gravels	
		III	2	45-50	C	2.5Y 4/3	Coarse Sand	None	60% rounded gravels	
STG-011	**D9**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		II	1	25-35	C	2.5Y 4/3	Coarse Sand	None	70% rounded gravel	
STG-011	**D10**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	26-36	Bw	2.5Y 5/4	Loamy Sand	None	50% small subangular gravel	
		II	2	36-43	Bw	2.5Y 5/4	Loamy Sand	None	50% small subangular gravel	
		III	1	43-53	C	2.5Y 4/3	Sand	None	70% small subangular gravel	
STG-011	**D11**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	30-40	C	2.5Y 4/3	Coarse Sand	None	40% small subangular gravel	
STG-011	**D12**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	30-40	Bw	2.5Y 5/4	Sandy Loam	None	40% small subangular gravel	
		II	2	40-50	Bw	2.5Y 5/4	Sandy Loam	None	40% small subangular gravel	
		III	1	50-60	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravel	
STG-011	**D13**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% small Subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% small Subangular gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	40% small Subangular gravel	
		I	4	30-40	Ap	10YR 4/3	Sandy Loam	None	40% small Subangular gravel	
		I	5	40-45	Ap	10YR 4/3	Sandy Loam	None	40% small Subangular gravel	
		II	1	45-55	Bw	2.5Y 5/4	Sandy Loam	None	50% small subangular gravel	
		II	2	55-60	Bw	2.5Y 5/4	Sandy Loam	None	50% small subangular gravel	
		III	1	60-70	C	2.5Y 4/3	Coarse Sand	None	60% small subangular gravel	
STG-011	**D14**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	30% small subangular gravel	
		II	1	26-36	Bw	2.5Y 5/4	Sandy Loam	None	40% small subangular gravel	
		II	2	36-46	Bw	2.5Y 5/4	Sandy Loam	None	40% small subangular gravel	
		II	3	46-50	Bw	2.5Y 5/4	Sandy Loam	None	40% small subangular gravel	
		III	1	50-60	C	2.5Y 4/3	Coarse Sand	None	50% small subangular gravels	
STG-011	**D15**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% small subangular gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% small subangular gravel	
		I	3	20-27	Ap	10YR 4/3	Sandy Loam	None	40% small subangular gravel	
		II	1	27-37	Bw	2.5Y 5/4	Sandy Loam	None	50% small subangular gravel	
		II	2	37-40	Bw	2.5Y 5/4	Sandy Loam	None	50% small subangular gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	60% small subangular gravel	
STG-011	**D16**	No test: Slope								
STG-011	**D17**	No test: Slope								

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
STG-011	**D18**	No test: Slope								
STG-011	**D19**	No test: Slope								
STG-011	**D20**	I	1	0-10	A	10YR 4/3	Sand	None	10% small subrounded gravel	
		I	2	10-20	A	10YR 4/3	Sand	None	10% small subrounded gravel	
		I	3	20-30	A	10YR 4/3	Sand	None	10% small subrounded gravel	
		II	1	30-40	C	2.5Y 6/2	Fine Sand	None	20% Small subrounded gravel	
		II	2	40-50	C	2.5Y 6/2	Fine Sand	None	20% Small subrounded gravel	
STG-011	**D21**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	3	20-31	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		II	1	31-41	Bw	2.5Y 5/4	Sandy Loam	None	30% small subrounded gravel	
		II	2	41-51	Bw	2.5Y 5/4	Sandy Loam	None	30% small subrounded gravel	
		II	3	51-56	Bw	2.5Y 5/4	Sandy Loam	None	30% small subrounded gravel	
		III	1	56-66	C	2.5Y 4/3	Coarse sand	None	50% small subrounded gravel	
STG-011	**D22**	I	1	0-10	A1	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		I	2	10-20	A1	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		I	3	20-30	A1	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		I	4	30-33	A1	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		II	1	33-43	A2	10YR 3/4	Sandy Loam	None	20% small subangular gravel	
		II	2	43-53	A2	10YR 3/4	Sandy Loam	None	20% small subangular gravel	
		II	3	53-63	A2	10YR 3/4	Sandy Loam	None	20% small subangular gravel	
		II	4	63-65	A2	10YR 3/4	Sandy Loam	None	20% small subangular gravel	
		III	1	65-75	A3	10YR 2/1	Sandy Loam	None	20% small subangular gravel	
		III	2	75-85	A3	10YR 2/1	Sandy Loam	None	20% small subangular gravel	
		IV	1	85-95	C	2.5Y 6/2	Fine Sand	None	10% small subangular gravel	
STG-011	**D23**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	4	30-32	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	32-40	Bw	2.5Y 5/4	Loamy Sand	None	40% small subrounded gravel	
		III	1	40-51	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**D24**	I	1	0-10	A	10YR 4/4	Sandy Loam	None	10% subrounded gravel	
		I	2	10-20	A	10YR 4/4	Sandy Loam	None	10% subrounded gravel	
		I	3	20-26	A	10YR 4/4	Sandy Loam	None	10% subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	1	26-36	B	2.5Y 5/4	Sandy Loam	None	20% subrounded gravel	
		II	2	36-46	B	2.5Y 5/4	Sandy Loam	None	20% subrounded gravel	
		II	3	46-50	B	2.5Y 5/4	Sandy Loam	None	20% subrounded gravel	
		III	1	50-60	C	2.5Y 6/2	Fine Sand	None	40% subrounded gravel	
STG-011	**D25**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	2	20-20	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		I	3	20-22	Ap	10YR 4/3	Sandy Loam	None	20% small subangular gravel	
		II	1	22-32	C	2.5Y 5/4	Fine Sand	None	10% small subanglar gravel	
		II	2	32-42	C	2.5Y 5/4	Fine Sand	None	10% small subanglar gravel	
STG-011	**D26**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	<5% gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	<5% gravel	
		I	3	20-21	Ap	10YR 4/3	Sandy Loam	None	<5% gravel	
		II	1	21-31	C	2.5Y 5/4	Fine Sand	None	<5% gravel	
STG-011	**D27**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	3	20-28	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		II	1	28-38	Bw	10YR 5/6	Sandy Loam	None	20% small subrounded gravel	
		III	1	38-48	C	2.5Y 5/6	Fine Sand	None	10% small subrounded gravel	
STG-011	**D28**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	4	30-40	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		I	5	40-43	Ap	10YR 4/3	Sandy Loam	None	10% small subrounded gravel	
		II	1	43-53	Bw	10YR 5/8	Sandy Loam	None	10% small subrounded gravel; burn inclusions with ash and soil staining (2.5Y 7/1) in first 3 cm of level	
		II	2	53-56	Bw	10YR 5/8	Sandy Loam	None	10% small subrounded gravel	
		III	1	56-66	C	2.5Y 5/6	Fine Sand	None	5% subrounded gravel	
		III	2	66-70	C	2.5Y 5/6	Fine Sand	None	5% subrounded gravel	
STG-011	**D29**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	3	20-31	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		II	1	31-41	Bw	10YR 5/6	Sandy Loam	None	20% small subrounded gravel	
		II	2	41-49	Bw	10YR 5/6	Sandy Loam	None	20% small subrounded gravel	
		III	1	49-60	C	2.5Y 5/6	Fine Sand	None	10% small subrounded gravel	
STG-011	**D30**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subangular gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		I	3	20-28	Ap	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		II	1	28-33	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		III	1	33-45	C	2.5Y 5/6	Fine Sand	None	5% small subangular gravel	
STG-011	**D31**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% small subangular gravel	
		I	2	10-20	Ap	10YR 4/4	Sandy Loam	None	10% small subangular gravel	
		I	3	20-31	Ap	10YR 4/5	Sandy Loam	None	10% small subangular gravel	
		II	1	31-40	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		II	2	40-50	Bw	10YR 5/6	Sandy Loam	None	10% small subangular gravel	
		III	1	50-60	C	2.5Y 5/6	Fine Sand	None	5% small subangular gravel	
STG-011	**D32**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		I	3	20-29	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		II	1	29-39	Bw	10YR 5/6	Sand	None	10% rounded gravel	
		III	1	39-49	C	2.5Y 5/4	Fine Sand	None	<5% rounded gravel	
		III	2	49-59	C	2.5Y 5/4	Fine Sand	None	<5% rounded gravel	
		III	3	59-65	C	2.5Y 5/4	Fine Sand	None	<5% rounded gravel	
STG-011	**D33**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	10% rounded gravel	
		II	1	30-40	C	2.5Y 5/4	Fine Sand	None	<5% rounded gravel	
STG-011	**D34**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	20% subrounded gravel	
		I	4	30-40	Ap	10YR 4/3	Sandy Loam	None	20% subrounded gravel	
		I	5	40-49	Ap	10YR 4/3	Sandy Loam	None	20% subrounded gravel	
		II	1	49-59	C	2.5Y 5/4	Fine Sand	None	<5% subrounded gravel	
		II	2	59-61	C	2.5Y 5/4	Fine Sand	None	<5% subrounded gravel	
STG-011	**D35**	I	1	0-10	A1	10YR 2/2	Sandy Loam	None	<5% round gravel	
		I	2	10-20	A1	10YR 2/2	Sandy Loam	None	<5% round gravel	
		I	3	20-30	A1	10YR 2/2	Sandy Loam	None	<5% round gravel	
		I	4	30-40	A1	10YR 2/2	Sandy Loam	None	<5% round gravel	
		I	5	40-50	A1	10YR 2/2	Sandy Loam	None	<5% round gravel	
		II	1	50-60	A2	2.5Y 2.5/1	Loamy Sand	None	10% round gravel	
		II	2	60-70	A2	2.5Y 2.5/1	Loamy Sand	None	10% round gravel	
		III	1	70-80	C	2.5Y 5/4 m/w 2.5Y 6/1	Loamy Sand	None	<5% round gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		III	2	80-82	C	2.5Y 5/4 m/w 2.5Y 6/1	Loamy Sand	None	Scoured C; Pockets fine sand (2.5Y 6/1); <5% round gravel	
STG-011	**D36**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	15% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	15% subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	15% subrounded gravel	
		I	4	30-32	Ap	10YR 4/3	Sandy Loam	None	15% subrounded gravel	
		II	1	32-40	Bw	10YR 5/6	Loamy Sand	None	15% subrounded gravel	
		III	1	40-50	C	2.5Y 5/4	Fine Sand	None	10% subrounded gravel	
STG-011	**D37**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		II	1	20-30	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
		II	2	30-36	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
STG-011	**D38**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	10% round gravel	
		II	1	23-30	Bw	10YR 5/6	Loamy Sand	None	10% round gravel	
		II	2	30-34	Bw	10YR 5/6	Loamy Sand	None	10% round gravel	
		III	1	34-40	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
		III	2	40-44	C	2.5Y 5/4	Fine Sand	None	<5% round gravel	
STG-011	**D39**	I	1	0-10	A	10YR 3/3	Sandy Loam	None	30% small round gravel	
		I	2	10-19	A	10YR 3/3	Sandy Loam	None	30% small round gravel	
		II	1	19-29	Btg	2.5Y 4/2 m/w 7.5YR 4/6 m/w 2.5Y 5/1	Sand	None	10% subangular gravel;Sand inclusion (2.5Y 5/1) in strat; Fe02 present	
		II	2	29-34	Btg	2.5Y 4/2 m/w 7.5YR 4/6 m/w 2.5Y 5/1	Sand	None	10% subangular gravel; Sand inclusion (2.5Y 5/1) in strat; Fe02 present	
STG-011	**D40**	I	1	0-10	Ap	10YR 3/3 m/w 2.5Y 6/1	Sandy Loam	None	20% small round cobbles	
		I	2	10-16	Ap	10YR 3/3 m/w 2.5Y 6/1	Sandy Loam	None	20% small round cobbles	
		II	1	16-26	C	2.5Y 6/1	Coarse Sand	None	60% medium-large round cobbles	
STG-011	**E5**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		II	1	20-28	Bw	2.5Y 5/4	Sand	None	50% rounded gravel	
		III	1	28-38	C	2.5Y 5/3	Coarse Sand	None	70% rounded gravel	
		III	2	38-44	C	2.5Y 5/3	Coarse Sand	None	70% rounded gravel	
STG-011	**E6**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		II	1	25-35	Bw	10YR 3/6	Loamy Sand	None	40% small subrounded gravel	
		II	2	35-40	Bw	10YR 3/6	Loamy Sand	None	40% small subrounded gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
		III	2	50-55	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**E7**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/4	Sandy Loam	None	40% small subrounded gravel	
		I	3	20-28	Ap	10YR 4/5	Sandy Loam	None	40% small subrounded gravel	
		II	1	28-38	Bw	2.5Y 5/4	Loamy Sand	None	50% small subrounded gravel	
		II	2	38-45	Bw	2.5Y 5/4	Loamy Sand	None	50% small subrounded gravel	
		III	1	45-55	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	
STG-011	**E8**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		I	3	20-28	Ap	10YR 4/3	Sandy Loam	None	40% rounded gravel	
		II	1	28-38	C	2.5Y 4/3	Coarse Sand	None	70% rounded gravel	
		II	2	38-45	C	2.5Y 4/3	Coarse Sand	None	70% rounded gravel	
STG-011	**E9**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% subrounded gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	40% subrounded gravel	
		II	1	23-33	Bw	2.5Y 5/6	Loamy Sand	None	50% subrounded gravel	
		II	2	33-43	Bw	2.5Y 5/6	Loamy Sand	None	50% subrounded gravel	
		II	3	43-53	Bw	2.5Y 5/6	Loamy Sand	None	50% subrounded gravel	
		III	1	53-63	C	2.5Y 4/3	Coarse Sand	None	70% subrounded gravel	
STG-011	**F5**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	50% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	50% small subrounded gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	50% small subrounded gravel	
		II	1	25-35	Bw	2.5Y 5/4	Loamy Sand	None	50% small subrounded gravel	
		II	2	35-45	Bw	2.5Y 5/4	Loamy Sand	None	50% small subrounded gravel	
		II	3	45-51	Bw	2.5Y 5/4	Loamy Sand	None	50% small subrounded gravel	
		III	1	51-61	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
STG-011	**F6**	I	1	0-10	Ap	10Yr 4/3	Sandy Loam	None	30% rounded gravel	
		I	2	10-20	Ap	10Yr 4/3	Sandy Loam	None	30% rounded gravel	
		I	3	20-25	Ap	10Yr 4/3	Sandy Loam	None	30% rounded gravel	
		II	1	25-35	Bw	2.5Y 5/4	Loamy Sand	None	50% rounded gravel	
		III	1	35-45	C	2.5Y 4/3	Coarse Sand	None	60% rounded gravel	
STG-011	**F7**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	40% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	40% small subrounded gravel	
		I	3	20-29	Ap	10YR 4/3	Sandy Loam	None	40% small subrounded gravel	
		II	1	29-39	Bw	10YR 3/6	Sand	None	50% small subrounded gravel	
		II	2	39-49	Bw	10YR 3/6	Sand	None	50% small subrounded gravel	
		III	1	49-59	C	2.5Y 4/3	Coarse Sand	None	70% small subrounded gravel	
STG-011	**F8**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	2 Glass	30% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	30-40	Bw	10YR 3/6	Loamy Sand	None	50% small subrounded gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	
		III	2	50-60	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	
		III	3	60-70	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	
STG-011	**F8 + 5mW**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	20% small subrounded gravel	
		II	1	20-30	Bw	2.5Y 5/4	Loamy Sand	None	30% small subrounded gravel	
		II	2	30-40	Bw	2.5Y 5/4	Loamy Sand	None	30% small subrounded gravel	
		III	1	40-50	C	2.5Y 4/3	Coarse Sand	None	40% small subrounded gravel	
STG-011	**F8 +5mE**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-23	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	23-33	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**F8 + 5mS**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-31	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
		II	1	31-41	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**F8 + 5MN**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	30-37	Bw	2.5Y 5/4	Sandy Loam	None	40% small subrounded gravel	
		III	1	37-47	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**F8 + 9MS**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	4	30-37	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	37-47	Bw	2.5Y 5/4	Loamy Sand	None	40% small subrounded gravel	
		II	2	47-51	Bw	2.5Y 5/4	Loamy Sand	None	40% small subrounded gravel	
		III	1	51-61	C	2.5Y 4/3	Coarse Sand	None	50% small subrounded gravel	
STG-011	**G5**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	50% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	50% small subrounded gravel	
		I	3	20-26	Ap	10YR 4/3	Sandy Loam	None	50% small subrounded gravel	
		II	1	26-31	Bw	2.5Y 5/4	Loamy Sand	None	70% small subrounded gravel	
		III	1	31-42	C	2.5Y 4/3	Coarse Sand	None	70% small subrounded gravel	
STG-011	**G6**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% rounded gravel	
		II	1	20-30	Bw	2.5Y 5/4	Sand	None	40% rounded gravel	
		III	1	30-40	C	2.5Y 4/3	Coarse Sand	None	50% rounded gravel	
		III	2	40-50	C	2.5Y 4/3	Coarse Sand	None	50% rounded gravel	
STG-011	**H6**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-25	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	25-35	Bw	10YR 3/6	Loamy Sand	None	50% small subrounded gravel	
		II	2	35-45	Bw	10YR 3/6	Loamy Sand	None	50% small subrounded gravel	
		II	3	45-55	Bw	10YR 3/6	Loamy Sand	None	50% small subrounded gravel	
		II	4	55-66	Bw	10YR 3/6	Loamy Sand	None	60% small subrounded gravel	
		III	1	66-76	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	

Survey Area	STP	Strat	Level	Depth (cm)	Hzn	Munsell	Texture	Artifacts	Comments	Photo
STG-011	**H7**	I	1	0-10	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	2	10-20	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	3	20-30	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		I	4	30-40	Ap	10YR 4/3	Sandy Loam	None	30% small subrounded gravel	
		II	1	40-50	Bw	10YR 3/6	Loamy Sand	None	50% small subrounded gravel	
		II	2	50-55	Bw	10YR 3/6	Loamy Sand	None	50% small subrounded gravel	
		III	1	55-65	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	
		III	2	65-70	C	2.5Y 4/3	Coarse Sand	None	60% small subrounded gravel	

Appendix B: Artifact Inventory

FS#	Survey Area	Site Name	Artifact Count	Group	Object	Color	Ware	Decoration	Manufacture Technique	Comments
150	STG-011	R5A	1	Household	Bottle	Green			Mouth Blown, General	Cylindrical bottle base. No other diagnostic attributes visible.
150	STG-011	R5A	1	Household	Container Glass	Green			Indeterminate	Curved body sherd.
151	STG-011	R5A	1	Household	Indeterminate		Whiteware	Indeterminate		No visible decoration.

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