CONNECTICUT SITING COUNCIL

FINDINGS OF FACT

~FOR~

DOCKET NO. 516 - The United Illuminating Company (UI) application for a Certificate of Environmental Compatibility and Public Need for the Fairfield to Congress Railroad Transmission Line 115-kV Rebuild Project that consists of the relocation and rebuild of its existing 115- kilovolt (kV) electric transmission lines from the railroad catenary structures to new steel monopole structures and related modifications along approximately 7.3 miles of the Connecticut Department of Transportation's Metro-North Railroad corridor between Structure B648S located east of Sasco Creek in Fairfield and UI's Congress Street Substation in Bridgeport, and the rebuild of two existing 115-kV transmission lines along 0.23 mile of existing UI right-of-way to facilitate interconnection of the rebuilt 115-kV electric transmission lines at UI's existing Ash Creek, Resco, Pequonnock and Congress Street Substations traversing the municipalities of Bridgeport and Fairfield, Connecticut.

February 15, 2024

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Findings of Fact

Introduction

1. Pursuant to the Public Utility Environmental Standards Act (PUESA), Connecticut General Statutes (C.G.S.) §16-50g *et seq*., on March 17, 2023, The United Illuminating Company (UI), applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the Fairfield to Congress Railroad Transmission Line 115-kilovolt (kV) Rebuild Project (Project) that traverses the municipalities of Bridgeport and Fairfield and consists of the construction, maintenance and operation of a rebuilt 115-kV overhead electric transmission line along approximately 7.3 miles of the existing Connecticut Department of Transportation's Metro-North Railroad (MNR) corridor and rebuilt 115-kV overhead electric transmission line along 0.23 mile of existing UI right-of-way (ROW) by relocating existing electric transmission lines from railroad catenary structures to new steel monopole structures and related modifications to facilitate the interconnection of the rebuilt 115-kV transmission lines with UI's existing Ash Creek, Resco, Pequonnock, and Congress Street substations. (UI 1, Vol. 1, pp. ES-1 to ES-5)

2. Under C.G.S. §16-50k, no person shall commence any modification of a facility, that may, as determined by the Council, have a substantial adverse environmental effect in the state without having first obtained a Certificate issued with respect to such facility by the Council. (C.G.S. § 16-50k (2023))

3. The Council's purpose under PUESA is to provide for the balancing of the need for adequate and reliable public utility services at the lowest reasonable cost to consumers with the need to protect the environment and ecology of the state and to minimize damage to scenic, historic, and recreational values. (C.G.S. §16-50g (2023))

4. The Council has exclusive jurisdiction over electric transmission line facility sites throughout the state. A facility site is defined as a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. (C.G.S. §16-50x (2023); RCSA §16-50j-2a(29) (2023))

5. Local zoning regulations do not apply to facilities under the exclusive jurisdiction of the Council. (C.G.S. §16-50x (2023))

6. Under C.G.S. §16-50p, the Council shall render a decision on an application for an electric transmission line facility not later than twelve months after the filing of an application. The twelve-month deadline for the Council's decision on this application under C.G.S. §16-50p is March 17, 2024. There is no provision for an extension of the deadline under the statute. (C.G.S. §16-50p (2023))

7. In its decision, the Council shall find and determine:

   a. A public need for the facility and the basis of need;
   b. The nature of the probable environmental impact of the facility alone and cumulatively with other existing facilities, including a specification of every significant adverse effect, including, but not limited to, (i) electromagnetic fields that, whether alone or cumulatively with other effects, impact on, and conflict with the policies of the state concerning the natural environment, (ii) ecological balance, (iii) public health and safety, (iv) scenic, historic and recreational values, (v) agriculture, (vi) forests and parks, (vii) air and water purity, and (viii) fish, aquaculture and wildlife;
   c. Why the adverse effects or conflicts referred to above are not sufficient reason to deny the application;
   d. What part, if any, of the facility shall be located overhead;
   e. The facility conforms to a long-range plan for expansion of the electric power grid of the electric systems serving the state and interconnected utility systems and will serve the interests of electric system economy and reliability;
   f. The overhead portions, if any, of the facility are cost effective and the most appropriate alternative based on a life-cycle cost analysis of the facility and underground alternatives to such facility, are consistent with the purposes of PUESA; and
   g. The location of the line will not pose an undue hazard to persons or property along the area traversed by the line.

   (C.G.S. §16-50p (2023))

8. The Project area contains statutory facilities that are defined under C.G.S §16-50p(a)(3)(D) to include residential areas, private or public schools, licensed child day care facilities, licensed youth camps or public playgrounds along the proposed route. (UI 1, Vol. 1, pp. 5-30 to 5-34; 6-22)

9. The Council shall consider, among other things, residential areas, private or public schools, licensed child care centers, licensed youth camps or public playgrounds adjacent to the proposed route of the overhead portions and the level of the voltage of the overhead portions and any existing overhead transmission lines on the proposed route. At a minimum, the existing ROW shall serve as a buffer zone to protect public health and safety at statutory facilities. (C.G.S. §16-50p (2023))

10. UI's service area consists of the following municipalities in Connecticut: Ansonia, Bridgeport, Derby, East Haven, Easton, Fairfield, Hamden, Milford, New Haven, North Branford, North Haven, Orange, Shelton, Stratford, Trumbull, West Haven, and Woodbridge. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #2)

11. The purpose of the Project is to address age-related physical asset condition limitations of the existing transmission lines located on existing railroad catenary support structures (catenaries) and rebuild the lines on new steel monopoles to meet the current National Electrical Safety Code (NESC) and UI standards to maintain the reliability of the bulk transmission grid. (UI 1, Vol. 1, pp. ES-1, ES-2 and 1-14)

12. Four parties participated in this proceeding: UI; BJ's Wholesale Club, Inc. (BWC); the Town of Fairfield (Town); and the City of Bridgeport (City). (Record; UI 1; BWC 1; Town 1; City 1; Council Continued Evidentiary Hearing Memorandum, dated November 29, 2023 (Party and Intervenor Chart))

13. Twenty-four intervenors and Connecticut Environmental Protection Act (CEPA) intervenors participated in this proceeding. CEPA is an intervention statute that limits participation to consideration of unreasonable pollution, impairment or destruction of the public trust in the air, water or other natural resources of the state. (Record; SCNET 1, 7-13; Grouped LLCs 1-9, 11-12, 15-17; FSL 1; SPC 1; Council Continued Evidentiary Hearing Memorandum, dated November 29, 2023 (Party and Intervenor Chart); C.G.S. §22a-14, *et seq*. (2023))

14. Under the Uniform Administrative Procedure Act (UAPA), an intervenor's participation in a proceeding may be limited to designated issues in which the intervenor has a particular interest and, at the discretion of the Presiding Officer, may be restricted, including the rights to inspect and copy records, to introduce evidence and cross-examine, so as to promote the orderly conduct of the proceedings. (C.G.S. §4-177a (2023); Record)

15. On August 29, October 17, and November 16, 2023, the Council grouped 22 of the 24 intervenors and CEPA intervenors with the same interests and common counsel pursuant to C.G.S. §16-50n(c). The two groups are the Sasco Creek Neighborhood Environmental Trust, Inc., et al Group (SCNET Group) and the Grouped LLC Intervenors (Grouped LLCs). Fairfield Station Lofts, LLC (FSL) and the Superior Plating Company (SPC) were not grouped with any other intervenor and CEPA intervenor. (Record; Council Continued Evidentiary Hearing Memoranda, dated August 30, October 19, November 17, and November 29, 2023 (Party and Intervenor Chart))

16. The grouping of the intervenors and CEPA intervenors resulted in 8 separate appearances during the proceedings for cross examination by the 7 other groups and the Council. The parties, intervenors and CEPA intervenors to this proceeding, as well as the intervenor and CEPA intervenor groupings, are identified in Figure 28. (Record; Council Continued Evidentiary Hearing Memorandum, dated November 29, 2023 (Party and Intervenor Chart))

17. On October 20, 2023, the Southport Congregational Church (SCC) entered the appearance of additional counsel. (Record)

18. On November 17, 2023, the Council granted the National Trust for Historic Preservation (NTHP) Intervenor and CEPA Intervenor status on the condition that appearing counsel on behalf of NTHP is licensed to practice law in the state of Connecticut, and if not, grouped NTHP with the Grouped LLCs with Attorney Russo as the sponsoring attorney for purposes of a *pro hac vices* appearance. (Record)

19. Counsel for NTHP is not licensed to practice law in the State of Connecticut. Attorney Russo represented NTHP, acting as the sponsoring attorney for purposes of a *pro hac vices* appearance in this proceeding. (Tr. 6, p. 18)

20. Pursuant to C.G.S. §16-50*l*(b), UI provided legal service and notice of the application. This included notice to municipalities traversed by the proposed Project; municipalities within 2,500 feet of the proposed Project; federal, state, local and regional agencies, elected officials, and abutters of the substations. (UI 1, Vol. 1, p. 8-4; UI 1, Vol. 1A, Appendices – Part II, Appendix F, Affidavit Regarding Notice Provided to Customers and Affidavit Regarding Publication of Legal Notice; UI 2)

21. The Town of Westport is within 2,500 feet of the proposed Project. (UI 1, Vol. 1, p. ES-11)

22. Pursuant to C.G.S. §16-50*l*(b), UI published notice of the application filing in the Connecticut Post on February 17 and February 28, 2023, Fairfield Citizen on February 24 and March 3, 2023, and Westport News on February 24 and March 3, 2023. UI included a project information insert in one of its monthly bills to customers within Fairfield and Bridgeport within 60 days before submission of the application to the Council. (UI 1, Vol. 1, p. 8-4; UI 1, Vol. 1A, Appendices – Part II, Appendix F, Affidavit Regarding Notice Provided to Customers and Affidavit Regarding Publication of Legal Notice; UI 2)

23. Pursuant to C.G.S. §16-50*l*(b), UI served a copy of the application for the proposed Project on federal, regional, state and local officials listed therein. (UI 1, Vol. 1A, Appendices – Part II, Appendix F, Affidavit of Service of Application)

24. In accordance with the Council's Application Guide for an Electric and Fuel Transmission Line Facility, UI provided notice to community groups including applicable economic development commissions, land trusts, environmental groups, river protection organizations, historic preservation groups, and water companies with watersheds within the Project area. (UI 1, Vol. 1A, Appendices – Part II, Appendix F, Affidavit Regarding Notice to Community Organizations and Water Companies)

Procedural Matters

25. Public Act 22-3, codified at C.G.S. §1-225a, took effect on April 30, 2022. It permits public agencies to hold remote meetings under the Freedom of Information Act (FOIA) and UAPA. FOIA defines "meeting" in relevant part as "any hearing or other proceeding of a public agency." (Council Administrative Notice Item No. 68; C.G.S. §1-200, *et seq*. (2023))

26. C.G.S. §1-225a allows public agencies to hold remote meetings provided that:
    a) The public has the ability to view or listen to each meeting or proceeding in real-time, by telephone, video, or other technology;
    b) Any such meeting or proceeding is recorded or transcribed and such recording or transcript shall be posted on the agency's website within seven (7) days of the meeting or proceeding;
    c) The required notice and agenda for each meeting or proceeding is posted on the agency's website and shall include information on how the meeting will be conducted and how the public can access it any materials relevant to matters on the agenda shall be submitted to the agency and posted on the agency's website for public inspection prior to, during and after the meeting; and
    d) All speakers taking part in any such meeting shall clearly state their name and title before speaking on each occasion they speak.

    (Council Administrative Notice Item No. 68)

27. On March 20, 2023, the Council sent a letter to the State Treasurer, with copies to the Chief Elected Officials of Fairfield, Bridgeport, and Westport, stating that $25,000 was received from UI as payment to the Municipal Participation Fund (MPF) and deposited in the Office of the State

Treasurer's department account. The MPF is available for any or all of the municipalities to apply for as reimbursement to defray expenses incurred by the municipalities if they participated as a party in the proceeding, pursuant to C.G.S. §16-50bb. The City of Bridgeport and the Town of Fairfield participated as parties in the proceeding. (Record)

28. During a regular Council meeting held on April 13, 2023, the application was deemed complete pursuant to Regulations of Connecticut State Agencies (R.C.S.A.) §16-50*l*-1a and the public hearing schedule was approved by the Council. (Record; Council April 13, 2023 Meeting Minutes)

29. Pursuant to C.G.S. §16-50m, the Council published legal notice of the date and time of the public hearing in The Connecticut Post on April 15, 2023. (Record)

30. Pursuant to C.G.S. § 16-50m, on April 13, 2023, the Council sent a letter to the Town, City and Town of Westport to provide notification of the scheduled public hearing via Zoom remote conferencing and to invite each municipality to participate in the proceeding. (Record)

31. On June 27, 2023, BWC submitted a request for party status in the proceeding. (Record)

32. On June 28, 2023, the Council held a pre-hearing conference on procedural matters for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists and filing of pre-hearing interrogatories. UI and BWC participated in the pre-hearing conference. Procedures for the public hearing via Zoom remote conferencing were also discussed. (Council Pre-Hearing Conference and remote hearing procedure Memoranda, dated June 21, 2023)

33. On July 10 and 11, 2023, in compliance with R.C.S.A. §16-50j-21, UI installed a total of six, approximately four-foot by six-foot signs throughout the Project area. The signs presented information regarding the Project and the Council's public hearing. One sign was installed at each of the following locations:

    a) Bridgeport Train Station* at 525 Water Street, Bridgeport;
    b) Fairfield Train Station* at 195 Unquowa Road, Fairfield;
    c) Fairfield Metro-North Train Station* at 61 Constant Comment Way, Fairfield;
    d) Ash Creek Conservation Area at Kenard Street, Fairfield;
    e) Pequonnock Substation at 1 Kiefer Street, Fairfield; and
    f) Southport Train Station* at 96 Station Street, Fairfield.

    *Railroad station locations for signs were included in order for the signs to be visible to both passenger train traffic and the general public.
    (UI 9)

34. During a regular meeting held on July 20, 2023, the Council granted BWC party status in the proceeding. (Record; Council July 20, 2023 Meeting Minutes)

July 25, 2023 Evidentiary and Public Comment Hearing Sessions

35. Pursuant to C.G.S. § 16-50m, after giving due notice thereof, the Council held a public hearing on July 25, 2023, beginning with the evidentiary session at 2:00 p.m. and continuing with the public comment session at 6:30 p.m. via Zoom remote conferencing. The Council provided information for video/computer access or audio only telephone access. (Council's Hearing Notice dated April 13,

2023; Transcript 1, July 25, 2023, 2:00 p.m. [Tr. 1], p. 1; Transcript 2, July 25, 2023, 6:30 p.m. [Tr. 2], p. 129)

36. During the July 25, 2023 evidentiary hearing session, the Council cross examined UI and requested late-filed exhibits. BWC appeared and participated in the proceeding. (Tr. 1, pp. 8-124)

37. The 6:30 p.m. public comment session afforded interested persons the opportunity to provide oral limited appearance statements. Interested persons were also afforded an opportunity to provide written limited appearance statements at any time up to 30 days after the close of the evidentiary record. Limited appearance statements in this proceeding, whether oral or written, were not provided under oath nor subject to cross examination. (Council's Hearing Notice dated April 13, 2023; Tr. 1, pp. 6-7; Tr. 2, pp. 138-144; C.G.S. §16- 50n(f) (2023))

38. During the public comment session of the Council's hearing held on July 25, 2023, two persons made oral limited appearance statements about the proposed Project. (Tr. 2, pp. 138-144)

39. On July 27, 2023, the Council issued a memorandum that the continued evidentiary hearing session would be held on August 29, 2023 and commence with the appearance of UI for cross examination by BWC and the Council to be followed by the appearance of BWC for cross examination by the Council and UI. (Record)

40. The July 27, 2023 memorandum included a revised discovery schedule for the August 29, 2023 continued evidentiary hearing session. (Record)

August 29, 2023 Continued Evidentiary Hearing Session

41. On August 24, 2023, SCNET Group and 12 of the Grouped LLCs submitted requests for intervenor and CEPA intervenor status, as well as a request for an additional evidentiary hearing session. (Record; SCNET 1, 7-9; Grouped LLCs 1-9)

42. On August 28, 2023, FSL submitted a request for intervenor and CEPA intervenor status, as well as a request for an additional evidentiary hearing session. (Record; FSL 1)

43. On August 29, 2023, the Town requested party status, as well as a request for an additional evidentiary hearing session. (Record; Town 1)

44. The Council continued the evidentiary hearing session via Zoom remote conferencing on August 29, 2023 beginning at 2:00 p.m. (Council Evidentiary Hearing Continuation Memorandum dated July 27, 2023; Transcript 3, August 29, 2023, 2:00 p.m. [Tr. 3], p. 1)

45. During the August 29, 2023 continued evidentiary hearing session, the Council granted all requests for party, intervenor and CEPA intervenor status with associated groupings and granted all requests for an additional evidentiary hearing session. (Tr. 3, pp. 8-16; Council Continued Evidentiary Hearing Memorandum, dated August 30, 2023)

46. Under R.C.S.A. §16-50j-16, the Council may add parties and intervenors at any time during the pendency of a proceeding. Any person granted status is responsible for obtaining and reviewing all materials for the proceeding. (R.C.S.A. §16-50j-16 (2023))

47. During the August 29, 2023 continued evidentiary hearing session, BWC and the Council cross examined UI, and BWC was cross examined by the Council and UI. (Tr. 3, pp. 20-142)

48. On August 30, 2023, the Council issued a memorandum that the continued evidentiary hearing session would be held on October 17, 2023 and commence with the continued appearance of BWC for cross examination by all of the parties, intervenors and the Council to be followed by the appearance of UI for cross examination by all of the parties, intervenors and the Council. (Record)

49. The August 30, 2023 memorandum included a revised discovery schedule for the October 17, 2023 continued evidentiary hearing session. (Record)

October 17, 2023 Continued Evidentiary Hearing Session

50. On September 15, 2023, the Town submitted a Motion for Continuance requesting extension of deadlines for interrogatories, responses to interrogatories and pre-filed testimony and delay of the evidentiary hearings to a date during the week of January 8, 2024. (Record)

51. On September 18, 2023, the Grouped LLCs submitted a Motion for Continuance, adopting the Town's request and including a claim that the Council failed to provide proper notice of the application and the public hearings held on it. (Record)

52. During a regular meeting held on September 28, 2023, the Council granted the Town and Grouped LLCs Motions for Continuance in part for a continued evidentiary hearing to be held on November 16, 2023 and denied the Grouped LLCs Motion in part on claims the Council failed to provide proper notice of the application and the hearings held on it. (Record; Council September 28, 2023 Meeting Minutes)

53. On October 2, 2023, SCNET Group submitted a request for a service list change to include 2190 Post Road, LLC, Invest II, LLC and International Investors in the SCNET Group rather than the Grouped LLCs. (Record; Council Continued Evidentiary Hearing Memorandum, dated November 29, 2023 (Party and Intervenor Chart))

54. On October 3, 2023, BWC submitted a Motion for a Protective Order, pursuant to C.G.S. §1-210(b), related to disclosure of its late-filed exhibit on the basis it contains confidential, proprietary information. (Record)

55. During a regular meeting held on October 12, 2023, the Council granted BWC's Motion for a Protective Order. (Record; BWC 5)

56. On October 12, 2023, four additional requests for intervenor and CEPA intervenor status were submitted to the Council. (Record)

57. On October 13, 2023, three additional requests for intervenor and CEPA intervenor status were submitted to the Council. (Record)

58. On October 13, 2023, SCNET and 2190 Post Road, LLC, Invest II, LLC and International Investors of the Grouped LLCs at the time submitted a Motion to Amend the Schedule requesting extension of deadlines for interrogatories, responses to interrogatories and pre-filed testimony and delay of the evidentiary hearings to a date during the week of January 8, 2024. (Record)

59. On October 16, 2023, the Town submitted a Motion to Amend the Schedule requesting extension of deadlines for interrogatories, responses to interrogatories and pre-filed testimony and delay of the evidentiary hearings to a date during the week of January 8, 2024. (Record)

60. The Council continued the evidentiary hearing session via Zoom remote conferencing on October 17, 2023 beginning at 2:00 p.m. (Council Evidentiary Hearing Continuation Memorandum dated August 30, 2023; Transcript 4, October 17, 2023, 2:00 p.m. [Tr. 4], p. 1)

61. During the October 17, 2023 continued evidentiary hearing session, the Council granted the 7 additional requests for intervenor and CEPA intervenor status and grouped them accordingly. The Council also denied the Motions to Amend the Schedule for a continued evidentiary hearing session to be held during the week of January 8, 2024. (Tr. 4, pp. 6-21; Council Continued Evidentiary Hearing Memorandum, dated October 19, 2023)

62. During the October 17, 2023 continued evidentiary hearing session, the Council and UI cross examined BWC, and the Council, BWC and FSL cross examined UI. None of the other parties and intervenors availed themselves of the opportunity to cross examine BWC or UI during the continued evidentiary hearing session. (Tr. 4, pp. 51-149)

63. On October 19, 2023, the Council issued a memorandum that the continued evidentiary hearing session would be held on November 16, 2023 and commence with the continued appearance of UI for cross examination by all of the parties and intervenors and the Council to be followed by the appearance of the other parties and intervenors for cross examination by all of the parties and intervenors and the Council in the order by which the requests for status were granted by the Council. (Record)

64. The October 19, 2023 memorandum included a revised discovery schedule for the November 16, 2023 continued evidentiary hearing session. (Record)

November 16, 2023 Continued Evidentiary Hearing Session

65. On November 9, 2023, three additional requests for Intervenor and CEPA intervenor status were submitted to the Council. (Record)

66. On November 14, 2023, SCNET Group submitted a Motion for an Order to Compel Production of Documents requesting the Council to order UI to identify persons and produce documents requested in SCNET Group's interrogatories. UI objected to production of the documents on the basis that the information sought is irrelevant to the Council's evaluation of the application and is proprietary and/or confidential Critical Energy Infrastructure Information (CEII). (Record)

67. The Federal Energy Regulatory Commission (FERC) defines CEII as specific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that:

    1. relates to details about the production, generation, transportation, transmission or distribution of energy;
    2. could be useful to a person in planning an attack on critical infrastructure;
    3. is exempt from mandatory disclosure under the state Freedom of Information Act; and
    4. does not simply give the general location of critical infrastructure.

    (18 C.F.R. §388.113 (2023); C.G.S. §1-210(b)(19) (2023); R.C.S.A. §16-50j-22(d) (2023); Council Administrative Notice 3-5, 9, 11)

68. The Council adopted the FERC definition of CEII in 2009. It was codified in Council regulations in 2012. (Council Docket 370, March 16, 2009 Memorandum Re Motion for Protective Order to Not Disclose CEII; R.C.S.A. §16-50j-22(d) (2023))

69. The Council continued the evidentiary hearing session via Zoom remote conferencing on November 16, 2023 beginning at 2:00 p.m. (Council Evidentiary Hearing Continuation Memorandum dated October 19, 2023; Transcript 5, November 16, 2023, 2:00 p.m. [Tr. 5], p. 1)

70. During the November 16, 2023 continued evidentiary hearing session, the Council granted the 3 additional requests for intervenor and CEPA intervenor status and grouped them accordingly. (Tr. 5, pp. 8-18; Council Continued Evidentiary Hearing Memorandum, dated November 17, 2023)

71. During the November 16, 2023 continued evidentiary hearing session, the Council also denied SCNET Group's Motion for an Order to Compel Production of Documents on the basis that UI's witness panel was available for cross examination during the hearing on topics that are relevant to the Council's evaluation of the application including, but not limited to, UI's Fairfield to New Haven Railroad Corridor Transmission Line Asset Condition Assessment, responses to Council Interrogatories Nos. 5 and 6, and publicly available asset condition presentations on the ISO-New England, Inc. (ISO-NE) website. (Tr. 5, pp. 8-18; UI 3, responses 5 and 6; Council Administrative Notice Item Nos. 31 and 34; Council Continued Evidentiary Hearing Memorandum, dated November 17, 2023)

72. During the November 16, 2023 continued evidentiary hearing session, SCNET Group and SPC cross examined UI. (Tr. 5, pp. 27-149)

73. On November 17, 2023, the Council issued a memorandum that the continued evidentiary hearing session would be held on November 28, 2023 and commence with the continued appearance of UI for cross examination by the Grouped LLCs, FSL and the Town to be followed by the appearance of the other parties and intervenors for cross examination by all of the parties and intervenors and the Council in the order by which the requests for status were granted by the Council. (Record)

November 28, 2023 Continued Evidentiary Hearing Session

74. On November 20, 2023, UI requested to add a witness to its panel. On November 21, 2023, SCNET Group submitted a Motion to Preclude the UI Witness. UI subsequently withdrew its request on November 27, 2023, rendering it moot. (Record)

75. On November 22, 2023, the City submitted a request for party status. (Record)

76. On November 27, 2023, SCNET Group submitted a Motion for Reconsideration of its November 14, 2023 Motion to Compel UI to identify persons and produce documents requested in its interrogatories. (Record)

77. On November 27, 2023, the Grouped LLCs submitted a Motion to Dismiss and/or Stay Proceedings on the basis that the Council's membership includes only one member with experience in the field of ecology while the statute requires at least two members with experience in the field of ecology. (Record)

78. Under PUESA, the Council's membership consists of:

(1) The Commissioner of Energy and Environmental Protection, or the Commissioner's designee;

(2) the Chairperson of the Public Utilities Regulatory Authority, or the Chairperson's designee;
(3) one designee of the speaker of the House and one designee of the president pro tempore of the Senate; and
(4) five members of the public, to be appointed by the Governor, at least two of whom shall be experienced in the field of ecology, and not more than one of whom shall have affiliation, past or present, with any utility or governmental utility regulatory agency….

(C.G.S. §16-50j(b) (2023))

79. The Governor's appointment of public members to state boards and commissions, including the Council, is regulated under C.G.S. §4-9a, which states, "Public members shall constitute not less than one-third of the members of each board and commission…" (C.G.S. §4-9a (2023))

80. One-third of the Council membership is equivalent to 3 members. At all times during the proceedings held on this application, the Council consisted of 3 public members, and currently, the Council consists of 3 public members. (C.G.S. §16-50j(b) (2023); Council Membership, updated to January 26, 2024)

81. On October 21, 2019, John Morissette was appointed to the Council by the Governor as a public member in succession to Philip Ashton who passed away on January 27, 2017. In their professional careers, Mr. Ashton and Mr. Morissette were electrical engineers employed by Yankee Gas and Eversource Energy, respectively. (Grouped LLCs November 27, 2023 Motion to Dismiss and/or Stay Proceedings, Exhibit A - Council Docket 509 Decision on Motion to Dismiss/Motion for Stay of Proceeding, June 23, 2022)

82. On March 15, 2021, Louanne Cooley was appointed to the Council by the Governor as a public member with experience in the field of ecology in succession to Dr. Michael Klemens, who resigned in 2019. Mrs. Cooley resigned from the Council as of January 1, 2023. (Grouped LLCs November 27, 2023 Motion to Dismiss and/or Stay Proceedings, Exhibit A - Council Docket 509 Decision on Motion to Dismiss/Motion for Stay of Proceeding, June 23, 2022)

83. On October 28, 2021, Mark Quinlan was appointed to the Council by the Governor as a public member with experience in the field of ecology in succession to Michael Harder, who resigned in 2021. Mr. Quinlan resigned from the Council as of June 1, 2023. (Grouped LLCs November 27, 2023 Motion to Dismiss and/or Stay Proceedings, Exhibit A - Council Docket 509 Decision on Motion to Dismiss/Motion for Stay of Proceeding, June 23, 2022)

84. On June 14, 2023, Robert Hannon was appointed to the Council by the Governor as a public member with experience in the field of ecology in succession to Louanne Cooley. Mr. Hannon actively participated in these proceedings until he passed away on December 15, 2023. (Council Membership, updated to January 26, 2023; Tr. 1; Tr. 2; Tr. 3; Tr. 4; Tr. 5)

85. On December 6, 2023, Dr. Thomas Near was appointed to the Council by the Governor as a public member with experience in the field of ecology in succession to Mark Quinlan. (Council Administrative Notice Item 40; Council Membership, updated to January 26, 2024)

86. On January 4, 2024, Mr. Chance Carter was appointed to the Council by the Governor as a public member in succession to Ed Edelson, who resigned as of January 1, 2023. (Council Membership, updated to January 26, 2024)

87. The failure of the Governor to appoint public members to a multi-member board does not deprive the board of the power to act where a quorum equal to a majority of the members of the board exists during transaction of the business involved. (*Levinson v. Conn. Board of Chiropractic Examiners*, 211 Conn. 508 (1989); Grouped LLCs November 27, 2023 Motion to Dismiss and/or Stay Proceedings, Exhibit A - Council Docket 509 Decision on Motion to Dismiss/Motion for Stay of Proceeding, June 23, 2022)

88. A quorum of the Council is five members. Currently, the Council consists of seven members. If one or two members were absent or recused from an action on a jurisdictional matter, such as both members with experience in the field of ecology, a quorum of Council members would exist during transaction of the business involved. (*Levinson v. Conn. Board of Chiropractic Examiners*, 211 Conn. 508 (1989); Grouped LLCs November 27, 2023 Motion to Dismiss and/or Stay Proceedings, Exhibit A - Council Docket 509 Decision on Motion to Dismiss/Motion for Stay of Proceeding, June 23, 2022; Council Membership, updated to January 26, 2024; Council Administrative Notice Item 40)

89. In the absence of evidence to the contrary, state boards and commissions are assumed to be properly constituted. (*Block v. Statewide Grievance Comm*., Conn. Supp. 5 (Conn. Super. 2000); *DuBaldo v. Dept. of Consumer Protection,* 209 Conn. 719 (1989); *Furtney v. Zoning Commission*, 159 Conn. 585 (1970); *Hebb v. Zoning Board of Appeals*, 150 Conn. 539 (1963); Grouped LLCs November 27, 2023 Motion to Dismiss and/or Stay Proceedings, Exhibit A - Council Docket 509 Decision on Motion to Dismiss/Motion for Stay of Proceeding, June 23, 2022)

90. The Council continued the evidentiary hearing session via Zoom remote conferencing on November 28, 2023 beginning at 2:00 p.m. (Council Evidentiary Hearing Continuation Memorandum dated November 17, 2023; Transcript 6, November 28, 2023, 2:00 p.m. [Tr. 6], p. 1)

91. During the November 28, 2023 continued evidentiary hearing session, the Council granted the City's request for party status. It also denied SCNET Group's Motion for Reconsideration and deferred a ruling on the Grouped LLCs Motion to Dismiss and/or Stay Proceedings until the other parties and intervenors to the proceeding have an opportunity to address it in post-hearing briefs. (Tr. 6, pp. 7-18; Council Continued Evidentiary Hearing Memorandum, dated November 29, 2023)

92. During the November 28, 2023 continued evidentiary hearing session, the Grouped LLCs, the Town, SPC, the City, SCC, and the Council cross examined UI. (Tr. 6, pp. 19-197)

93. On November 29, 2023, the Council issued a memorandum that the final continued evidentiary hearing session would be held on December 12, 2023 and commence with the appearance of the parties and intervenors for cross examination by the other parties and intervenors and the Council in the order by which the requests for status were granted by the Council. (Record)

December 12, 2023 Continued Evidentiary Hearing Session

94. On December 8, 2023, the Council issued a memorandum notifying the parties and intervenors that each of the 7 party/intervenor appearances listed in the Council's November 29, 2023 memorandum shall be allotted a total of one hour for cross examination by the other parties/intervenors to the proceeding and the Council. (Record)

95. On December 12, 2023, SCNET Group, the Town and the Grouped LLCs submitted a Joint Motion in Opposition to the Council's December 8, 2023 Order. It claimed the right to cross examination is guaranteed by the UAPA and it is improper to impose time limits on cross examination. (Record)

96. The Council continued the evidentiary hearing session via Zoom remote conferencing on December 12, 2023 beginning at 2:00 p.m. and ending at 7:38 p.m. (Council Evidentiary Hearing Continuation Memorandum dated November 29, 2023; Transcript 7, December 12, 2023, 2:00 p.m. [Tr. 7], pp. 1, 265)

97. During the December 12, 2023 continued evidentiary hearing session, the Council deferred a ruling on the Joint Motion in Opposition to the Council's December 8, 2023 Order until the other parties and intervenors to the proceeding have an opportunity to address it in post-hearing briefs. (Record; Tr. 7, pp. 7-13)

98. During the December 12, 2023 continued evidentiary hearing session, all 7 of the parties and intervenors identified in the Council's November 29, 2023 Memorandum Regarding the Continuation of the Evidentiary Hearing on December 12, 2023 appeared for cross examination by all other parties and intervenors and the Council in the order by which requests for status were granted by the Council. (Record; Tr. 7, pp. 15-264)

99. The time for the Council's cross examination of each of the 7 listed party/intervenor appearances referenced in the Council's December 8, 2023 Final Hearing Procedures Memorandum was not included in the allotted one hour. (December 8, 2023 Council Final Hearing Procedures Memorandum; Tr. 7)

100. At the close of the evidentiary record on December 12, 2023, Council membership included three public members, including, but not limited to, two public members with experience in the field of ecology. (C.G.S. §16-50j (2023); R.C.S.A. §16-50j-31 (2023); Council Administrative Notice Item No. 40)

Administrative Procedures

101. Hearings shall be held at times and locations specified by the Council. (C.G.S. §16-50m RCSA §16-50j-20 (2023))

102. In compliance with C.G.S. §1-225a:
    a) The public had the ability to view and listen to the remote public hearings in real-time, by computer, smartphone, tablet or telephone;
    b) The remote public hearings were recorded and transcribed, and such recordings and transcripts were posted on the Council's website on July 25, 2023 and August 10, 2023; August 29, 2023 and September 13, 2023; October 17, 2023 and October 24, 2023; November 16, 2023 and December 5, 2023; November 28, 2023 and December 5, 2023; and December 12, 2023 and December 20, 2023, respectively;
    c) The Hearing Notice, Hearing Program, Citizens Guide for Siting Council Procedures and Instructions for Public Access to the Remote Hearings were posted on the agency's website;
    d) The record of the proceeding is available on the Council's website for public inspection prior to, during and after the remote public hearings; and
    e) The Council, parties and intervenors provided their information for identification purposes during the remote public hearings.

    (Hearing Notice dated April 13, 2023; Tr. 1; Tr. 2; Tr. 3; Tr. 4; Tr. 5; Tr. 6; Tr. 7; Record)

103. The purpose of discovery is to provide the Council, parties and intervenors access to all relevant information in an efficient and timely manner to ensure that a complete and accurate record is compiled. (R.C.S.A. §16-50j-22a (2023))

104. Prior to and during the evidentiary hearing sessions, the parties and intervenors were afforded opportunities to issue interrogatories, submit pre-filed testimony and exhibits, and cross examine all other parties and intervenors on their respective pre-filed testimony and exhibits. (Hearing Notice dated April 13, 2023; Tr. 1; Tr. 2; Tr. 3; Tr. 4; Tr. 5; Tr. 6; Tr. 7; Record; Council Memoranda dated June 21, 2023; July 27, 2023; August 30, 2023; October 19, 2023; November 17, 2023; November 29, 2023)

105. In an administrative proceeding, irrelevant, immaterial or unduly repetitious evidence shall be excluded, and an agency has the right to believe or disbelieve the evidence presented by any witness, even an expert, in whole or in part. (C.G.S. §4-178 (2023); *Dore v. Comm'r of Motor Vehicles*, 62 Conn. App. 604 (2001); R.C.S.A. §16-50j-25 (2023))

106. The Council's experience, technical competence, and specialized knowledge may be used in the evaluation of evidence. (C.G.S. §4-178 (2023))

107. The Presiding Officer may require the production of records, physical evidence, papers and documents to any hearing held in a contested case. (C.G.S. §4-177b (2023); R.C.S.A. §16-50j-22a(c) (2023))

108. Each party and intervenors' appearing witnesses in this proceeding prepared, supervised or assisted in the preparation of exhibits. During the evidentiary hearing sessions, the Council provided all parties and intervenors opportunities to cross examine each party and intervenors' witness panel on their respective exhibits. (Record; Tr. 1; Tr. 3; Tr. 4; Tr. 5; Tr. 6; Tr. 7)

109. Neither the City nor FSL presented any witnesses or exhibits in the proceeding except for their respective requests for party and intervenor/CEPA intervenor status. No party or intervenor objected to admission of the requests for status into the evidentiary record without cross examination. (Tr. 7, pp. 135-137, 263-264; FSL 1; City 1)

110. SCNET Group's witness on behalf of SCC was not available to verify or be cross examined on its request for intervenor and CEPA intervenor status. No party or intervenor objected to admission of the request for status into the evidentiary record without cross examination. (Tr. 7, pp. 36-37; SCNET Group 10)

111. The Town First Selectperson was not available to verify or be cross examined on the November 2, 2023 pre-filed testimony during the Town's appearance at the December 12, 2023 continued evidentiary hearing session. No party or intervenor objected to admission of the November 2, 2023 pre-filed testimony into the evidentiary record without cross examination. (Town 4; Tr. 7, pp. 146-148)

112. Under C.G.S. §4-178, the right to cross examination is subject to the discretion of the Presiding Officer who may exercise a reasonable judgment in determining when the line of inquiry has been exhausted and deciding the relevancy of evidence as it pertains to cross-examination. (*Pet v. Dept. Public Health,* 228 Conn. 651 (1994); *FairwindCT, Inc. v. Conn. Siting Council,* 313 Conn. 669 (2014); *Town of Middlebury v. Conn. Siting Council,* 326 Conn. 40 (2017))

113. Pursuant to C.G.S. §16-50n(f), at the conclusion of the hearing session held on December 12, 2023, the Council closed the evidentiary record for Docket 516 and established January 11, 2024 as the deadline for public comments and the submission of briefs and proposed findings of fact. (Tr. 7, pp. 264-265; R.C.S.A. §16-50j-31 (2023))

114. On December 29, 2023, SCNET Group submitted Corrected Pre-Filed Testimony of Harry Orton to resolve typographical errors in the November 9, 2023 Pre-Filed Testimony of Harry Orton that were identified through the exhibit verification process during the December 12, 2023 continued evidentiary hearing. (Tr. 7, pp. 34-36, 54; SCNET 24)

115. A new Town chief elected official (CEO) took office on November 27, 2023. In correspondence to the Council, dated January 9, 2024, the new CEO adopted the position of the Town toward the Project during the prior administration. (Record – January 9, 2024 Correspondence from First Selectperson Gerber)

116. On January 11, 2024, the Town submitted Revised Pre-Filed Testimony of Peter Vimini to modify a statement on page 6 in the November 2, 2023 Pre-Filed Testimony of Peter Vimini that was identified through the exhibit verification process during the December 12, 2023 continued evidentiary hearing. (Tr. 7, pp. 141-144, 54; Town 8)

117. On January 11, 2024, all parties, intervenors and grouped intervenors submitted post-hearing briefs. This included SCC, who is represented by counsel separate from counsel for the SCNET Group, and NTHP, who is represented by *pro hac vices* counsel separate from counsel for the Grouped LLCs. (Record)

118. The Town incorporated SCNET Group's post-hearing brief into its post-hearing brief and the Grouped LLCs incorporated SCNET Group's and the Town's post-hearing brief into its post-hearing brief. (Record)

119. On January 11, 2024, BWC, SCNET Group, SCC and the Town submitted proposed Findings of Fact. The Town incorporated SCNET Group's proposed Findings of Fact into its proposed Findings of Fact and SCNET Group incorporated the Town's proposed Findings of Fact into its proposed Findings of Fact. (Record)

120. Constitutional principles permit an administrative agency to organize its hearing schedule so as to balance its interest in reasonable, orderly and non-repetitive proceedings against the risk of erroneous deprivation of a private interest. It is not unconstitutional for the Council, in good faith, to balance its statutory time constraints against the desire of a party, intervenor or CEPA intervenor for more time to present their objections to a proposal. (*Concerned Citizens of Sterling v. Conn. Siting Council*, 215 Conn. 474 (1990); *Pet v. Dept. of Public Health*, 228 Conn. 651 (1994); *FairwindCT, Inc. v. Conn. Siting Council*, 313 Conn. 669 (2014))

State Agency Comment

121. Pursuant to C.G.S. § 16-50j(g), on April 13, 2023, the following state agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection (DEEP); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Administrative Services (DAS); Department of Labor (DOL); Department of Economic and Community Development (DECD); Department of Agriculture (DOAg); Department of Transportation (DOT); Connecticut Airport Authority (CAA); Department of Emergency Services and Public Protection (DESPP); and State Historic Preservation Office (SHPO). (Record)

122. The Council received comments from CAA on April 17, 2023[1]; CEQ on May 26, 2023[2]; DOT on August 18, 2023[3] and October 6, 2023;[4] and SHPO on November 17, 2023[5] and November 22, 2023.[6] These comments are more specifically addressed in the Public Safety and Environmental Effects and Mitigation Measures sections of this document. (Record)

123. CAA requests UI to coordinate with the Federal Aviation Administration (FAA) if any construction equipment exceeds the heights in the FAA notifications and to analyze the height of any equipment to ensure the safety of operations near the Sikorsky Memorial Airport. (CAA Comment Letter, dated April 17, 2023)

124. CEQ provided comments and recommendations related to Best Management Practices, vegetation removal, erosion and sedimentation controls, invasive species, and inspections. (CEQ Comment Letter, dated May 25, 2023)

125. DOT owns the railroad ROW. The New Haven Line corridor is one of the busiest railroads in the nation. (Council Administrative Notice Item No. 39 – Docket No. 508 Findings of Fact #39 and #77)

126. DOT prefers that UI's transmission lines are removed from the existing catenaries because it would facilitate DOT's maintenance of its equipment by not having to request UI transmission line outages. (Council Administrative Notice Item No. 39 – Docket No. 508 Findings of Fact #39 and #77; UI 12, response 85; DOT comment letter received August 18, 2023)

127. DOT is currently engaged in efforts to improve railroad customer experience through shorter trip times, enhancing station amenities, and improved service along the entire New Haven Line. These efforts include increasing train speeds and will require addition of catenary structures, track sidings, additional bridge spans, and wayside equipment to support this high-speed rail initiative. (DOT comment letter received August 18, 2023)

128. DOT recommends UI shift the new monopoles and transmission line to the maximum possible extent away from the railroad ROW due to its planned high-speed upgrades requiring new catenaries every 150 feet along the railroad. (DOT comment letter received August 18, 2023)

129. DOT notes that the north side of the railroad has the most available free space and distance from each catenary. DOT agrees property is less available on the south side of the railroad than on the north side of the railroad and has no objection to such a transmission line design. (DOT comment letter received August 18, 2023)

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[1] https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/1_MEDIA_DO500_600/DO516/ProceduralCorrespondence/DO516-20230418-CAACommentsRcd_s.pdf
[2] https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/1_MEDIA_DO500_600/DO516/ProceduralCorrespondence/DO516-CEQcommentsrecd_a.pdf
[3] https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/1_MEDIA_DO500_600/DO516/ProceduralCorrespondence/DO516-DOTcommentsrecd_a.pdf
[4] https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/1_MEDIA_DO500_600/DO516/ProceduralCorrespondence/DO516-SACRCDPI_DOT-a.pdf
[5] https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/1_MEDIA_DO500_600/DO516/ProceduralCorrespondence/DO516-SACRCDPI_SHPO_a.pdf
[6] https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/1_MEDIA_DO500_600/DO516/ProceduralCorrespondence/DO516-SACRCDPI_SHPOaddtl_a.pdf

130. DOT would not support an all-underground configuration because no longitudinal underground utility occupations are permitted within the railroad ROW. (DOT comment letter received October 6, 2023)

131. SHPO believes the scope of work associated with the proposed Project will have an adverse effect to historic resources and requests UI to further consult with SHPO to resolve the effect. SHPO indicated that there should be proposed mitigation to offset any effects to historic resources. (SHPO comment letter, dated November 17, 2023; Tr. 1, p. 40)

132. No other state agencies responded with comment on the application. (Record)

133. While the Council is obligated to consult with and solicit comments from state agencies by statute, the Council is not required to abide by the comments from state agencies. (C.G.S. §16-50x (2023); *Corcoran v. Conn. Siting Council*, 284 Conn. 455 (2007))

134. The Council cannot delegate its statutory authority to any other entity. (C.G.S. §16-50x (2023); *Corcoran v. Conn. Siting Council*, 284 Conn. 455 (2007))

Municipal Consultation and Community Outreach

135. UI began its outreach efforts to the City and Town in June 2021 by meeting with municipal officials. Specifically, UI conducted the following meetings with municipal officials:

    a) UI conducted a Webex meeting with the City on June 24, 2021 to provide a Project overview, scope, need, and timeline. Follow-up Webex meetings related to traffic concerns, route considerations, and a Project summary were held on August 19, September 2, and October 6, 2021, respectively;
    b) UI provided a Project overview to the City Mayor on March 24, 2022;
    c) UI met with City staff and provided a Project overview on May 9, 2022;
    d) UI discussed the development plans for the "Sliver by the River" parcel with the City on September 16, 2022;
    e) UI held bi-monthly meetings with the City to discuss the status of the Project and other UI projects in Bridgeport;
    f) UI met with the Town First Selectperson and staff on July 13, 2021 to provide a Project overview, scope, need, and timeline;
    g) UI held a meeting with Town Conservation and Wetlands staff on August 24, 2021;
    h) UI held an in-person meeting with the Town First Selectperson on September 13, 2021 to discuss Project updates based on feedback from the Town;
    i) UI provided a Project overview, design of monopoles at train stations, and vegetation removal plan on October 14, 2021; and
    j) UI provided vegetation management information to the Town on September 19, 2022.

    (UI 1, Vol. 1, pp. 8-7 and 8-8; UI 12, response 75; Town 4)

136. Pursuant to C.G.S. §16-50*l*(e), UI delivered a Municipal Consultation Filing (MCF) to the City, Town and Town of Westport on October 20, 2022 to begin the 60-day municipal consultation process. (UI 1, Vol. 1, p. 8-4)

137. UI created a website (www.UIRailroadTLineUpgrades.com) to provide information to the community about the Project. (UI 1, Vol. 1, p. 8-5)

138. UI mailed a postcard to Project abutters on January 7, 2023. The mailing included a description of the Project and an invitation to a Virtual Open House (VOH) for the Project. The VOH is accessible via the Project website and went live in mid-January 2023. As of July 25, 2023, UI had not received any questions via the VOH. (UI 1, Vol. 1, pp. 8-5 and 8-6; Tr. 1, pp. 18-19)

139. UI held a Public Informational Meeting (PIM) at the Fairfield Public Library on January 11, 2023. Eight residents/business owners attended the meeting. Comments included viewshed concerns, business access and general inquiries. (UI 1, Vol. 1, p. 8-6)

140. On January 31, 2023, UI held a PIM at the Margaret Morton Government Center in Bridgeport. Eight residents and representatives of businesses and organizations attended the meeting. UI responded to questions regarding vegetation management, traffic plans and construction. (UI 1, Vol. 1, p. 8-6)

141. UI offered two Zoom appointment sessions in January 2023 to allow the public to ask questions or provide comments to UI representatives. (UI 1, Vol 1, p. 8-5)

142. By letter dated February 21, 2023, the Town Conservation Department requested that the Council require replacement of cleared vegetation with appropriate native plant species that are compatible with electrical transmission lines on two properties that contain proposed Structures P708S, P713WS, P714ES, P174ES-1, and P713WS-1. (Town 2; Town 5; Tr. 7, p. 149)

143. On August 29, 2023, the Town requested party status, which was granted during the evidentiary hearing held on August 29, 2023. The Town participated in the proceeding by submission of exhibits and cross-examination of UI and other parties and intervenors. (Town 1; Tr. 3; Tr. 4; Tr. 5; Tr. 6; Tr. 7)

144. After the application was submitted to the Council, UI received nine comments from residents related to property access, potential permanent easements, vegetation clearing, visibility, and an existing billboard. UI also received comments from State Representative Leeper regarding a resident's concerns about EMF. UI responded to each of the comments. (UI 3, response 3; UI 13, LF-2)

145. By letters dated August 18 and August 29, 2023, State Representatives Leeper and Keitt, respectively, requested the Council approve an underground configuration for the rebuilt transmission lines. (Record)

146. By letter dated September 6, 2023, State Senator Hwang requested the Council consider the impacts to businesses and residents, storm hardening, and economic, historic, and environmental impacts. (Record)

147. By letter dated September 26, 2023, U.S. Senator Blumenthal and U.S. Representative Himes requested the Council seek alternatives that balance the need for the line upgrade while reducing negative impacts to the community, including, but not limited to, an underground configuration for the rebuilt transmission lines. (Record)

148. On October 4, 2023, at the request of the Town, UI held an additional PIM. (Town 4)

149. By letter dated October 16, 2023, the Fairfield Legislative Delegation requested the Council hold additional evidentiary hearings. After receipt of the letter, four additional evidentiary hearings were held on October 17, November 16, November 28, and December 12, 2023. (Record)

150. On November 22, 2023, the City requested party status, which was granted during the evidentiary hearing held on November 28, 2023. The City participated in the proceeding by cross examination of UI. (City 1; Tr. 6; Tr. 7)

151. Bridgeport is the state's most populous city and an environmental justice community. (City 1)

152. C.G.S. §22a-20a requires applicants seeking a permit from DEEP or the Council for a new or expanded facility defined as an "affecting facility" that is proposed to be located in an environmental justice community to file an Environmental Justice Public Participation Plan (EJPPP). The existing electric transmission line facility is not an "affecting facility" under C.G.S. §22a-20a. Thus, Environmental Justice does not apply to the facility, and an EJPPP is not required. (CGS §22a-20a (2023); City 1)

153. The City's concerns relate to the location of the transmission equipment and any impacts associated with coastal recreational resources, economic development, historic structures and environmental justice. (City 1)

154. The Town prefers updating the existing lines, moving the lines to the north side of the railroad tracks and/or placing the new lines underground to minimize ground disturbance, easements and visual impact. (Town 4)

155. The Town believes that moving the lines to the north side of the railroad tracks would reduce impacts to wetlands and watercourses due to previous disturbance associated with the existing line on the north side of the railroad tracks. (Town 4; Tr. 7, p. 159)

156. SCNET Group's witnesses prefer undergrounding, installation of the transmission lines on existing or rebuilt catenary structures, or collocation on existing transmission structures on the north side of the railroad ROW to the proposed configuration. (SCNET 15 and 16; Tr. 7, pp. 48-50)

157. If the transmission lines are collocated on existing structures on the north side of the railroad ROW, SCNET Group prefers no increase in easement area and no structure height increases. (Tr. 7, pp. 48-51)

158. The narrowest section of the railroad ROW where the track is raised on a retaining wall adjacent to streets is in Bridgeport. UI cannot build the facility on the retaining wall. (Tr. 6, pp. 143-144)

159. UI has built electric transmission facilities outside the railroad ROW in Bridgeport, including, but not limited to, overhead transmission structures on sidewalks. The Project does not propose to install transmission structures on sidewalks. (Tr. 6, pp. 144-145)

160. The Project complies with the City's zoning codes and regulations. (Tr. 6, p. 135-139)

161. During meetings with UI related to the Project, the City did not request the transmission lines be constructed underground. (Tr. 6, pp. 148-149)

162. UI did not consider an underground option in Bridgeport only. (Tr. 6, p. 143-144)

163. The City has plans for a multi-use park known as "the Sliver by the River." It is located south of the railroad ROW adjacent to the Bridgeport Train Station. An existing 345-kV underground electric transmission cable is located within the park area. UI met with the City twice to discuss the City's plans for the Sliver by the River. The Project is compatible with the City's plans. (Tr. 6, pp. 140-143)

System Planning and Mandatory Reliability Standards

164. The Federal Energy Policy Act of 2005 required FERC to designate an Electric Reliability Organization (ERO) to develop and enforce a system of mandatory reliability standards for planning and operations of the bulk power electric system. Compliance with the standards is mandatory under federal law and violations are punished by fines. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #42)

165. FERC designated the North American Electric Reliability Corporation Inc. (NERC) to be ERO. As the ERO, NERC is charged with improving the reliability of the bulk-power electric system by developing mandatory reliability standards for planning and operations. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #43)

166. The Northeast Power Coordinating Council (NPCC) is a regional reliability council that was established to improve the reliability of the interconnected bulk power system in New York, the six New England states, and eastern Canadian provinces. The US systems of the NPCC formed two regional reliability councils to ensure the reliability of their portions of the interconnected bulk-power electric system - ISO-NE, and New York Independent System Operator (NYISO). (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #44)

167. ISO-NE is the not-for-profit corporation responsible for power system planning, as well as grid operation and market administration in the six New England States. ISO-NE uses a ten-year planning horizon. It has adopted planning standards, criteria and procedures consistent with the standards and criteria established by NERC and the NPCC, designed to ensure that New England's electric system will provide adequate and reliable electric power. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #45; Council Administrative Notice Item No. 19 – ISO-NE 2021 Regional System Plan, p. iii)

168. As a transmission owner in New England, UI must comply with the reliability standards and criteria adopted by NERC, NPCC, and ISO-NE. These standards and criteria establish a set of performance tests or contingency simulations under which UI's electric transmission system must perform without experiencing overloads or voltage problems. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #46)

169. ISO-NE is responsible for the reliable and economical operation of New England's electric power system, which includes managing the comprehensive, long-term planning of the regional power system to identify the region's electricity needs and plans for meeting those needs. The planning process involves the preparation of an annual Regional System Plan (RSP) that provides forecasts of annual energy use and peak loads for a ten-year planning horizon; information about amounts, locations, and characteristics of market responses; and descriptions of transmission projects for the region that could meet the identified needs, as summarized in the RSP Project List. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #47)

170. ISO-NE is responsible for the operation of Pool Transmission Facilities (PTFs) which include bulk electric system facilities. Bulk electric system includes transmission elements operated at 100 kV or higher and real power and reactive power resources connected at 100 kV or higher. The bulk electric system does not include facilities used in the local distribution of electrical energy. (Council Administrative /Notice Item No. 19 – ISO-NE 2021 Regional System Plan, p. 34)

171. The *2021 ISO-NE Regional System Plan* (RSP21) and the regional system planning process identify the region's electricity needs and plans for meeting these needs for 2021 through 2030. (Council Administrative Notice Item No. 19 – ISO-NE 2021 Regional System Plan, p. iii)

172. The RSP Project List is a summary of projects that have a reliability need based on a criteria violation, e.g. voltage violation. The Project is not listed on the March 2023 ISO-NE RSP Project List. (Council Administrative Notice Item No. 20 – March 2023 ISO-NE RSP Project List; UI 3, response 4)

173. A reliability project is identified by ISO-NE. ISO-NE examines transmission needs in the region and develops solutions to ensure the New England system's continued reliability. The ISO-NE needs and solutions studies for reliability projects contain CEII. (Council Administrative Notice Item No. 19 – ISO-NE 2021 Regional System Plan)

174. Projects on the ISO-NE RSP Asset Condition List are determined by the transmission owners to be necessary to continue prudent operation of electric infrastructure. ISO-NE does not perform asset condition assessments on behalf of the New England Transmission Owners. Thus, UI performed the Fairfield to New Haven Railroad Corridor Transmission Line Asset Condition Assessment that includes the Project independently. (Tr. 1, p. 26; UI 3, response 4)

175. An asset condition project is identified by the PTF owner. Transmission owners of PTFs in New England have an ongoing obligation to identify degraded assets and to implement necessary replacements or upgrades. These asset management programs are necessary to support the continued reliability of the system. (Council Administrative Notice Item No. 19 – ISO-NE 2021 Regional System Plan, p. 33)

176. The ISO-NE RSP Asset Condition List is a summary of PTFs in the region that are being rebuilt or modified due to their condition, age, or physical deterioration and to comply with the updated NESC standards. The minimum cost for eligibility on the ISO-NE Asset Condition List is $5M in PTFs costs. The Project is listed on the March 2023 ISO-NE RSP Asset Condition List under Entries #91 and 151 through 154. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #50; Council Administrative Notice Item No. 19 – ISO-NE 2021 Regional System Plan, p. 86; Council Administrative Notice Item No. 21 – March 2023 ISO-NE RSP Asset Condition List; Tr. 1, p. 38; Tr. 3, p. 75)

177. On March 31, 2017, the Council issued a declaratory ruling to Eversource for the implementation of transmission facility asset condition maintenance to comply with the requirements of the updated NESC. It did not include line upgrades or reconductoring work. (Council Administrative Notice Item 32 – Council Petition 1293)

178. UI presented its Railroad Corridor Transmission Line Asset Conditions to the ISO-NE Planning Advisory Committee (PAC) in June 2018. The presentation contains CEII. (June 7, 2018 ISO-NE PAC Meeting Minutes)

State Energy Policy

179. "Wheeling" is the ability to transport energy from one network to a neighboring network. Due to the interstate nature of electric transmission, FERC has determined that a transmission owner would be paid for transporting energy from one network to another. (Tr. 7, p. 192)

180. In New England, non-discriminatory access to the transmission system is provided by ISO-NE under the Open Access Transmission Tariff (OATT) that is approved by FERC. (UI 18, Late Filed Exhibit 2-2 – ISO-NE OATT)

181. If Connecticut load is radially fed from New York, the load would obtain its capacity and energy requirements from the NYISO rather than ISO-NE. Charges would be based on New York costs rather than ISO-NE costs. (Tr. 6, p. 109, 116; Council Administrative Notice Item 37 – Docket 461A)

182. Charges for the use of New York's distribution and/or transmission system to transmit power to the NY/CT border and allocation of general and administrative costs conflicts with the deregulated electricity structure in Connecticut where ratepayers have the option to purchase their generation services directly from competitive suppliers. (Council Administrative Notice Item No. 37 – Docket 461A)

183. Any interconnection of the New York and Connecticut systems would require ISO-NE and NYISO interregional system coordination planning studies to determine the impact on existing transfer limits between the two systems. (Tr. 6, p. 109; Council Administrative Notice Item No. 37 – Docket 461A)

184. The Project is not designed to transmit capacity or energy to or from New York. The nearest interconnection between Connecticut and New York is the submarine 138-kV Norwalk to Northport Cables located approximately 9 miles west of Sasco Creek Substation. (Tr. 6, p. 109; ISO-NE Geographic Transmission Map dated December 21, 2023; Council Administrative Notice Item No. 19 – ISO-NE 2021 Regional System Plan, p. 87; Council Docket 224, Record)

185. The General Assembly determined that energy use has a profound impact on the society, economy and environment of the state, particularly in its impact on low and moderate-income households and interrelationship with population growth, high density urbanization, industrial well-being, resource utilization, technological development and social advancement, and that energy is critically important to the overall welfare and development of our society. (C.G.S. §16a-35k (2023))

186. The state energy policy is essential to the preservation and enhancement of the health, safety and general welfare of the people of the state and its implementation therefore constitutes a significant and valid public purpose for all state actions. (C.G.S. §16a-35k (2023))

187. As part of its final decision on an electric transmission line facility application, the Council must find and determine that the proposed facility conforms to a long-range plan for expansion of the electric power grid of the electric systems serving the state and interconnected utility systems and will serve the interests of electric system economy and reliability. (C.G.S. §16-50p (2023))

Public Need

188. The railroad ROW is owned by DOT and used by MNR and Amtrak for transporting passengers. (UI 1, p. ES-2)

189. UI has a lease agreement with DOT for collocation of electric transmission facilities within the railroad ROW and a maintenance agreement with MNR for the bonnets on the catenaries. The DOT lease has a 30-year term with two 15-year extensions. The current lease was executed in May 2003. (UI 1, p. 1-4; UI 3, response 18; Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #51)

190. The existing catenaries along the ROW, which are owned by DOT and operated by MNR, were originally built between 1912 and 1914. The catenaries consist of posts with trusses that extend above the railroad tracks and support MNR signal and feeder wires (2/0 and 4/0 copper wires) for the electric operation of the trains. (UI 1, pp. ES-2 and 1-4)

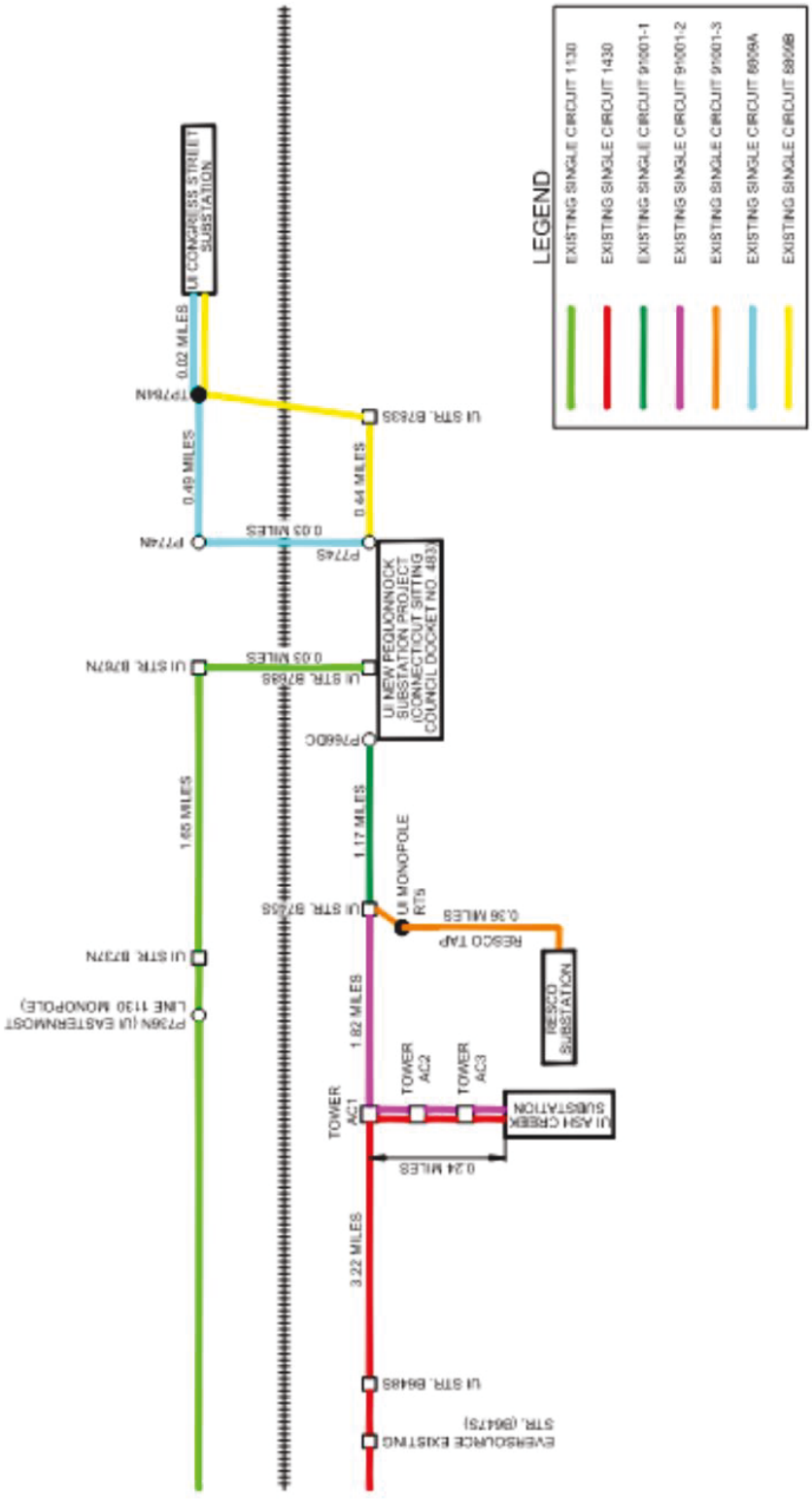
191. Currently, any time that work is performed, outages on the lines must be taken which impacts both UI and MNR. Separating these assets to the maximum extent possible would increase reliability and reduce the need for outages, cost, resources, and scheduling impacts to both entities that serve the public. (UI 8, response 2)

Asset Condition Assessment

192. UI attached 69-kV transmission lines to the catenaries in the 1940s to connect its New Haven and Bridgeport transmission systems. At that time, UI constructed transmission support columns (bonnets) on the top of the northern and southern ends of the catenaries and installed the 69-kV transmission lines on the bonnets along with shield wires for lightning protection. (UI 1, Vol. 1, pp. 1-4 and 1-5)

193. UI's 69-kV transmission lines were upgraded to 115-kV in the 1960s. (UI 1, Vol. 1, p. 1-5)

194. UI's existing configuration is depicted in the following one-line diagram.



(UI 1, Vol 1, p. 1-10)

195. UI's existing 115-kV Line Configurations are identified in the table below.

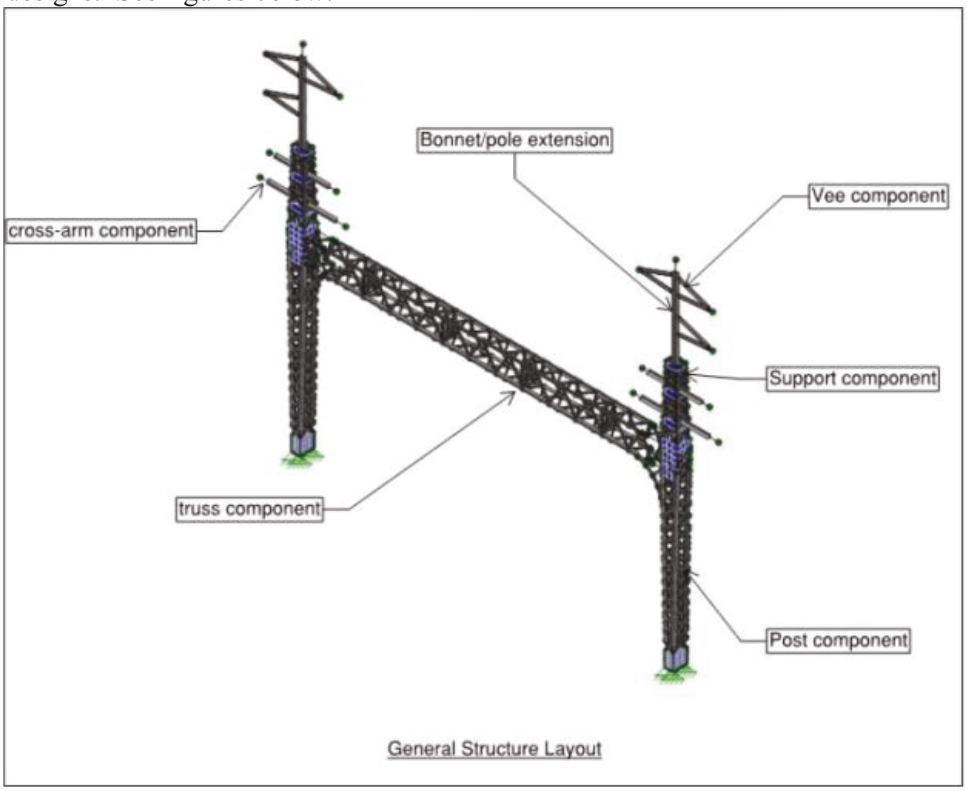
Location by Catenary Structure No, Tap, or Substation	Circuit No. Designation/Location in Relation to MNR Tracks	
	115-kV Line: North of Railroad Tracks	**115-kV Line: South of Railroad Tracks**
Catenary Structure 648 – Ash Creek Substation	1130 (Independent monopoles)	1430* (On southern catenary support columns)
Ash Creek Substation – Resco Tap (Ash Creek to Catenary Structure 737)	1130 (Independent monopoles; *115-facilities previously removed from northern catenary support columns*)	91001-2* (On southern catenary support columns)
Ash Creek Substation – Resco Tap (Catenary Structure 737 to Resco Tap)	1130 (On northern catenary support columns)	91001-2 (On southern catenary support columns)
Resco Tap – Pequonnock Substation	1130 (On northern catenary support columns)	91001-1 (On southern catenary support columns)
Pequonnock Substation – Congress Street Substation	8809A (On northern catenary support columns)	8909B (On southern catenary support columns)

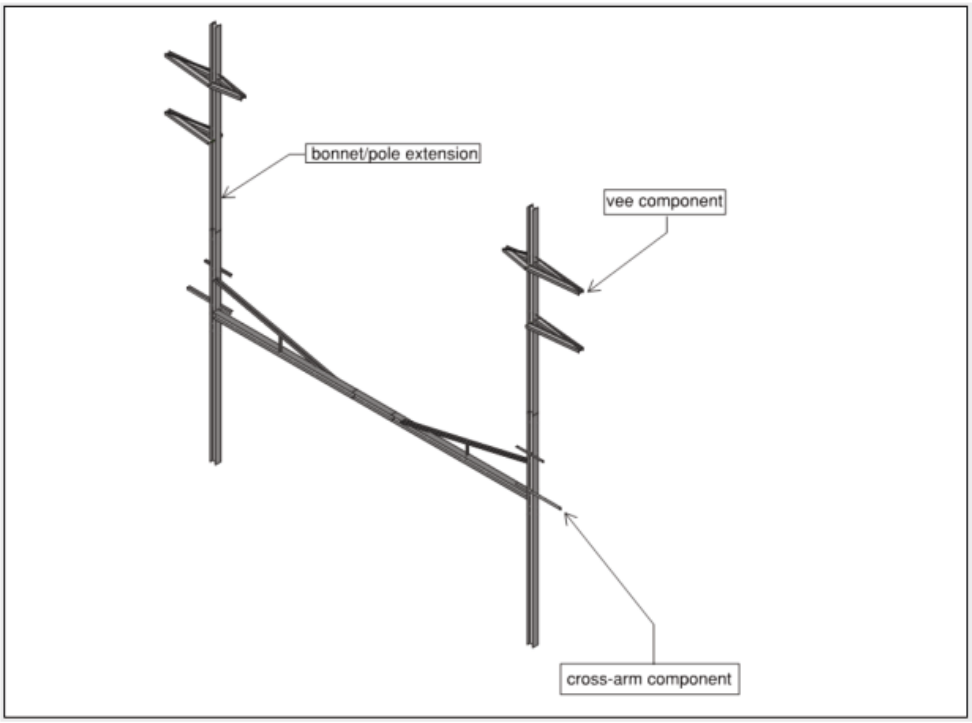
NOTES:

The existing portion of the 1130 Line (supported on independent monopoles) will not be affected by the Project.
*The 1430 and 91001-2 lines diverge from the CT DOT corridor to connect to Ash Creek Substation along UI's 0.23-mile ROW. In this area, the 1430 and 91001-2 lines are supported, in a double-circuit configuration, on three lattice steel towers.

(UI 1, Vol 1, p. 1-9)

196. The existing catenaries are approximately 60 feet wide measured perpendicular to the railroad tracks. The tops of the UI-owned bonnets with the existing 115-kV transmission attached reach a typical height of approximately 60 to 80 feet above ground level (agl). There are two types of existing catenary designs. See figures below.





(UI 1, pp. 1-7 and 2-8; UI 1, Vol. 2)

197. The Catenary Structure 648S to Congress Street Substation segment of 115-kV lines is currently located on top of 157 catenary structures that are typically spaced about 300 feet apart. (UI 1, pp. ES-2 and 1-4)

198. In 2018, UI conducted engineering analyses, the Fairfield to New Haven Railroad Corridor Transmission Line Asset Condition Assessment (Asset Condition Assessment), that included, but weren't limited to, the 115-kV transmission lines between Catenary Structure B648S and Congress Street Substation. The Asset Condition Assessment included field observations of the catenaries and evaluation of the asset condition of the catenaries, given the existing railroad mechanical loading, as well as the age of both the bonnets and the catenaries. (UI 1, Vol. 1, p. 1-14; Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #58)

199. The Asset Condition Assessment found that the existing bonnet support system for the UI transmission line has age-related physical limitations such as loss of structural steel thickness, missing structural members, corrosion expansion, and exposed anchor bolts. As a result, UI identified and evaluated alternative solutions for upgrading the lines, and determined that, to maintain the reliability of the bulk power grid, the 115-kV lines must be relocated off of the bonnets attached to the catenaries and rebuilt using new monopoles, conductor, and optical ground wire (OPGW).*

    *OPGW contains a conductor for lightning protection and fiber optics for communications between substations.
    (UI 1, p. 1-14; UI 3, response 5)

200. UI also concluded that the 115-kV lines must be rebuilt to meet current NESC and UI standards, which include the ability to withstand extreme weather conditions and all Category 3 hurricane winds, that range from 111 to 129 miles per hour (mph). UI utilizes a Category 3 design wind loading due to recent hurricanes and future climate change. (UI 1, p. 1-14; UI 3, responses 29 and 40)

201. To date, UI has removed its 115-kV electric transmission lines from the railroad catenaries along approximately 6 miles of the railroad ROW in Bridgeport, the Town of Stratford and the City of Milford. (UI 1, Vol. 1, p. 1-3; Council Administrative Notice Items – 31 (Petition 1176), 35 (Docket 3B), 39 (Docket 508))

202. Publicly available ISO-NE transmission studies recognize that incremental upgrades associated with right-sizing transmission line projects to combine rebuilds necessitated by increased loads with replacements designed to meet asset condition needs provide more cost-effective opportunities. (Tr. 6, pp. 130-131; Council Administrative Notice Item 24, p. 18)

203. ISO-NE transmission studies identify Southwest Connecticut as a high-likelihood system concern due to its location in the corner of the New England power system. Increases in assumed load exceeded line ratings and precipitated thermal overloads. (Council Administrative Notice Item 24, p. 26)

204. Projects that address ISO-NE-identified high-likelihood system concerns are likely to bring the greatest benefit for a wide range of possible future conditions as the clean energy transition accelerates. (Council Administrative Notice Item 24, p. 17)

205. Estimated cumulative costs for Southwest Connecticut Import in the ISO-NE transmission study are as follows:

Year/Load Level	Southwest Connecticut Import
2035	$0.5 Billion
2040	$0.7 Billion
2050 (51 GW winter peak)	$0.8 Billion
2050 (57 GW winter peak)	$1.6 Billion

(Council Administrative Notice Item 24, p. 50)

206. The 2050 ISO-NE transmission study determined re-energizing an unused 345-kV transmission cable from Long Mountain in New Milford to Norwalk would allow for more power flow to southwest Connecticut. Additionally, two 345/115-kV transformers, 125 miles of rebuilt overhead 115-kV lines and 21 miles of rebuilt overhead 345-kV lines would be necessary to reliably serve southwest Connecticut at the 57 GW winter peak load level. The 57 GW peak load is based on ISO-NE's 2050 New England grid projections under a 100% heating and transportation electrification scenario. (Council Administrative Notice Item No. 24, pp. 16 and 38)

207. Many of the transmission system concerns identified in ISO-NE's 2050 Transmission Study could be addressed by rebuilding existing transmission lines with larger conductors, rather than expanding the transmission system into new locations. In many cases, replacing transmission lines with larger conductors and increasing their power transfer capability would allow the system to serve significantly higher peak loads. This type of conductor replacement, or reconductoring, may also require replacing some or all transmission structures in order to accommodate heavier, larger conductors. (Council Administrative Notice Item No. 24, p. 18)

208. During an asset condition replacement project, the incremental cost of upgrading a transmission line to a larger conductor size and stronger structures is relatively low. Many expenses inherent in transmission line rebuilds are unrelated to the line's capacity; costs related to building access roads along a right-of-way, labor for building structures, and financing an ongoing project are not significantly affected by the size of the conductor chosen. Therefore, upgrading the capacity of lines as the opportunity arises, or "right-sizing" asset condition projects when they occur, could be a financially prudent way for New England to reliably serve increased peak loads. (Council Administrative Notice Item No. 24, p. 18)

209. Double-circuit towers are structures supporting two overhead transmission lines on the same structure. NERC, NPCC, and ISO-NE reliability criteria require the consideration of the loss of both lines on double-circuit towers simultaneously, which is often caused by lightning strikes. Separation of circuits on double-circuit towers involves building new structures for at least one of the two circuits, and depending on the ROW layout, may or may not require additional ROW width. (Council Administrative Notice Item 24, p. 40)

Long Range Plan

210. On September 18, 1991, the Council issued a joint Certificate to Eversource and UI for an overhead 115-kV electric transmission line within the MNR railroad corridor on the north side of the tracks between UI's Pequonnock Substation in Bridgeport and Eversource's Ely Avenue Junction in Norwalk. This is UI's existing 1130 Line. (Council Administrative Notice Item No. 36 – Docket No. 141)

211. UI installed its approximately 15.1-mile 1130 Line on mostly single-circuit monopole structures and some catenary bonnets.* This 115-kV line was required to provide additional transmission service to southwest Connecticut, extending from Pequonnock Substation west to Eversource's Ely Avenue Junction in Norwalk.**

*Generally, the 1130 Line is located on monopoles in Fairfield and western Bridgeport, and the portion of the 1130 Line in eastern Bridgeport is located on top of catenary bonnets.

**Eversource constructed and operates the portion of the 1130 Line west of the Fairfield/Westport Line or approximately west of Sasco Creek.

(UI 1, Vol 1, p. 1-5; Council Administrative Notice Item No. 36 – Docket No. 141 Findings of Fact #21, #26 and #46)

212. In its final decision, the Council determined the addition of a transmission line on the north side of the existing railroad ROW would not significantly increase the environmental effects of the existing line on the south side of the existing railroad ROW that has been operating for many years. (Council Administrative Notice No. 36 – Docket No. 141 Opinion, p. 2)

213. In its final decision, the also Council determined that a high-pressure fluid filled (HPFF) underground alternative through the streets would affect traffic, would be difficult to repair, might cause environmental damage by invasion of wetlands and habitats from effects associated with blasting and soil erosion, and would be excessively costly when compared to the cost of the proposed line. (Council Administrative Notice No. 36 – Docket No. 141, Opinion, p. 3)

214. The Council ordered compact spacing and reverse phasing placement of the conductors to reduce the magnetic fields as a condition of the Certificate. (Council Administrative Notice No. 36 – Docket No. 141, Opinion, p. 3)

215. The existing 1130 Line utilizes 1590 kcmil aluminum conductor steel supported (ACSS) conductors. (Tr. 1, p. 29)

216. In the mid-1990s, UI replaced the 115-kV lines along the DOT corridor in the vicinity of Congress Street Substation and the Pequonnock River (catenary structures B778 through B790) as part of the Bridgeport Viaduct Project to allow for reopening of the Peck Drawbridge in Bridgeport. (UI 1, Vol. 1, p. 1-5; Council Petition 280)

217. On April 7, 2005, the Council issued a joint Certificate to Eversource and UI for the Middletown to Norwalk 345-kV Transmission Line Project consisting of an underground 345-kV electric transmission line with cross-linked polyethylene conductor (XLPE) for approximately 24 miles within the Route 1 corridor and reconstruction of portions of existing 115-kV electric transmission line between East Devon Substation and Norwalk Substation. (Docket 272, Opinion p. 16)

218. The estimated cost of an underground route was $8.5 to $12.7 million. (Docket 272, Finding of Fact ¶508)

219. Eversource's total actual cost for its portion of the Middletown to Norwalk Project was $955 million. (Docket 272, Supplement to Final Report)

220. On November 9, 2017, the Council issued a Certificate to Eversource for the Greenwich Substation and Line Project (GSLP) consisting of an underground 115-kV electric transmission line with XLPE conductor for approximately 2.3 miles across Bruce Park and within roads between Cos Cob Substation at Sound Shore Drive and a new Greenwich Substation at 290 Railroad Avenue in Greenwich. (Council Administrative Notice Item 37- Docket 461A)

221. In 2017, the cost of double circuit underground routes utilizing HPFF cable installation was approximately $28.1 to $31.3 million/circuit mile. By comparison, the Stamford Reliability Cables Project (SRCP), which was approved by the Council on September 5, 2013 and involved the installation of a 1.4 mile long single circuit XLPE cable in roadways in Stamford, cost approximately $24.2 million/circuit mile. (Council Administrative Notice Item 37 – Docket 461A; Council Docket 435, Record)

222. Actual construction costs for the SRCP amounted to $36.6 million. (Council Docket 435, Final Report)

223. Eversource's life cycle cost analysis for the GSLP was $121.6 million. The resulting life cycle cost per mile is $52.9 million. There was no directly comparable data within the Council's 2012 Life Cycle Cost Analysis Report as the route consisted of a double circuit HPFF 115-kV transmission line that included two HDD installations. The Council's 2012 Life Cycle Cost Analysis Report only provided an estimate for the life cycle cost of a single circuit underground HPFF line - $15 million/circuit mile. (Council Administrative Notice Item 37 – Docket 461A)

224. The estimated cost of the overhead GSLP alternative was $78 million. The estimated cost of the underground GSLP alternative was $98 million. Actual construction costs of the GSLP amounted to $130.2 million. This is 67% higher than the overhead estimate and 33% higher than the underground estimate. (Council Administrative Notice Item 37 – Docket 461A)

225. On September 21, 2015, the Council issued a declaratory ruling to UI for the Bridgeport-Stratford 115-kV Transmission Line Upgrade Project to install 1590-kcmil conductors on steel monopoles for 2.3 miles parallel to the north and south sides of the MNR ROW between Congress Substation in Bridgeport and Baird Substation in Stratford due to physical limitations associated with the catenary support structures and bonnets. (Council Administrative Notice Item 31 – Council Petition 1176)

226. The Bridgeport-Stratford 115-kV Transmission Line Upgrade Project relocated UI's facilities off 94 bonnets onto 83 monopoles. The project required acquisition of permanent easements. Construction was completed in April of 2020. (Council Administrative Notice Item 31 – Council Petition 1176)

227. On February 23, 2023, the Council issued a Declaratory Ruling to Eversource for the 1714 Line Rebuild Project to replace and reconductor its 115-kV electric transmission line along approximately 9.4 miles of existing ROW between its Weston Substation and UI's Old Town Substation in Bridgeport. UI participated in the proceeding as a party. (Council Administrative Notice Item 33 – Petition 1549)

228. Eversource's 1714 Line Rebuild Project entails replacement and realignment of the existing structure configuration to maintain electrical clearances, install mid-span structures to reduce span widths and mitigate conductor blowout, and coordination with UI on modifications at its Hawthorne and Old Town Substations. (Council Administrative Notice Item 33 – Petition 1549)

229. Eversource's 1714 Line Rebuild Project replaces 556-kcmil aluminum conductor steel reinforced (ACSR) conductor with 1590 ACSS conductor. (Council Administrative Notice Item 33 – Petition 1549)

230. The total estimated cost of Eversource's 1714 Line Rebuild Project is $124.3 million. (Council Administrative Notice Item 33 – Petition 1549)

231. Construction of the 1714 Line Rebuild Project commenced on July 12, 2023. The project design is not dependent upon the design of any UI projects. (Council Administrative Notice Item 33 – Petition 1549)

232. UI's existing 1430 Line extends from the point of UI's interconnection to Eversource's 1430 Line at the Westport-Fairfield Town Line to Ash Creek Substation via Ash Creek Substation Connection. The 1430 Line extends within the site along the southern side of the catenaries from Catenary Structure B648S to approximately Catenary Structure B713S, after which the 1430 Line diverges from the railroad ROW and continues as one of the two lines that makes up the Ash Creek Substation Connection. (UI 1, Vol. 1, p. 1-12)

233. UI's existing 1430 Line utilizes 1590 kcmil ACSR conductors. (Tr. 1, p. 29)

234. UI's existing 91001-2 Line makes up the other line of Ash Creek Substation Connection and then continues eastward on the southern side of the catenaries before connecting to Resco Tap. (UI 1, Vol. 1, pp. 1-12 and 1-13)

235. Resco Tap is UI's 115-kV single-circuit tap line (or 91001-3 Line) to Resco Substation that was constructed in the 1990s. It provides a connection between the WIN Waste Innovation (f/k/a Wheelabrator Technologies, Inc.) waste-to-energy plant and the transmission system. Resco Substation does not serve any distribution loads. (UI 1, Vol. 1, pp. 1-3 to 1-6 and 1-10; Tr. 1, p. 24)

236. UI's existing 91001-1 Line extends from Resco Tap east to Pequonnock Substation. With the exception of the span of the Interstate 95 (I-95) crossing east of Black Rock Harbor, which utilizes two monopoles, the 91001-1 Line is generally located on the southern side of the catenaries. (UI 1, Vol. 1, p. 1-13)

237. UI's existing 8809A and 8809B Lines were installed to connect Pequonnock Substation and Congress Street Substation. With the exceptions of a 215-foot double-circuit lattice tower located above the MNR tracks at the Bridgeport Transportation Center and two monopoles located adjacent to and south of the I-95 overpass, the 8809A Line is generally located on the northern side of the catenaries. The 8809B Line is located on the southern side of the catenaries. The 8809A and 8809B Lines were installed on the catenaries in the 1990s. (UI 1, Vol. 1, p. 1-13)

238. On October 12, 2018, the Council issued a Certificate to UI for the Pequonnock Substation Rebuild Project to address asset condition and flood risk issues associated with the existing Pequonnock Substation. The replacement substation location is at 1 Kiefer Street Bridgeport, about 700 feet southwest of the existing Pequonnock Substation location. (Council Administrative Notice Item No. 38 – Docket No. 483, Findings of Fact #38, #40, #68 and #70)

239. The existing 115-kV lines along the railroad ROW in the vicinity of the existing substation (1130/91001-1 Lines and 8809A/8909B Lines) are being rebuilt with new steel monopoles, 115-kV conductor, and OPGW. The Project would connect to the new monopoles. Specifically, the new monopoles are Structures P765BS and P766DC for the 1130 and 91001-1 Lines and Structure P774S for the 8809A and 8909B Lines. (UI 1, Vol. 1, p. 3-14; Council Administrative Notice Item No. 38 – Docket No. 483, Development and Management Plan)

240. In 2019, the Council approved, and UI completed replacement of OPGW that provides communication and lightning protection for UI's and Eversource's 115-kV lines from Pequonnock Substation to Catenary Structure 737. (Council Administrative Notice Item 29)

241. The underground connections to the replacement Pequonnock Substation for the 1955, 1710 and 1697 Lines would not be modified by the Project. (Council Administrative Notice Item No. 38 – Docket No. 483, Development and Management Plan; UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 7 of 7)

242. The Council approved the Development and Management Plan (D&M Plan) for the Pequonnock Substation Rebuild Project on August 28, 2020. Construction commenced on August 16, 2021. The replacement Pequonnock Substation is expected to go into service at the end of 2024. The original Pequonnock Substation will be decommissioned after the replacement substation goes into service. (Council Administrative Notice Item No. 38 – Docket No. 483, Finding of Fact #91, Council Decision on D&M Plan and UI Notice of Commencement of Construction; Council Administrative Notice Item No. 75 – UI 2023 FLR Report, p. 22; Tr. 1, p. 52)

Proposed Project

243. The June 2023 ISO-NE Asset Condition List identifies the proposed Project as "Planned," which means it is a regulated transmission upgrade that has been approved by ISO-NE under Identification Nos. 91, 151, 152, 153, and 154. (Council Administrative Notice Item No. 19 – ISO-NE 2021 Regional System Plan; Council Administrative Notice Item No. 21 – March 2023 Asset Condition List; June 2023 Asset Condition List; Tr. 1, 38)

244. The Project would adhere to NESC standards and UI design criteria, e.g. withstand Category 3 wind loads. (UI 1, p. 9-1)

245. The Project is listed in UI's March 1, 2023 *Ten-Year Forecast of Loads and Resources (FLR) Report* as a planned 115-kV electric transmission line facility upgrade due to asset condition needs. (Council Administrative Notice Item No. 75 – UI 2023 FLR Report)

246. The Project is consistent with the *Conservation and Development Policies Plan for Connecticut 2018-2023* (C&D Plan). It will serve a public need for a reliable source of electricity to support development in regional centers, ensure the safety and integrity of infrastructure over its useful life and minimize risks from natural hazards. (Council Administrative Notice Item No. 59 – C&D Plan; UI 1, Vol. 1, pp. 5-27 and 5-28)

247. The two municipalities in the Project area are part of the Connecticut Metropolitan Council of Governments (MCOG). The Project is consistent with the policies of MCOG by rebuilding 115-kV transmission along or adjacent to the railroad corridor, which has been historically used for both transportation and electric transmission purposes. (UI 1, Vol. 1, p. 5-28)

248. In January 2022, the U.S Department of Energy launched a "Building a Better Grid" initiative to facilitate deployment of new and upgraded electric transmission lines and work with community and industry stakeholders to identify national transmission needs that are critical for reaching President Biden's goal of 100% clean electricity by 2035 making the U.S. power grid more resilient to the impacts of climate change, increasing access to affordable and reliable clean energy, and boosting electric transmission jobs. (UI 3, response 8)

249. The Project is not expected to be eligible for funding via federal programs at this time. However, UI continues to monitor federal programs for potential applicability. (Tr. 1, pp. 47-48)

250. Connecticut, Maine, Massachusetts, Rhode Island, and Vermont have committed to reducing their carbon dioxide emissions by at least 80% by 2050, prompting ongoing changes in the grid's resource mix and the increased electrification of the heating and transportation sectors. (Council Administrative Notice Item No. 24, Draft 2050 ISO-NE Transmission Study, p. 8)

251. The future evolution of the power system toward renewable and variable or intermittent resources increases the importance of a robust transmission system. Many of the best locations for renewable resources like large-scale wind and solar farms are not near major load centers (i.e., the urban areas of New England) and the transmission system will be relied on to deliver the power from these renewable resources to electricity consumers. Transmission can also help to provide geographic diversity in renewable resources, smoothing out variations in wind and solar production in different parts of the power system. (Council Administrative Notice Item No. 24, Draft 2050 ISO-NE Transmission Study, p. 14)

252. With the expected future increase in the electrification of the heating and transportation sectors, summer and winter peak loads are expected to increase dramatically. Additionally, New England's current summer peaking system is forecasted to become winter peaking by the mid 2030s. A robust transmission system will ensure that loads under these future conditions can be served reliably. (Council Administrative Notice Item No. 24, Draft 2050 ISO-NE Transmission Study, p. 14)

253. The Project would be well placed in the coastal Connecticut area to potentially support the transmission of clean energy from offshore wind projects. Specifically, the Project's conductors and structures would be capable of accepting future capacity to be connected to the transmission system. (UI 3, responses 8 and 9; Tr. 1, pp. 24-25)

254. UI is not aware of specific generation projects in the ISO-NE Interconnection Queue to interconnect at this time. (UI 3, responses 8 and 9; Tr. 1, pp. 24-25)

255. Connecticut's Comprehensive Energy Strategy (CES) proposes further investments in grid reliability and identifies three important components to grid reliability: resource adequacy, transmission security and distribution resiliency. (Council Administrative Notice Item No. 47 – 2018 CES, p. 45)

Project Cost and Cost Allocation

256. The Connecticut Environmental Policy Act specifically applies to actions proposed to be undertaken by state departments, institutions or agencies, or funded in whole or in part by the state, that may significantly affect the environment, such as construction of state bridges and transportation infrastructure by DOT. It does not apply to private entities. (C.G.S. §22a-1a, *et seq*. (2023); *City of New Haven v. Conn. Siting Council,* 2002 Conn. Super. LEXIS 2753 (Conn. Super. 2002); Council Petition 1560)

257. Eversource and DOT have a July 22, 2021 Cost Sharing Agreement for a 50/50 split between DOT and Eversource customers for the construction costs associated with DOT's Walk Bridge Replacement Project and Eversource's Norwalk Bridge Transmission Relocation Project (NBTRP). The total estimated cost of the NBTRP is $46.3 million. Construction commenced on August 1, 2023. (Council Petition 1560)

258. Neither UI's Fairfield to Congress Railroad Transmission Line 115-kV Rebuild Project, nor any portion thereof, is proposed to be undertaken by state departments, institutions or agencies or to be funded in whole or in part by the state through any grant or contract. (Tr. 3, p. 156; UI 3, response 1; CGS §22a-1, *et seq*. (2023); Council Petition 1560)

259. UI follows the rules outlined in ISO-NE Planning Procedure 4 (PP4) to determine a project cost accuracy band required at various stages of a project. A "proposed project" requires the accuracy band to be within a +50%/-25% range, and a "final project design" requires a +/- 10% range. (UI 3, response 13)

260. The estimated capital cost of the Project is:

Total Construction	$123,500,000
Allowance for Funds Used During Construction (AFUDC) and Overhead*	$78,200,000
Land Rights**	$32,200,000
Materials	$10,700,000
Engineering Design and Permitting	$10,400,000
Total Estimated Cost* **	**$255,000,000**

*AFUDC is a combination of actual and forecasted costs for the Project. AFUDC are accrued interested on funds invested in a utility capital project, and Overheads are costs associated with the Project for certain services including, but not limited to, labor, general construction, and fleet, which are a calculated percent against the Project value. AFUDC totals about $31.4M, and Overhead totals approximately $46.8M.

**This is a high-level estimate of the approximately 19.3 acres of permanent easement to be acquired by UI based on the number of acres and an estimated cost per acre. A lower estimate of $30M was also provided by UI. The higher original estimate of $32.2M is used above to be conservative.

***The total cost has an accuracy band of +/- 25 percent, consistent with PP4. Substation upgrades would comprise less than 1 percent of the total cost.

(UI 1, Vol. 1, p. 2-17; UI 3, responses 10, 11 and 13; Tr. 1, p. 25; UI 12, response 77)

261. UI is responsible for costs to transfer DOT facilities for approximately $265,000. (UI 3, response 37)

262. SCNET Group's expert witness is a professional engineer licensed in British Columbia, Canada. The Town's expert witness is a professional engineer licensed in Quebec, Canada. UI's expert witness is a professional engineer licensed in Delaware, Pennsylvania, New York and Connecticut. (SCNET Group 24; Town 10; UI 15)

263. It is unknown if the cost estimates provided by SCNET Group and the Town's professional engineers are in American dollars or Canadian dollars. For this document, it is assumed the costs are in American dollars (SCNET Group 24; Town 10)

264. SCNET Group's cost estimate for a single circuit underground configuration is $157 million. SCNET Group's cost estimate for a double circuit underground configuration is $182 million. This does not include the HDD, survey work, soil sampling, environmental and geotechnical work, thermal studies, removal of the existing lines or the substation work. It is only for the underground cables. (Tr. 7, pp. 57, 61-66; SCNET Group 24)

265. SCNET Group's expert witness provided an estimated cost to underground the Project of $182 million based on a double-circuit configuration. The report references an electric distribution line. (SCNET Group 24; Tr. 7, pp. 62, 73)

266. Costs to design, install, operate and maintain an electric distribution line are less than costs to design, install, operate and maintain an electric transmission line. (Tr. 7, p. 60-62)

267. The Town's expert witness provided an estimated cost of $200 million or $27.1 million per mile to underground the Project based on a double-circuit configuration. (Town 10; Tr. 7, p. 153)

268. The Town believes that UI's cost of estimate of ~$30M for land rights for the Project is significantly underestimated. The Town estimates that it would cost on the order of three to five times UI's cost projection. (Town 8, pp. 6-7; UI 23, response 16; Tr. 7, pp. 142-143, 149-150)

269. The Project scope of work involves upgrading 115-kV transmission lines which are considered PTFs. Therefore, the entire Project cost is expected to be regionalized. (UI 3, response 12)

270. Cost regionalization would result in Connecticut ratepayers paying approximately 25 percent of the Project cost. Of the 25 percent of the total that would be borne by Connecticut ratepayers, approximately 5 percent of the total would be for UI retail customers; 19 percent would be for Eversource retail customers; and about 1 percent (combined) would be for the Connecticut Municipal Electric Energy Cooperative and Town of Wallingford retail customers. The remaining 75 percent of the total Project cost would be borne by New England customers located outside of Connecticut. These cost allocations are generally determined by ISO-NE based on load share. (UI 3, response 12; UI 12, response 6; Tr. 1, pp. 27-28, 50)

271. The proposed Project would be considered the least cost alternative in terms of ISO-NE cost allocation. (Tr. 1, pp. 25-26)

272. UI's estimated cost to install the Project underground within public streets from Structure P648S to Congress Street Substation is $1 billion. (UI 1, Vol 1, pp. 9-9 to 9-10; UI 16)

273. Any incremental costs (cost delta) beyond the least cost alternative as identified by ISO-NE (i.e. the proposed Project) would be expected to be regionalized across New England or borne by Connecticut ratepayers only, depending on what drives the incremental cost. (Tr. 1, p. 26)

274. ISO-NE makes the final determination on the regionalization of a cost delta or if the cost delta would be borne by Connecticut ratepayers. For example, if a municipality required that a line in that municipality be constructed underground in to order to reduce the visual impacts of such facility in that municipality and the cost to underground the line is substantially more than the overhead solution, the cost delta between the overhead solution and the underground solution would likely be borne by Connecticut ratepayers because the underground solution would only benefit the residents of such municipality. (UI 12, response 76)

275. BWC is willing to fund the relocation of P724S off of BWC's property and onto the Feroleto Steel Co., Inc property in order to maintain critical functioning of its loading dock and operations and avoid associated business impacts. (BWC 2, Pre-filed Testimony of Patrick Netreba dated August 22, 2023, p. 5)

276. ISO-NE does not provide any process for private funding of a PTF. ISO-NE would defer the responsibility of local cost recovery, including private funding, to the transmission owner and local interested parties such as PURA or the Office of Consumer Counsel. (UI 19, Late Filed Exhibit 3-9)

277. In the 2022 Council Life Cycle Report, UI provided data relative to a single-circuit 115-kV vertical monopole configuration along the MNR railroad ROW with 1590 ACSS conductors. The first costs (to design, permit and build the line) were estimated at $10,819,493 per mile. The (initial) annual operations and maintenance costs were estimated at $38,553 per mile. The (initial) annual electrical loss costs were estimated at $117,888. The life-cycle cost (net present value) was estimated at $16,036,641 per mile. (Council Administrative Notice Item No. 28 – 2022 Council Life-Cycle Report, pp. 8 and 23)

278. Double-circuit transmission line life-cycle costs could not be calculated because life-cycle cost data on double-circuit transmission configurations are not available. (Council Administrative Notice Item No. 28 – 2022 Council Life-Cycle Report)

Project Alternatives

No Action Alternative

279. A "no-action" alternative would not resolve the known asset condition issues, associated with the alignment of the existing 115-kV lines on top of the catenaries; thus, it would not allow conformance with current NESC and UI standards. As a result, the 115-kV lines would continue to be at risk for structural failures associated with mechanical loadings or stress associated with major weather events such as hurricanes. Such structural failures could lead to extended duration outages that would adversely affect electrical customers and the bulk power system. (UI 1, Vol. 1, pp. 9-2 and 9-3)

280. The "no-action alternative was rejected by UI because it would not resolve the known asset condition issues. It was also rejected by DOT as it is inconsistent with plans to improve railroad service and requires coordination between UI and DOT for any maintenance on the railroad or the electric transmission lines. (UI 1, Vol. 1, pp. 9-2 and 9-3; UI 12, response 85; DOT comment letter received August 18, 2023)

Transmission Alternatives

Overhead Alternatives

281. UI evaluated four overhead transmission alternatives:

    a) Install new single-circuit and double-circuit monopoles along the railroad corridor. Single-circuit monopoles would generally be installed to support 115-kV lines that are currently located on catenary bonnets on the south side of the tracks within Fairfield and western Bridgeport. Double-circuit monopoles would be used to support 115-kV lines that are currently located on catenary bonnets on the north and south sides of the tracks in Bridgeport. This is the proposed Project (Alternative 1);

b) Install new single-circuit monopoles to support 115-kV lines that are currently located on catenary bonnets on the south side of the tracks within Fairfield and western Bridgeport and both north and south sides of the tracks in portions of Bridgeport. The new monopoles would be installed within or near both sides of the railroad ROW depending on the location (Alternative 2);
c) Perform structural modifications to the existing catenaries/bonnets on the south side of the tracks within Fairfield and western Bridgeport and both north and south sides of the tracks in portions of Bridgeport to allow existing 115-kV lines to generally remain. In Bridgeport where 115-kV lines are located on catenary bonnets on the north and south sides of the tracks, one 115-kV circuit would be rebuilt onto single-circuit monopoles (Alternative 3); and
d) Rebuild the existing catenaries/bonnets to completely correct all structural deficiencies to continue to support both 115-kV lines on bonnets (Alternative 4)

(UI 1, Vol. 1, pp. ES-1, 9-12, and 9-13; UI 3, response 14)

282. UI evaluated a hybrid of Alternative 1 and Alternative 2. The Hybrid Alternative is substantially similar to Alternative 1 except that, for an approximately 0.5-mile long segment west of Pequonnock Substation, the two 115-kV lines would be would be installed on single-circuit monopoles – one circuit to the north of the railroad ROW and one circuit to the south of the railroad ROW (Alternative 5). (UI 1, Vol. 1, pp. 9-13 and 9-14)

283. UI determined that a hybrid alternative was preferred due to system concerns under certain operating conditions caused by issues on the cables out of Pequonnock Substation. (UI 1, Vol. 1, pp. 9-12 to 9-13)

284. UI rejected Alternatives 3 and 4 due to the extensive structural modifications to upgrade the existing catenary structures and UI bonnets that would be required. Additionally, an extensive construction schedule and phasing would need to be scheduled and coordinated with DOT and MNR. The cost of Alternatives 3 and 4 would be on the 200% higher than Alternative 1. (UI 1, Vol 1, pp. 9-12 to 9-14)

285. DOT concurs with UI's rejection of Alternatives 3 and 4 due to inconsistencies with DOT and UI objectives as well as significant cost and constructability issues. (DOT Comments dated August 15, 2023)

286. In its application, UI evaluated two overhead alternatives associated with the existing 1130 Line on the north side of the railroad ROW. One alternative involved modification to the existing 1130 Line to support a double-circuit configuration and the other alternative involved rebuilding the existing 1130 Line to support a double-circuit configuration. (UI 1, Vol. 1, pp. 9-14 to 9-16)

287. UI eliminated these alternatives from consideration due to cost, line outages associated with the construction process, and potential connection issues to the Eversource transmission system that would require coordination with Eversource. (UI 1, Vol. 1, pp. 9-14 to 9-16)

Underground Alternatives

288. UI evaluated an underground transmission alternative within the railroad ROW. (UI 1, Vol. 1, pp. 9-5 and 9-6)

289. The railroad dates back to the mid-1800s, and the Call Before You Dig (CBYD) program is not applicable. There are numerous existing underground utility facilities within the ROW (both railroad and private) which would interfere with or potentially be damaged by an underground transmission line installation. Thus, hand digging down to at least 4 feet at every excavation point (in lieu of

CBYD) would be necessary, but it would add time and cost to the Project and would impact railroad operations. DOT also notes that no longitudinal* underground utility occupations are allowed within the railroad ROW. Thus, UI eliminated the underground Alternative within the railroad ROW from consideration.

*Longitudinal means parallel to the railroad tracks. Only traverse (i.e. perpendicular to the tracks) underground crossings are allowed.

(DOT Comments received August 18, 2023, p. 3; DOT Comments received October 6, 2023; UI 12, response 85; Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #77; UI 1, pp. 9-5 and 9-6)

290. UI also evaluated an underground transmission alternative in public streets (Alternative 6). (UI 1, Vol. 1, pp. 9-7 to 9-12)

291. Any underground alternative in public streets would be longer than the proposed overhead configuration because there are no roads that provide a direct path. UI estimates the underground route within public streets would be at least approximately 10 miles long. (UI 1, Vol. 1, p. 9-12)

292. For its Milvon to West River Railroad Transmission Line 115-kV Rebuild Project, UI's cost projection for an underground transmission alternative along the north side of the railroad ROW was $1.6 billion; UI's cost projection for an underground transmission alternative along the south side of the railroad ROW was $1.4 billion; and UI's cost projection for an all underground transmission alternative within streets was $3.4 billion based on a length of 11.5 linear miles. (Council Administrative Notice Item No. 39 – Docket 508)

293. On May 26, 2023, the Council issued the declaratory ruling to Eversource for the NBTRP that was driven by DOT's Walk Bridge Replacement Project in the City of Norwalk. The NBTRP entails the removal of Eversource 115-kV electric transmission facilities from catenary structures and bonnets within the railroad ROW and construction of a new underground configuration within roads and across the Norwalk River for approximately 0.66 miles. (Tr. 5, p. 112-117; Council Petition 1560)

294. Of the 4 catenary bonnet extensions that currently carry Eversource conductors, 2 are no longer necessary and 2 would be modified by adding post brace insulators to maintain the overhead transmission line within the railroad ROW. (Council Petition 1560)

295. In considering a potential underground alternative in public streets, UI considered the alignment of the existing 345-kV XLPE Middletown to Norwalk Project cables that extend east to west beneath roads in the general vicinity of the railroad ROW in both Fairfield and Bridgeport. (UI 1, Vol. 1, p. 9-7)

296. An underground route within public roads was rejected because, in the general area of the Project, 345-kV cables are located underneath Route 1 (Post Road) and Fairfield Avenue as well as other roads, and UI determined that a 115-kV underground cable system could not be located in the immediate vicinity of the these 345-kV cables due to the potential for mutual heating that could adversely affect the ratings on one or both of the transmission lines. UI estimates that roughly a minimum of 10 to 12 feet from its 115-kV transmission cables and the existing 345-kV transmission cables would be required due to address mutual heating.*

*An analysis of the ampacity of the cables would be required to determine the final required spacing of the cables.

(UI 1, Vol. 1, p. 9-7; Tr. 4, p. 89; Tr. 6, pp. 116-117; Tr. 7, pp. 156-157)

297. Route 1 and Fairfield Avenue are not wide enough to allow the required separation between the 115-kV cables and the 345-kV cables. UI also notes that the Route 1 corridor is congested, and duct banks would need to be located within that corridor to accommodate a Route 1 underground route. Thus, UI would have to locate its 115-kV cables outside of these road ROWs, on private properties. Splice vaults are not allowed within state highways. (UI 1, Vol. 1, p. 9-7; Tr. 6, p. 116, 161-162)

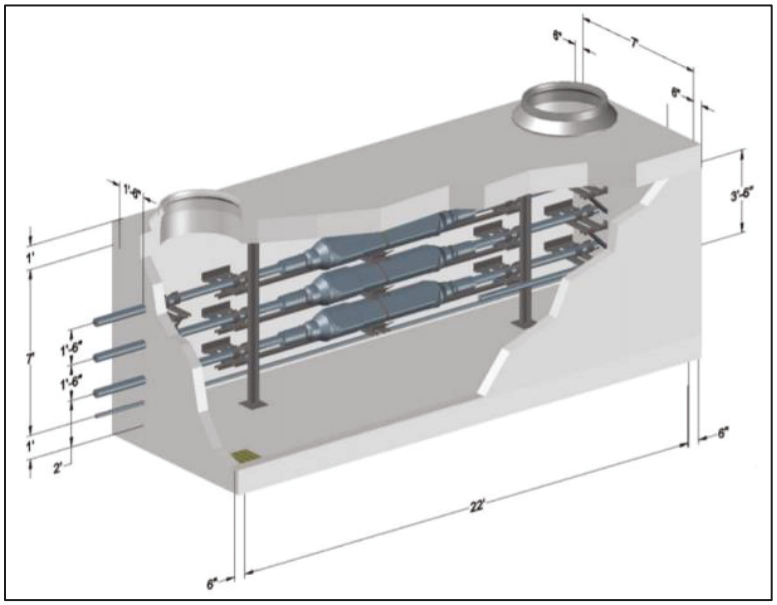
298. An all-underground configuration would require 747,504 feet of cable, 84 terminations and 90 splices. An underground configuration between P648S and Ash Creek Substation would require 318,366 feet of cable, 21 terminations and 90 splices. (UI 16, pp. 3, 9)

299. Underground trench installation could cause drainage issues on adjacent properties that could be remediated by subsurface work, such as the installation of curtain drains. (Council Administrative Notice Item 37 – Docket 461, Finding of Fact 426)

300. Two transition riser structures at each end (or a total of four) would be necessary to support an underground segment of two XLPE circuits as they transition from overhead to underground and from underground back to overhead, for example, from proposed Structure 723S to proposed Structure 725S. (Tr. 3, p. 69)

301. The maximum length of XLPE cable installation is 2,500 feet before a splice vault is necessary. (Council Administrative Notice Item 37 – Docket 461, Finding of Fact ¶291)

302. For Eversource's GSLP, which involved two 115-kV transmission circuits extending approximately 2.3 miles, each splice vault location consisted of two separate vaults, one for each circuit, with each vault measuring approximately 23 feet long, 8 feet wide by 9 feet high. A schematic showing the approximate dimensions of a splice vault is shown below:



(Council Administrative Notice 37 – Docket 461A, Finding of Fact ¶226)

303. Construction of the GSLP commenced in May of 2018 and was completed in November 2020. (Council Administrative Notice Item 37 – Docket 461A)

Additional Alternatives Explored During the Proceeding

304. During the proceeding, the following additional alternatives suggested by the Council were explored:

a) Double-circuit Overhead Transmission North of the Railroad Tracks from Catenary Structure B648S to Ash Creek Substation Connection (Hannon-Morissette Alternative); and
b) Single-circuit Underground Alternative from B648S to Ash Creek Substation Connection (SCU Alternative)

(UI 18, Late Filed Exhibit 2-5)

Hannon-Morissette Alternative

305. The existing 1130 Line structures could not accommodate an additional circuit. It is technically feasible to collocate the 1430 Line with the 1130 Line on double circuit monopoles north of the railroad ROW. This would require a complete rebuild that would include, but not be limited to, new foundations and stronger structures. (UI 22, response 9; Tr. 1, pp. 54, 99-101)

306. In most cases, the proposed structure heights are due to MNR and DOT's requirement for a 15-foot radial clearance between railroad infrastructure and UI's 115-kV conductors. (Tr. 1, pp. 53-54)

307. The estimated useful life of the conductor on the 1130 Line is approximately 40 years. Under the Hannon-Morissette Alternative, conductor for both the 1130 and 1430 Lines would be replaced. (Tr. 3, pp. 110-111)

308. UI has not conducted an asset condition analysis on the 1130 Line. (UI 22, response 9; Tr. 6, p. 194)

309. A 1130 Line Rebuild from Pequonnock Substation to UI Structure B737 is identified on the ISO-NE Asset Condition List as entry no. 152 with a projected in-service date of April 2028. A double circuit contingency is the loss of two adjacent transmission line circuits on a double-circuit structure. No portion of the 1130 Line has been identified as a double circuit contingency by ISO-NE because the loss of a double-circuit structure would still allow substations to be supplied from the opposite ends. (Tr. 6, pp. 194-197; ISO-NE, OP-19 Transmission Operations, Appendix J)

310. The 1130 Line is supported on 86 monopoles and 8 bonnets on top of the railroad catenaries. The 1430 Line and 91001-2 Line are installed on southern catenary structures. UI explored the feasibility of 2 options to rebuild the 1130 Line: modify the existing line in a double-circuit configuration or remove the existing line and install both lines in a double-circuit configuration. (UI 1 Volume 1, pp. 9-14 – 9-16)

311. UI rejected both options because the existing structures and foundations are not designed to support a double-circuit configuration and cannot be modified. Approximately 50% of the existing 1130 Line monopoles are in a delta configuration and there is no physical space for additional attachments to accommodate an additional line. (UI 1 Volume 1, pp. 9-14 – 9-16)

312. Costs to rebuild the 1130 Line between catenary structure 648S and Ash Creek substation would be approximately $104 million. (UI 19, LF 3-12)

313. Eversource-owned extensions of the 1130 and 1430 Lines are located west of Sasco Creek. The 1130 Line is located north of the railroad ROW and the 1430 Line is located south of the railroad ROW. (UI 21, response 3)

Single-Circuit Underground Alternative (B648S to Ash Creek)

314. A single-circuit underground alternative with a duct bank on the southern side of the railroad ROW would cost approximately $488 million. (UI 18, Late Filed Exhibit 2-5)

Shorter Monopoles with Smaller Conductors

315. During the proceedings held on the Milvon to West River Railroad Transmission Line 115-kV Rebuild Project, SHPO suggested an alternative with fewer structures of taller heights. (Council Administrative Notice Item 39 – Docket 508, Opinion p. 8)

316. In its August 18, 2022 final decision on the Milvon to West River Railroad Transmission Line 115-kV Rebuild Project, the Council ordered UI to construct "Option J," which entailed reduced structure heights ranging from 5-20 feet and a net increase of one structure in Downtown Milford. (Council Administrative Notice Item 39 – Docket 508, Opinion p. 8)

317. The section of reduced structure heights ordered by the Council spans the historic area of Downtown Milford. This "Option J" configuration reduced visual impacts to this historic area with the smallest cost delta of all of the alternatives - $350,000 beyond the originally proposed $295 million Project or a very modest cost increase of 0.12 percent. (Council Administrative Notice Item 39 – Docket 508, Opinion p. 7)

318. Smaller conductors could theoretically result in shorter poles and smaller foundations. However, UI must comply with conductor clearance requirements relative to the existing catenaries because new poles would be located adjacent to existing catenaries. Thus, conductor sag is not expected to be a factor in pole height, and smaller conductors would not be expected to decrease overall pole height. (Tr. 7, p. 193-194; Tr. 6, p. 132)

Bridge Attachment

319. DOT is generally opposed to any attachment of transmission lines to its bridge infrastructure. (Council Administrative Notice Item 37 – Docket 461A, Finding of Fact 235; Council Petition 1560)

320. For the GSLP, two options to cross I-95 at Field Point Road were presented: an above ground crossing with the line attached to the underside of the overpass bridge or a pipe jacking crossing where the line would be installed under the highway. DOT opposed any attachment of the line to the bridge. (Council Administrative Notice Item 37 – Docket 461A, Findings of Fact 234-241; Council Petition 1560, Record)

321. There are two water crossings at Southport Harbor and Ash Creek Substation. Use of horizontal Directional Drilling (HDD) would be required for an underground configuration. (Tr. 6, pp. 117-119)

322. An underground line configuration would need to cross the harbor. Use of HDD would be required if attachment to the bridge for the water crossing was prohibited. (Tr. 6, pp. 117-119)

Conductor Alternatives

323. The existing Eversource conductor on its portion of the 1430 Line is 1272-kcmil ACSR "Bittern." It would constrain the overall line rating until Eversource completes reconductoring along that portion of the line due to the differences in maximum operating temperature between ACSR and ACSS conductors and the smaller conductor size of 1272-kcmil relative to UI's proposed 1590-kcmil. (UI 12, response 81, 83)

324. UI's 1590 ACSS conductors have the same physical, operational and mechanical characteristics as Eversource's 1590 ACSS conductors. (UI 12, response 82; Council Administrative Notice Item No. 33 – Petition 1549)

325. Sag does not factor into the height of structures; a smaller conductor will not necessarily decrease the structure height. (Tr. 6, p. 132)

326. The corresponding Eversource project west of Structure B648S is identified in Eversource's 2023 *Forecast of Electric Loads and Resources Report* as a proposed partial 115-kV line rebuild over 26.8 miles in Fairfield, Weston and Norwalk with a projected in-service date of 2025. (Council Administrative Notice Item 21; Eversource 2023 Forecast of Electric Loads and Resources)

327. Bluebird conductors have a higher ampacity than Lapwing conductors all else being equal (e.g. based on a similar conductor operating temperature). However, the difference in sag would be very marginal. (UI 3, response 34; Tr. 6, pp. 131-132)

328. 506 kcmil ACSS Peacock conductor has a 1397-amp ampacity and is lighter and smaller in diameter than the proposed conductors. The 506 ACSS Peacock conductor would have reduced sag relative to the proposed conductors. This conductor configuration was not investigated by UI. (Tr. 7, p. 193)

329. Trapezoidal conductors are roughly hexagonal or multi-sided rather than round. This conductor design has an advantage during an ice storm because ice does not attach to this configuration. This conductor configuration was not investigated by UI. (Tr. 7, p. 193)

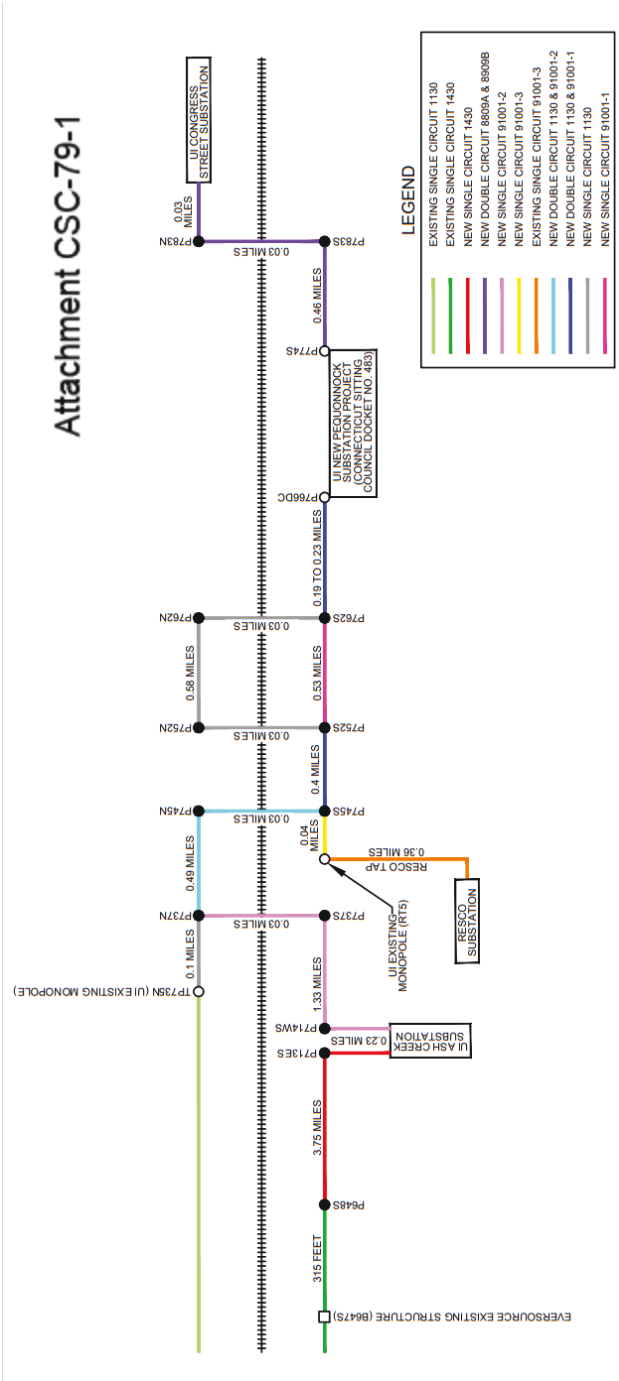
330. High temperature low sag (HTLS) conductors are not typically used and are three to four times more expensive than typical wire types. UI could have evaluated alternative conductors that are lighter but with the same ampacity, but UI believes it is prudent to select an alternative that is the most cost effective for the ratepayers. (Tr. 6, pp. 124-125)

Project Description

331. The proposed Project entails the installation of rebuilt 115-kV electric transmission lines and related improvements as listed below:
    a) Rebuild the existing 115-kV lines located on top of the railroad catenary bonnets between catenary structure B648S in Fairfield to Congress Street Substation in either single-circuit or double-circuit configurations, supported on galvanized steel monopole structures, and including OPGW;
    b) Connect the rebuilt 115-kV lines to UI's existing Ash Creek and Congress Street Substations, perform minor associated modifications within the substation boundaries and install single-circuit and double-circuit monopoles as necessary to maintain the existing 115-kV connections to the substations, and decommission and remove 115-kV facilities on existing lattice towers;
    c) Interconnect the rebuilt lines to the Resco Tap, located adjacent to the DOT corridor, and replace the tap line shield wire with OPGW; and
    d) Decommission and remove the existing 115-kV facilities on the catenaries.

Detail of each portion of the Project is described in the following subsections. (UI 1, Vol. 1, pp. 1-14, 1-15 and 2-1)

332. UI's proposed configuration is depicted in the following one-line diagram.



(UI 12, response 79)

Proposed Overhead Rebuilt 115-kV Transmission Lines

333. The proposed overhead rebuilt 115-kV transmission lines would consist of 21 double-circuit and 81 single-circuit galvanized monopole structures. One additional monopole would be installed within Ash Creek Substation to support OPGW. (UI 1, Vol. 1, p. 2-3, 2-4, and 2-13)

334. The proposed single-circuit monopoles would support one set of three 1,590 kcmil ACSS Lapwing phase conductors plus one 0.583-inch 72 count fiber OPGW or one 0.726-inch 96 count fiber OPGW. (UI 1, Vol. 1, p. 2-13)

335. The proposed double-circuit monopoles would support two sets of three 1,590 kcmil ACSS Lapwing phase conductors plus two 0.583-inch 72 count fiber OPGW. (UI 1, Vol. 1, p. 2-13)

336. Anti-galloping devices would be installed on the conductors in order affect wind motion across the conductors thus mitigate galloping. (Tr. 1, p. 20; UI 3, response 43)

337. Due to the large span length, 2156 kcmil ACSS high strength Bluebird conductor would be installed in the span that crosses over I-95 and portions of the western bank of the Pequonnock River between Pequonnock Substation and Congress Street Substation. (UI 1, Vol. 1, p. 2-13)

338. There are no current or future plans to upgrade the proposed 1590 kcmil ACSS conductors to 2156 kcmil ACSS. Notwithstanding, the proposed structures would be designed to support 2156 kcmil ACSS conductors and to meet clearance requirements for such conductors should a future conductor upgrade be necessary to support increased demand for electricity. (UI 1, Vol. 1, p. 2-13; UI 3, response 33)

339. It is considered best engineering judgement and prudent to build a transmission solution that is capable of including additional capacity based on green energy resources and other interconnections rather than having to redesign, reconstruct and reinstall different structures in the future. (Tr. 6, p. 130)

340. While current planning studies generally do not indicate increased load growth, these studies are being continually updated and additional generation and other connections could be added in the future and raise transmission capacity needs. (Tr. 6, pp. 129-131)

341. The proposed 1590 kcmil ACSS conductors would have a higher ampacity than the existing conductors because UI's transmission is part of the ISO-NE system that interfaces with New York to the south. Without the conductor ampacity upgrade, UI's proposed facility would become a limiting factor in the CT-NY interface and would inhibit load to be shared amongst New England and New York. (Tr. 6, pp. 108-109, 129)

342. The proposed monopoles would support conductors arranged in a vertical configuration. A vertical conductor arrangement was selected by UI to minimize the amount of ROW required outside of the railroad corridor. A delta configuration would require almost double the total amount of ROW space, and a horizontal conductor configuration would require more ROW than a delta configuration. (UI 1, Vol. 1, p. 2-13; Tr. 1, pp. 30-31)

343. A galvanized finish for the proposed structures was selected in lieu of weathering steel because galvanized structures have a longer life cycle (approximately a 40-year minimum) and cost about 5 to 10 percent less than weathering steel structures. (UI 1, Vol. 1, p. 2-13; UI 3, response 35; Tr. 1, p. 70)

344. UI does not have a policy related to telecommunications equipment collocations on its transmission line structures. The proposed monopoles are not designed to accommodate third party telecommunications equipment. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #96; UI 3, response 25)

345. The single-circuit and double-circuit monopoles would primarily be installed on drilled pier foundations. Direct embed structures and structures supported by pile type foundations might be installed in certain locations, subject to final engineering analyses. The proposed monopole within Ash Creek Substation to support OPGW would be direct embed. (UI 1, p. 2-13 and 3-10)

346. The new monopoles would range in height from approximately 95 feet to 145 feet agl. (UI 1, Vol. 1, pp. 2-7)

347. The new monopoles would typically be installed slightly offset or staggered from existing UI bonnets in the ROW. (UI 1, Vol. 2)

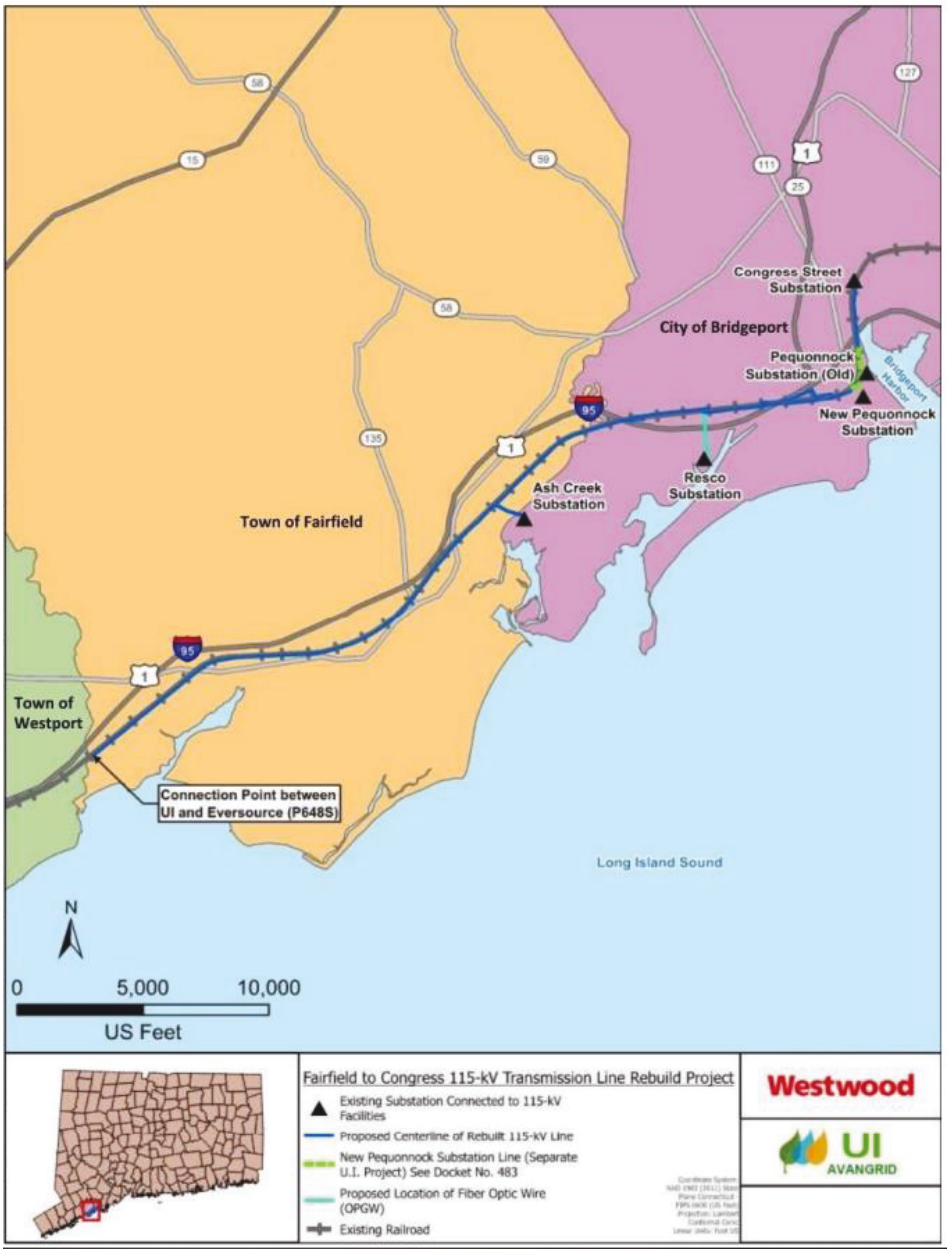
348. The typical span lengths between the structures ranges from approximately 300 to 450 feet. However, in some locations, longer spans up to approximately 800 feet would be necessary to minimize impacts to environmental resources such as wetlands and watercourses or due to nearby land uses such parking lots, residential backyards, buildings, and roadways. (UI 1, Vol. 1, p. 2-10)

349. The proposed rebuilt transmission lines would be located along approximately 7.3 linear miles within or near the existing DOT ROW and 0.23 mile along the UI ROW to Ash Creek Substation. In total, about 4.8 linear miles would be located within the Town of Fairfield, and about 2.7 linear miles would be located within the City of Bridgeport. (UI 1, Vol. 1, p. ES-8)

350. Sections of the railroad ROW are:

a) Catenary Structure 648 in Fairfield to Ash Creek Substation Connection in Bridgeport;
b) Ash Creek Substation Connection in Bridgeport to Resco Tap in Bridgeport;
c) Resco Tap in Bridgeport to Pequonnock Substation in Bridgeport; and
d) Pequonnock Substation in Bridgeport to Congress Street Substation in Bridgeport.

Such railroad ROW sections (and off railroad ROW substation connection/tap lines) are shown below.



(UI 1, Vol. 1, pp. 1-2 and 1-9)

Catenary Structure 648S in Fairfield to Ash Creek Substation Connection in Bridgeport

351. The existing railroad ROW from Catenary Structure 648S in Fairfield to Ash Creek Substation in Bridgeport ranges from 71 to 312 feet wide. This section of ROW extends for approximately 3.75 miles in Fairfield. (UI 1, Vol. 1, p. 1-11; UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 1 through 4)

352. The ROW contains two separate UI transmission lines. The 1130 Line is located on existing single-circuit monopoles on the north side of the tracks. The monopoles have an average height of 85 feet agl. The 1430 Line is located on catenary bonnets south of the tracks. The bonnets reach a typical height of about 60 feet agl. (UI 1, Vol. 2, Sheets XS-1 through XS-6)

353. In this section, UI proposes to relocate the 1430 Line on 51 new single-circuit vertical monopole structures. (UI 1, Vol. 1, p. 2-3; UI 1, Vol. 2, Sheets XS-1 through XS-6)

354. The proposed monopoles would range in height from 95 feet to 135 feet. (UI 1, Vol. 1, p. 2-15)

355. Land use adjacent to the ROW includes urban/suburban with lawns and landscaping, low profile commercial/industrial buildings, roadways, parking areas, and tidal floodplain, riparian areas, deciduous woodlands, and waterways. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 1 through 4)

Ash Creek Substation Connection in Fairfield and Bridgeport

356. The existing UI ROW for Ash Creek Substation Connection in Fairfield begins between Catenary Structures B713 and B714 and continues in an approximately east-west direction to reach Ash Creek Substation in Bridgeport. This ROW extends for approximately 0.23 miles. (UI 1, Vol. 1, p. 2-3; UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 4 of 7)

357. The ROW contains two separate UI transmission lines and runs in a roughly east-west direction. The 1430 Line and the 91001-2 Line are located on three existing double-circuit lattice towers. The 1430 Line is located on the western side of the structures, and the 91001-2 Line is located on the eastern side of the structures. The double-circuit lattice structures have a typical height of 100 feet agl. (UI 1, Vol. 2, Sheets XS-7 and XS-8; UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 4 of 7)

358. In this section, UI proposes to install the two relocated transmission lines on six new single-circuit vertical monopole structures (or three pairs of single-circuit monopoles) to replace the double-circuit lattice structures. (UI 1, Vol. 1, p. 2-3; UI 1, Vol. 2, Sheets XS-7 and XS-8; UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 4 of 7)

359. Three pairs of single-circuit monopoles were selected in lieu of three double-circuit monopoles due to outage restrictions i.e. ability to only take one line out of service at a time and to maintain continuity of service for the fiber optics. (Tr. 1, pp. 21-22)

360. The proposed monopoles would range in height from 95 feet to 135 feet. (UI 1, Vol. 1, p. 2-15)

361. Land use adjacent to the ROW includes residential, parks and recreation, and wetlands and intertidal flats. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 4 of 7)

Ash Creek Substation Connection in Bridgeport to Resco Tap in Bridgeport

362. The existing ROW from Ash Creek Substation Connection to Resco Tap ranges from 66 to 236 feet wide. This section of ROW is 1.9 miles in length and extends through a portion of Bridgeport. (UI 1, Vol. 1, p. 1-11; UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 4 through 6)

363. The ROW contains two separate UI transmission lines. From Ash Creek Substation Connection to the western intersection with I-95, the 1130 Line is located on existing single-circuit monopoles on the north side of the tracks. The monopoles have an average height of about 116 feet agl. From Ash Creek Substation Connection to I-95, the 91001-1 Line is located on catenary bonnets south of the tracks. Between east of I-95 and Resco Tap, both transmission lines are located on catenary bonnets. The bonnets reach a typical height of 60 to 70 feet agl. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 4 and 5; UI 1, Vol. 2, Sheets XS-9 through XS-13)

364. In this section, UI proposes to install the two relocated transmission lines on 10 new single-circuit and 7 new double-circuit vertical monopole structures. (UI 1, Vol. 2, Key Map and Cross Section Dimension Tables)

365. The proposed monopoles would range in height from 95 feet to 130 feet. (UI 1, Vol. 1, p. 2-15)

366. Land use adjacent to the ROW includes urban/suburban with low profile commercial/industrial buildings, roadways, parking areas, and tidal floodplain, riparian areas, deciduous woodlands and waterways and harbor areas. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 4 through 6)

Resco Tap in Bridgeport

367. The existing Resco Tap transmission line (Resco Tap) is a single-circuit 115-kV line that was installed in the 1990s. Resco Tap runs in a north-south direction along Howard Avenue from existing Structure B745S at the intersection of the railroad ROW and Howard Avenue to Resco Substation. Resco Tap extends for approximately 0.37 mile in Bridgeport. (UI 1, Vol. 1, pp. ES-2 and 1-6; UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 6 through 7)

368. Resco Tap is located on five existing structures: Structures RT1 through RT5. (UI 1, Vol. 1, p. 2-6)

369. Resco Tap delivers electricity to the transmission grid from the WIN Waste Innovation Bridgeport (f/k/a Wheelabrator Technologies, Inc.) waste-to-energy plant. (UI 1, Vol. 1, p. ES-2)

370. UI proposes replace the existing 7#6 Alumoweld shield wire with 0.582-inch 72 count OPGW along Resco Tap. No monopoles would be replaced for this portion of the Project. No reconductoring of the Resco Tap is proposed, except for a short span between proposed Structure P745S and existing Structure RT5. (UI 1, Vol. 1, p. 2-6; UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 6 of 7)

371. Land use adjacent to Resco Tap includes urban with low profile commercial/industrial buildings, and I-95. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 6 through 7)

Resco Tap in Bridgeport to Pequonnock Substation in Bridgeport

372. The existing ROW from Resco Tap to Pequonnock Substation ranges from 66 to 210 feet wide. This section of ROW is 1.15 miles in length and extends through portions of Bridgeport. (UI 1, Vol. 1, p. 1-11; UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 6 and 7)

373. The ROW contains two separate UI transmission lines located on bonnets on opposite ends of the catenaries and reaching a typical height of about 80 feet agl. (UI 1, Vol. 2, Sheets XS-16)

374. In this section, UI proposes to install the two relocated transmission lines on 9 new double-circuit vertical monopole structures and 10 new single-circuit vertical monopole structures. (UI 1, Vol. 1, p. 2-4)

375. The proposed monopoles would range in height from 115 feet to 145 feet. (UI 1, Vol. 1, p. 2-15)

376. Land use adjacent to the ROW includes urban with housing and low profile and high rise commercial/industrial buildings, parking areas, and waterways and harbor areas. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 6 and 7)

Pequonnock Substation in Bridgeport to Congress Street Substation in Bridgeport

377. The existing ROW from Pequonnock Substation to Congress Street Substation ranges from 66 to 210 feet wide. This section of ROW is 0.52-mile in length and extends through a portion of Bridgeport. (UI 1, Vol. 1, pp. 1-11 and 2-4; UI 1, Vol. 2, 1" = 400' Maps – Map 7)

378. The ROW contains two separate UI transmission lines generally located on bonnets on opposite ends of the catenaries. (UI 1, Vol. 2, Sheet XS-17)

379. In this section, UI proposes to install the two relocated transmission lines on 4 new double-circuit vertical monopole structures. (UI 1, Vol. 1, p. 2-4)

380. The proposed monopoles would range in height from 120 feet to 195 feet. (UI 1, Vol. 1, p. 2-15)

381. Land use adjacent to the ROW includes urban with single and multi-family housing, low profile and high rise commercial/industrial buildings, parking areas, and waterfront and harbor areas. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheet 7)

Easements

382. In deciding whether to issue a certificate, the Council shall in no way be limited by the applicant already having acquired land or an interest therein for the purpose of constructing the facility that is the subject of its application. (C.G.S. §16-50p(g) (2023); *Corcoran v. Conn. Siting Council*, 284 Conn. 455 (2007))

383. The Council's evaluation criteria under C.G.S. §16-50p does not include the consideration of property ownership or property values nor is the Council otherwise obligated to take into account the status of property ownership or property values. (C.G.S. §16-50p (2023); *Westport v. Conn. Siting Council*, 47 Conn. Supp. 382 (2001); *Goldfisher v. Conn. Siting Council*, 95 Conn. App. 193 (2006))

384. Whether properties subject to a permanent easement are conforming or non-conforming to Town and City zoning regulations is not a factor for consideration by the Council under PUESA. The Council shall consider other state laws and municipal regulations as it deems appropriate. (C.G.S. §16-50x (2023); Tr. 6, p. 65)

385. The Council may grant an application upon such terms, conditions, limitations or modifications of the construction or operation of the facility as it deems appropriate. If the Council determines that the location of all or a part of the proposed facility should be modified, it may condition the certificate upon such modification, provided the municipalities affected by the modification and the residents of such municipalities shall have had notice of the application pursuant to C.G.S. §16-50*l*. (C.G.S. §16-50p(a) (2023); C.G.S. §16-50p(d) (2023); *Preston v. Conn. Siting Council*, 20 Conn. App. 474, 491-92 (Conn. App. 1990))

386. The Project area, and associated one-mile radius study areas, encompass the locations of UI's existing transmission facilities and proposed rebuilt transmission facilities from Catenary Structure B648S to Congress Street Substation. It contains existing UI transmission facilities located on bonnets on top of the catenary structures or on independent monopole, lattice or other types of structures located both north and south of the railroad ROW, including, but not limited to, UI's 1130 Line. (UI 1, Vol 1, pp. ES-2,9-14 to 9-16, 10-2; UI 3, responses 16, 51, 53)

387. Project construction, maintenance and operation, whether in an overhead configuration to the north or south of the railroad ROW, or in an underground configuration along the railroad ROW or within

public streets, requires acquisition of temporary and permanent easements. (UI 1, Vol. 1, pp. 9-3 to 9-16)

388. Easements would be required for an underground alternative within public streets and private properties. The total acreage of temporary and permanent easement would be determined after a subsurface survey identifies potential locations for splice chambers and duct banks. (UI 21, response 26; UI 1, Vol. 1, pp. 9-6 to 9-12)

389. The total acreage of temporary easement required to underground the portion of the line from a transition structure at P648S to Westway Road in Fairfield would be approximately 0.62 acres and the total acreage of permanent easement for this configuration would be approximately 0.39 acres. These estimated easements are limited to the approximately 1,800-foot section of underground line in this area. (UI 19, LF3-1)

390. When a project is complete, temporary easements for the workspace are extinguished. (Tr. 4, p. 94)

391. The total acreage of easement required for the Hannon-Morissette Alternative would be approximately 8 acres for the section of the 1130 Line between Sasco Creek and the railroad track crossing to reach Ash Creek. This does not include temporary construction easements on the north side of the railroad ROW or on the south side of the railroad ROW that are needed for access and bonnet removal. (UI 19, LF3-2; Tr. 7, pp. 181-182)

392. Permanent easements for the Project are required for compliance with conductor clearance requirements, vegetation clearing and maintenance purposes in perpetuity. Excavation, filling, grading, construction of permanent structures and planting of vegetation that create a hazard to the transmission facilities or impedes access and maintenance to the structures is restricted. (UI 22, response 13, 14; UI 23, response 14; Tr. 4, pp. 65-77)

393. Permanent easement accounts for the sag and sway of the transmission lines at certain wind and ice loading conditions. Reducing the height of the structures or the size of the conductor will not reduce the size of the permanent easement. (Tr. 6, pp. 153-155)

394. UI's standard transmission easement includes the rights to construct, reconstruct, erect, install, maintain, and inspect the facilities. (UI 17, response 18; Tr. 4, pp. 65-77)

395. UI estimated approximately $30 million for the acquisition of approximately 19.3 acres of new easements for the Project. The Town, SCNET Group and the Grouped LLCs believe those costs are underestimated by approximately 3-5 times. (Tr. 1, p. 25; UI 23, response 16; Tr. 7, pp. 149-150)

396. UI's estimate for easement acquisition includes, but is not limited to, costs to relocate structures, such as fencing, and restoration of asphalt in parking lot areas. It does not include legal and appraisal costs. (Tr. 6, pp. 51-52;167)

397. UI is not aware of any private rights to a view or vista or any other visual easements along the Project route that are recorded on the land records. (Tr. 4, p. 83)

398. In Fairfield, UI estimates a total easement acreage of 8.73 acres of which approximately 0.97 acres are residential and approximately 7.76 acres are commercial. (Tr. 6, p. 76)

399. A double-circuit line requires a wider easement. There would be no cost reduction associated with easements on the north side of the railroad ROW. (Tr. 4, pp. 114-117; Tr. 6, p. 183)

400. Easement dimensions would be refined during final Project design and incorporated into the D&M Plan if the Project is approved. UI would negotiate with property owners for easements. If easement negotiations are unsuccessful, UI would initiate eminent domain proceedings. Several intervenors indicated that they would not negotiate with UI. (UI 1, Vol 1, pp. 2-7, 3-9; UI 22, response 18; SCNET Group 10; Tr. 5, pp. 68-137; Tr. 7, pp. 52-53, 110-112)

401. UI would coordinate with property owners and consider feasible modifications to the easement area, as well as the performance of work outside business hours and revisions to work pad locations. (UI 1, Vol 1, p. 6-39; Tr. 6, pp. 55, 72-73)

402. Approximately 8 acres of easements would be required for the 3.75 mile line segment between Sasco Creek to the railroad crossing toward Ash Creek. The proposed easement was assumed to be a 32-foot offset from the centerline of the existing 1130 Line structures. (UI 19, LF 3-2; Tr. 6, pp. 181, 192)

403. Two parcels subject to a Town conservation easement are immediately adjacent to the southern railroad ROW boundary. One is located at 2082 Kings Highway and the other is located at 21 Black Rock Road. (UI 1, Vol. 1, p. 5-27)

404. The Kings Highway easement area consists of 0.3 acres of trees and shrubs with underground stormwater control infrastructure. The Black Rock Road easement area contains a wetland mitigation area, stormwater biofiltration basins, public access trail and coastal meadows. (UI 1, Vol. 1, p. 5-27)

405. Approximately 1.6 acres of UI's existing ROW between the railroad ROW and Ash Creek Substation encompass the southern portion of the conservation easement. (UI 1, Vol. 1, p. 5-27)

406. The Project requires an estimated total of 19.25 acres of new permanent easement. Of this total, 19.1 acres are required to accommodate the new structures, wire, blowout and vegetation management in accordance with NESC clearance standards and UI design criteria. The remaining 0.15 acre is required for permanent access related to operation and maintenance of the transmission lines. (UI 1, Vol. 1, pp. 1-16, 2-9)

407. Of the 19.1 acres of permanent easement, 4.25 acres are located north of the railroad ROW and 14.85 acres are located south of the railroad ROW. Approximately 8.58 acres are located in Fairfield and approximately 10.52 acres are located in Bridgeport. (UI 1, Vol. 1, p. 2-10)

408. In Docket 508, 17.7 acres of new permanent easements were required to accommodate the new structures and maintain conductor clearances along 9.5 miles of railroad ROW and 20 acres of temporary construction easements were required for temporary access roads and work pads, including for the removals of bonnets along the DOT ROW. (Council Administrative Notice Item No. 39 – Docket No. 508, pp. ES-4, 2-8)

409. In Docket 3B, 9.9 acres of new permanent easements were required to accommodate the new structures and maintain conductor clearances along 4.1 miles of railroad ROW and temporary construction easements were required for temporary access roads and work pads, including for the removals of bonnets along the DOT ROW. (Council Administrative Notice Item No. 35 – Docket No. 3B)

410. If a property owner disputes the need for a public utility company to acquire residential real property, the owner of the property may bring the issue of the purpose for which the property is being acquired to the Council within 30 days of the company notice to the property owner. (C.G.S. §16-50z (2023))

411. Upon written request from the property owner, the Council shall initiate a proceeding to determine whether the proposed acquisition is necessary and consistent with the energy policy of the state. The Council's decision shall be rendered no later than 90 days after receipt of the request and state whether the proposed acquisition is necessary and consistent with the energy policy of the state. (C.G.S. §16-50z (2023))

Structure Locations

412. UI proposes to locate structures on 14 properties in Fairfield and 16 properties in Bridgeport. (UI 24)

413. A summary of structure locations and proposed easements is described in Attachment GLI-1-1. (UI 22, response 1)

414. The Project cannot be constructed without obtaining permanent easements on private property. Easements could be decreased by 1-2 feet in width between the crossings of Old Post Road and Post Road if an additional structure is added adjacent to catenary structure B670. (UI 21, response 30, 31; UI 22, response 17, 18)

415. BWC's building is located in the northeastern side of its property. The Feroleto Steel Company Inc. property abuts the BWC property to the northeast and is located at 300 Scofield Avenue, Fairfield. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 17 of 29; BWC 2, Pre-filed Testimony of Patrick Netreba, p. 2)

416. BWC's truck delivery dock is directly off of the northeastern corner of the BWC building. BWC's parking area is located southwest of the BWC building and directly southeast of the railroad ROW. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 17 of 29)

417. While the number of truck deliveries to BWC's loading dock area per day varies based on consumer activity and time of the year, at least 15 to 20 trucks (largely semi-trailers) enter and exit BWC's loading dock daily. These semi-trailers require the entire loading dock area (which is already constrained in its current state) in order to perform their turning maneuvers for the loading berths. (BWC 2, Pre-filed Testimony of Patrick Netreba dated August 22, 2023, pp. 2-4)

418. Proposed Structure P724S would be located in the northeastern corner of the BWC property. This proposed structure would be partially on the BWC property and partially on the railroad ROW. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 17 of 29; Tr. 1, p. 22)

419. Proposed Structure P723S would be located largely in the railroad ROW adjacent to BWC's parking area. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 17 of 29)

420. The placement, installation and maintenance of proposed Struture P724S, the temporary work pad and the related easement in the loading dock area of BWC's property would have short-term and long-term adverse impacts on BWC's business operations. BWC requests reasonable, prudent alternative locations for P724S that would not cause adverse impacts to BWC's business operations. (BWC 2, Pre-filed Testimony of Patrick Netreba dated August 22, 2023, pp. 2-4)

421. BWC suggests that P724S be located on the railroad ROW or on the Feroleto Steel Co Inc. property. (BWC 2, Pre-filed Testimony of Patrick Netreba dated August 22, 2023, p. 3)

422. In order to locate P724S onto the railroad ROW, UI would have to support the MNR signal wires at this location. As proposed, UI would maintain complete separation between MNR and UI infrastructure at this location. (Tr. 1, p. 22-23)

423. UI evaluated five overhead transmission alternatives for the BWC property:

e) Relocate Structure P723S fully off of the BWC property and onto the railroad ROW for a cost delta of $0 (Alternative 1);
f) Relocate Structure P724S (as a deadend structure) fully off of the BWC property and onto the railroad ROW for a cost delta of approximately $72.1k (Alternative 2-1);
g) Relocate Structure P724S (changed to a suspension type structure) fully off of the BWC property and onto the railroad ROW for a cost delta of approximately $60k (Alternative 2-2);
h) Relocate Structure P724S (as a deadend structure) to as close to the property corner as possible, but still on the BWC property for a cost delta of $18k (Alternative 2-3); and
i) Relocate Structure P724S (changed to a suspension type structure) to as close to the property corner as possible, but still on the BWC property for a cost delta of $0 (Alternative 2-4).

(UI 13, Late Filed Exhibit 1-1 dated August 22, 2023)

424. BWC requests that UI avoid access across the parking deck. UI could accommodate that request. (BWC 6, p. 5; Tr. 6, pp. 164-165)

425. The FSL property contains a five-story multi-family residential building with 27 apartments located in the center of the property that was approved per C.G.S. §8-30g, the state's affordable housing statute. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 9 of 29; FSL 1, pp. 2-3)

426. The western side of the FSL building is located approximately 5 feet east of the railroad ROW. (FSL 1, p. 3)

427. The northwestern portion of the FSL building is located less than 6 inches from the nearest property line. Between this property line and the southwestern portion of the FSL building is an emergency generator, a concrete access way required for local emergency services personnel, the main combined service shut off curb valve, and a 6-inch diameter fire line. (FSL 1, p. 3)

428. The southwestern portion of the FSL roof is common space for residents. The northwestern portion of the roof contains solar panels. (FSL 1, p. 3)

429. UI's proposed permanent easement over FSL's property could be reduced in size by approximately 1 foot in width. (UI 17, response 21)

430. The originally proposed Structure P689S location was in the railroad ROW and adjacent to the western corner of the FSL building. It was about 7-foot 4-inches west of the corner of FSL's property line and 20-foot 8-inches west of the corner of the FSL building. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 9 of 29; UI 17, response 1)

431. On December 6, 2022, UI performed a field visit and noted the as-built conditions and determined that the location of proposed Structure P689S needed to be shifted to minimize impacts on this developed property. UI revised the proposed Structure P689S location by shifting it 18 feet to the

west of the originally proposed location. The proposed revised Structure P689S location would be approximately 23-foot 6-inches west of the corner of FSL's property line and 36-foot 3-inches west of the corner of the FSL building. (UI 17, response 1)

432. The proposed revised location of Structure P689S takes into account the location of a new pad-mounted transformer and also accommodates space for emergency services access to the western side of the FSL building. (UI 17, response 5)

433. Proposed Structure P690S would be located partially on the FSL property and partially on the railroad ROW. Proposed Structure P690S would be located approximately 111 feet northeast of FSL's property line. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 9 of 29)

434. SPC is located at 2500 Post Road, Fairfield and abuts the railroad ROW to the south. (SPC 1, p. 2; UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 5 of 29)

435. Proposed Structure P671S would be located on the railroad ROW. Proposed Structure P671S would be located approximately 8 feet north of SPC's property line. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 5 of 29)

436. A proposed work pad for P671S would be located partially in the northern portion of the SPC property and partially on the railroad ROW. (UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 5 of 29)

437. Proposed Structure P671S would be located in the southern portion of the railroad ROW near the SPC property and proximate to an existing groundwater containment system. (SPC 1, p. 3; UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 5 of 29)

438. If Structure P671S is moved approximately 250 feet to the west, it would not be expected to have an adverse impact on the existing groundwater containment system. (Tr. 7, p. 252-253)

Substation Modifications

439. The existing Ash Creek Substation is located in the southwestern section of Bridgeport and is accessed off Poland Street. (UI 1, Vol. 2, 1" = 400' Maps – Map 4 of 7)

440. The existing Resco Substation is located in the southwestern section of Bridgeport and is accessed off Howard Avenue. (UI 1, Vol. 2, 1" = 400' Maps – Map 6 of 7)

441. The Pequonnock Substation (currently being replaced) is located in south-central Bridgeport and is accessed off Ferry Access Road. (UI 1, Vol. 2, 1" = 400' Maps – Map 7 of 7; Council Administrative Notice Item No. 38 – Docket No. 483 Monthly Construction Status Reports)

442. The existing Congress Street Substation is located in the central section of Bridgeport and is accessed off Congress Street. (UI 1, Vol. 2, 1" = 400' Maps – Map 7 of 7)

443. To connect the rebuilt 115-kV lines to Ash Creek Substation, the three existing double-circuit lattice towers between the railroad tracks and the substation fence would be removed and replaced by two single-circuit monopoles. New conductor and OPGW would also be installed in this section. One new approximately 45-foot tall direct embedded monopole would be installed within the fenced Ash Creek Substation to support the OPGW. Additionally, new underground fiber optic cable would be installed to the connect the fiber at the OPGW splice box to the control enclosure. (UI 1, Vol. 1, p. 3-14)

444. To connect the rebuilt 115-kV lines to Congress Street Substation, new conductor and OPGW would be installed up to an existing double-circuit steel monopole within the fenced Congress Street Substation. The new conductor and OPGW would replace the existing conductor and shield wire. The new conductor and OPGW would extend between the existing monopole and the termination structures inside the substation. Additionally, new underground fiber optic cable would be installed to the connect the fiber at the OPGW splice box to the control enclosure. (UI 1, Vol. 1, p. 3-14)

445. The modifications to be performed at Resco Substation are related to the replacement of existing shield wire with OPGW. Additionally, new underground fiber optic cable would be installed to the connect the fiber at the OPGW splice box to the control enclosure. (UI 1, Vol. 1, p. 3-14)

446. The Project requires hardware modifications to the approved Structures P766N and P767S to ensure proper phasing. Such modifications would be performed inside the fenced replacement Pequonnock Substation. (UI 1, Vol. 1, p. 3-14)

447. The Project entails modifying the jumper connections at the riser structures for the 1130 and 8909B lines to properly aligning the phases of the rebuilt circuits to the line terminal structures to the replacement Pequonnock Substation and to meet NESC and UI phase-to-phase clearances. (UI 3, response 32)

448. There would be necessary transmission outages in order to install and connect the Project, but no distribution outages would be expected as a result of construction. (Tr. 1, pp. 41-42)

449. None of the four substations (i.e. Ash Creek, Resco, Pequonnock, and Congress Street) supply power to the MNR rail line. (UI 3, response 21)

Project Construction Procedure

450. The following subsections describe the general construction procedures for each portion of the Project. If the Project is approved, UI intends to submit one or more partial D&M Plans for the Project. (UI 1, Vol. 1, p. 3-1)

451. Pursuant to CGS §22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater discharges. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices. (CGS §22a-430b; DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. (DEEP-WPED-GP-015)

452. The DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit) requires implementation of a Stormwater Pollution Control Plan (SWPCP) to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a proposed project after construction is complete. In its discretion, DEEP could require an Individual Permit for discharges and hold a public hearing prior to approving or denying any General or Individual Permit (Stormwater Permit) application. (CGS Section 22a430b; CGS Section 22a-430(b))

453. The SWPCP incorporates project designs consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (2002 E&S Guidelines) and the *2004 Connecticut Stormwater Quality Manual* (2004 Stormwater Manual). (DEEP-WPED-GP-015)

454. DEEP has the authority to enforce proposed project compliance with its Individual or General Permit and the SWPCP, including, but not limited to, the installation of site-specific water quality protection measures in accordance with the 2002 E&S Guidelines and 2004 Stormwater Manual. (CGS Section 22a-430b)

455. The Project would require a DEEP-issued Stormwater Permit prior to commencement of construction activities as defined in the General Permit. (UI 1, Vol. 1, p. 3-7; CGS Section 22a-430b)

456. The DEEP Stormwater Permit requires an assessment of the potential for a proposed development to impact the state's archaeological and historical sites. (DEEP-WPED-GP-015)

457. The Council may impose a condition that requires subsequent compliance with DEEP standards and regulations. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #138)

Proposed Overhead Rebuilt 115-kV Transmission Lines

458. UI's proposed general construction sequence is as follows:

<u>General</u>

a) Survey and stake construction work areas, including the edge of the DOT property and UI easement (where different) and proposed structure locations. Confirm and re-flag environmental resource areas (e.g. wetland and watercourse boundaries) or other sensitive areas to be avoided. Mark vegetation clearing limits, and locate and mark utilities;

b) Establish laydown/material staging areas/contractor yard(s) to support the construction;

c) Establish temporary erosion and sedimentation controls as necessary;

d) Remove or mow vegetation where necessary;

e) Install temporary matting in wetlands as necessary, and install temporary bridges to traverse small watercourses;

f) Establish or upgrade access roads to reach the proposed monopole locations;

g) Establish work pads at proposed monopole locations and pull pads where necessary;

h) Install new structure foundations and assemble new structures;

<u>Pequonnock Substation to Congress Street Substation Segment</u>

i) Remove 115-kV line (e.g. existing shield wires, conductors, hardware, and steel bonnets) from the southern/eastern side of the catenaries. Some of this work may be staged from a barge located near the CDOT corridor in the Pequonnock River. Any existing monopoles that are no longer required on the southern/eastern side of the railroad tracks would also be removed;

j) Install conductors and OPGW on the new structures;

k) Install rebuilt 115-kV line connections to UI substations;

l) Place the rebuilt 115-kV lines into service;

m) Remove existing 115-kV line (e.g. existing shield wires, conductors, hardware, and steel bonnets) from the northern/western side of the catenaries. Any existing monopoles and lattice towers that are no longer required on the northern/western side of the railroad tracks would also be removed. This activity would include establishing temporary work pads at the locations of the facilities to be removed. Existing access roads and city streets would be used.

Catenary Structure B648S to Ash Creek Substation Segment and Ash Creek Substation to UI Structure TP735S Segment

a) Remove 115-kV line (e.g. existing shield wires, conductors, hardware, and steel bonnets) from the southern side of the catenaries. Any existing wide-flange structures that are no longer required on the southern side of the railroad tracks would also be removed;

b) Install conductors, shield wire and OPGW on the new structures;

c) Remove existing lattice towers that currently support existing 115-kV connection o Ash Creek Substation;

d) Install rebuilt 115-kV line connections to Ash Creek Substation;

e) Place the rebuilt 115-kV lines into service (by segment);

UI Structure TP735S to new Pequonnock Substation Segment

f) Install conductors and OPGW that can be installed on existing 115-kV facilities in place;

g) Remove 115-kV line (e.g. existing shield wires, conductors, hardware, and steel bonnets) from the southern side of the catenaries;

h) Install remaining conductors and OPGW in order to place the southern circuit (91001 Line) in service;

i) Remove 115-kV line (e.g. existing OPGW, conductors, hardware, and steel bonnets) from the northern side of the catenaries. All temporary steel poles installed as part of the Pequonnock Substation Rebuild Project will also be removed; and

j) Install remaining conductors and OPGW in order to place the northern circuit (1130 Line) in service;

General

k) Remove temporary construction access and work pads along with associated matting and bridges;

l) Perform final cleanup and restoration/stabilization of areas affected by construction; and

m) Maintain erosion and sedimentation controls until areas affected by construction are stabilized.

(UI 1, Vol. 1, p. 3-4)

459. Project construction would be staged from one or more laydown/material staging/contractor yards. Multiple smaller laydown areas could also be used along the 115-kV line route. Field offices would also be required. Final sites would not be determined until a few months prior to commencement of construction, and UI would seek Council approval of these sites prior to use. (UI 1, Vol. 1, p. 3-3)

460. A primary laydown/material storage/contractor yard requires approximately 2 to 5 acres to accommodate field office trailers, parking, project material storage, construction equipment and supplies, fractionization tanks (for temporary storage of water removed from foundation excavations), and temporary stockpiling of existing 115-kV facility materials removed (e.g. bonnets, 115-kV conductor, existing transmission structures). (UI 1, Vol. 1, p. 3-3)

461. The laydown/material staging area/contractor yards also would provide a site for marshalling construction crews, holding daily safety meetings, and assigning daily work. (UI 1, Vol. 1, p. 3-3)

462. The laydown/material staging areas/contractor yard areas would be restored and stabilized to approximate pre-construction conditions in accordance with the UI's SWPCP requirements as necessary. (UI 1, Vol. 1, p. 3-12)

463. Types of equipment to be used on barges would include, but not be limited to, cranes, manlifts, and bucket trucks necessary for the removal of existing assets and installation of anti-galloping devices on the new conductors. (UI 3, response 43)

464. UI would utilize a combination of public roads and proposed or existing access road within or adjacent to the DOT railroad corridor. UI would utilize existing (e.g. paved or gravel) access roads where available. Existing paved access would not be expected to require significant upgrades. Existing non-paved access might require the addition of gravel or asphalt patch. (UI 1, Vol. 1, pp. 3-7 and 3-8)

465. Most Project access roads to be constructed would be temporary and would be located in upland areas. Temporary access roads would consist of gravel or construction matting (wood or equivalent). Temporary Project access roads would generally be approximately 16 feet wide. Access road width may be wider in certain areas to accommodate equipment turning and passing or due to terrain. (UI 1, Vol. 1, p. 3-8)

466. Most Project access roads would be designed to avoid wetlands and water resources. (UI 1, Vol. 1, p. 3-8)

467. Temporary erosion and sedimentation (E&S) controls would be installed as practicable prior to and/or during vegetation clearing in compliance with the 2002 E&S Guidelines, the DEEP General Permit, and the SWPCP. Temporary controls include, but are not limited to, straw bales and silt fence, to be used during construction involving soil disturbance. (UI 1, Vol. 1, pp. 3-7 and 3-19)

468. Work pads would be required to install the new monopoles as well as to remove the existing 115-kV facilities from the catenaries and remove the existing structures (e.g. monopoles, lattice towers, W-flange structures) that would no longer be needed. (UI 1, Vol. 1, p. 3-9)

469. The work pads would be used to provide a safe, level base for construction equipment used to install structure foundations and to erect structures. Specifically, along the 115-kV line route, work pads would be required at each new structure location, at conductor and OPGW pulling sites, and at each location where existing 115-kV facilities would be removed or modified. (UI 1, Vol. 1, p. 3-9)

470. Work pads would consist of gravel or timber construction mats (or equivalent) or will be situated within existing paved areas*. The size of each work pad would vary based on location, topography, and space available within or adjacent to the DOT railroad corridor. Generally, the typical work pad for installing a monopole would be approximately 100 feet by 40 feet. In most areas, minimal grading is expected to be necessary to establish work pads.

*Work pads located within paved areas may consist of construction matting (e.g. fiberglass, rubber or wood) to protect the asphalt if necessary.

(UI 1, Vol. 1, p. 3-9; UI 12, response 84)

471. Work pads for 115-kV facility removals would typically be approximately 60 feet by 40 feet. (UI 1, p. 3-9)

472. Pull pads would be required at various locations along the 115-kV line route. Pull pads would typically be approximately 400 feet by 40 feet. (UI 1, p. 3-9)

473. Generally, the proposed poles have been strategically placed to avoid any known subsurface utilities with a few exceptions. Based on current design to date, there are underground street lighting cables and sprinkler systems in the vicinity of proposed Structure P756S that would have to be relocated. These underground sprinkler systems and street lighting cables are associated with a new apartment building and surrounding parking lot that was constructed in Bridgeport. (UI 3, response 24; Tr. 1, pp. 22-24)

474. Additionally, abandoned underground utilities would be removed in areas where they conflict with pole locations. (UI 3, response 24)

475. For the installation of new foundations within the DOT corridor, UI would coordinate with DOT/MNR to determine appropriate drilling methods to avoid any potential for impacts to the rail bed. (UI 1, Vol. 1, p. 3-10)

476. Auger drilling would be used to perform the excavations for the drilled pier foundations. The size of each excavation would typically be approximately 6 to 10 feet in diameter. Temporary or permanent vibratory casings may be used to provide soil support as needed to complete the drilling work and place concrete. The temporary casing may be removed from the pier foundations as concrete is placed or soon thereafter. (UI 1, Vol. 1, p. 3-10; Tr. 1, pp. 19-20)

477. After the foundation excavation is complete, steel reinforcing bars and an anchor bolt cage would be placed in the excavation and encased in concrete. (UI 1, Vol. 1, p. 3-10)

478. After the structure foundation is in place and the concrete is cured, the transmission monopole would be assembled and erected. Transmission structure components would be delivered to work pads, assembled on the ground and then erected as a complete unit or assembled in pieces with a crane. (UI 1, Vol. 1, p. 3-11)

479. After a structure is erected and framed with support insulators and hardware, it would be ready for the installation of overhead lines. Conductor pulling blocks would typically be installed at this time. (UI 1, Vol. 1, p. 3-11)

480. Pulling and tensioning equipment, as well as reels of conductor, would be located at temporary pulling work pads along the transmission line route for the installation of line conductors, OPGW

and shield wires. Helicopters may be used to install pulling ropes at the commencement of the conductor/OPGW pulling process. (UI 1, Vol. 1, p. 3-11)

481. UI also anticipates using a helicopter for the removal of the lattice structure located directly outside of Ash Creek Substation based on a review of the constructability at this location aligned with permitting guidance and recommendations from DEEP and the U.S. Army Corps of Engineers (USACE). Helicopters may also be used for the removal of certain structures in logistically challenging areas. Final determination on helicopter use would not be until the award of a Project construction contract on or about May 2024. The cost to use a helicopter for structure removals would be approximately 3 to 4 times less expensive than use of a crane. (UI 3, response 15)

482. To maintain clearance at road crossings during conductor and OPGW installation, temporary guard structures or boom trucks would be positioned adjacent to the crossings. (UI 1, Vol. 1, p. 3-12)

483. Conductors and shield wires would be pulled to their design tensions and attached to the hardware. This process would be performed via bucket trucks. (UI 1, Vol. 1, p. 3-12)

484. Localized traffic congestion may occur when heavy construction equipment or large components are transported to the work sites, as well as when construction personnel travel to and from the Project area. However, such impacts during construction are generally expected to be minor and short term. To the extent practical, UI would coordinate with impacted landowners and the host municipality to minimize potential traffic impacts on local roads. (UI 1, Vol. 1, p. 6-36)

485. Upon completion of the transmission line installation, most work pads would remain in place in upland areas unless otherwise specified by the landowner. Work pads would be removed from wetland areas. Access roads in wetland areas would also be removed. Temporary access roads in upland areas would remain in place unless otherwise specified by the landowner. (UI 1, Vol. 1, pp. 3-8 and 3-12)

486. Following construction of the proposed Project, cleanup would include the removal of construction debris, signs, flagging, and fencing, as well as temporary access and work pads from wetland areas. Areas affected by construction and laydown/staging areas would be restored and stabilized, as necessary, to approximately pre-construction conditions (e.g. seeded, graveled, and repaved). Restoration work would be performed in accordance with the SWPCP. (UI 1, Vol. 1, p. 3-12)

487. The Project would be consistent with the recommendations of FERC and NERC Report on Transmission Facility Outages During the Northeast Snowstorm of October 29-30, 2011 – Causes and Recommendations. Specifically, UI would implement the recommendations of the report by adhering to the Transmission and Vegetation Management Operating Procedure (TVOP). (UI 3, response 7)

488. For the DOT ROW, a minimum of 25-foot clearance from conductors is required per the TVOP. If span lengths increase beyond 470 feet, UI requires a larger ROW width to ensure the full extent of conductor blowout under a 130-mph wind remains within UI's ROW limits. (UI 3, response 30; UI 8, response 2)

489. Any work performed within or adjacent to the railroad ROW require the following measures:
    a) Any work within the railroad ROW requires a flagger provided by MNR;
    b) Any work within 10-feet of the MNR signal and feeder wires requires an outage of those facilities;
    c) Any work involving a person or equipment within 4 feet of the tracks requires a track outage;

d) Any work requiring installation or removal of wires crossing the tracks requires a 4-track outage, which is limited to Friday, Saturday and Sunday nights.

(UI 3, response 27)

490. UI has ongoing biweekly meetings with MNR and DOT to coordinate both current and future projects. (Tr. 1, p. 51-52)

491. Project construction is anticipated to begin in the first quarter of 2025 and would achieve an in-service date of approximately May 2028. (UI 1, pp. 4-1 and 4-3)

Environmental Effects and Mitigation Measures

Air Quality

492. The Project would result in short-term and localized effects on air quality associated with construction equipment and vehicles as well as from fugitive dust emissions generated during earth moving and drilling activities. (UI 1, Vol. 1, p. 6-38)

493. Operation of the Project would not result in adverse impacts to air quality. (UI 1, Vol. 1, p. 6-38)

Water Quality

Inland Wetlands, Tidal Wetlands and Watercourses

494. The Inland Wetlands and Watercourses Act (IWWA), CGS §22a-36, *et seq.*, contains a specific legislative finding that the inland wetlands and watercourses of the state are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed, and the preservation and protection of the wetlands and watercourses from random, unnecessary, undesirable and unregulated uses, disturbance or destruction is in the public interest and is essential to the health, welfare and safety of the citizens of the state. (CGS §22a-36, et seq.)

495. The IWWA grants regulatory agencies with the authority to regulate upland review areas in its discretion if it finds such regulations necessary to protect wetlands or watercourses from activity that will likely affect those areas. (CGS §22a-42a)

496. The IWWA forbids regulatory agencies from issuing a permit for a regulated activity unless it finds on the basis of the record that a feasible and prudent alternative does not exist. (CGS §22a-41)

497. The Project area is located within the southern portions of the Southwest Coast drainage basin, which discharges into Long Island Sound and is one of Connecticut's eight major drainage basins. (UI 1, Vol. 1, p. 5-5)

498. A total of 10 wetland areas were delineated at the site. (UI 1, Vol. 1, p. 6-8; UI 1, Vol. 1A, Appendix B, Ecological Assessment Report, p. 3)

499. Vegetation clearing would impact 4 of the 10 wetlands. (UI 1, Vol. 1, pp. 6-9 and 6-10; UI 1, Vol. 1A, Appendix B, Ecological Assessment Report, p. 3)

500. The projected impacts to wetlands are listed below.

Shading = Tidal Wetland

Volume 2 Mapsheet No. (100/400 scale)	Wetland No.	Estimated Project Impact, by Type (Acres)				
		Temporary Impacts		Permanent Impacts		Wetland Vegetation Clearing
		Access Roads	Work Pads	Access Roads	Work Pads	
1/1	TW-A	-	-		-	0.01*
2/1	W-B			0.04	-	0.04
11/3	W-F	-	0.02	-	-	0.03*
14/4	W-H	-	0.08	-	-	-
15/4	TW-I	-	0.03	-	-	-
18/5	TW-J	-	-	-	-	0.04*
Total Inland Wetland Impacts		-	**0.10**	**0.04**	-	**0.07**
Total Tidal Wetland Impacts		-	**0.03**	-	-	**0.05**
TOTAL WETLAND IMPACTS			**0.13**	**0.4**	-	**0.12**

*Refers to long-term change in wetland vegetation type (e.g., forested to shrub-scrub), but not a net reduction in wetland function or size.
Numbers rounded for preliminary impact estimation purposes.

(UI 1, Vol. 1, p. 6-10)

501. None of the proposed monopoles would be located within wetlands. (UI 1, Vol. 1, p. 6-9)

502. One proposed permanent access road would extend within the railroad ROW across the northern portion of Wetland W-B located west of Westway Road in Fairfield. This access road would require approximately 0.04 acre of fill and would result in a long-term wetland impact. (UI 1, Vol. 1, p. 6-9)

503. Temporary impacts to three wetlands (i.e. W-F, W-H and TW-I) would result from the construction work pads. (UI 1, Vol. 1, p. 6-9)

504. The Hannon-Morissette Alternative would avoid Wetlands W-B and W-F because these wetlands are located along the southern side of the railroad ROW. This alternative would require the removal and replacement of an existing single-circuit structure located within Wetland W-C. (UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 1, 2 and 3 of 7)

505. UI would coordinate with DEEP and/or USACE and obtain the necessary authorizations for proposed activities in wetlands. (UI 1, Vol. 1, p. 6-9)

506. UI would develop a final Wetland Invasives Species Control Plan (WISCP) to be included in the D&M Plan(s). The WISCP would include standard procedures including, but not limited to, ensuring that temporary timber wetland mats are cleaned prior to bringing them to the site and relocating them from wetland to another during construction. (UI 1, Vol. 1, p. 3-18)

507. A D&M Plan is a condition of a Council final decision that must be met prior to commencement of construction and constitutes the "nuts and bolts" of a facility approved by the Council. It is required to be submitted to the service list for comment and to the Council for review and approval. (C.G.S. §16-50p (2023); R.C.S.A. §16-50j-60, *et seq*.; *Town of Westport v. Conn. Siting Council*, 260 Conn. 266 (2002); SCNET 3)

508. No vernal pool habitat is located within or proximate to the Project area. (UI 1, Vol. 1, p. 5-20)

509. The Project area extends across a total of 14 watercourses. Of these, 12 are perennial watercourses; one is an intermittent stream; and one is ephemeral drainage. (UI 1, Vol. 1, p. 5-9)

510. There are no lakes or ponds at the site. (UI 1, Vol. 1, p. 5-5)

511. Temporary construction access via construction matting would be required to cross one perennial freshwater stream (WC-8). Construction equipment would be prohibited from directly fording through streams. (UI 1, Vol. 1, p. 3-8 and 6-8)

512. The projected impacts to inland and tidal watercourses are listed below.

Shading = Tidal Watercourse

Volume 2 Mapsheet No. (100/400 scale)	Watercourse Designation / Name	Estimated Project Impact, by Type (acres) Temporary Impacts (acres)	
		Access Roads	Work Pads
12/4	WC-8 (P)	0.1	-
15/4	Ash Creek (P)	-	0.1
Total Impacts		0.1	0.1

(UI 1, Vol. 1, p. 6-8)

513. UI would utilize the following measures to minimize potential impacts on watercourses:
    a) Anti-tracking pads at the intersections of Project access roads and public roads as well as the use of dust control measures would be utilized to minimize the potential for the deposition of soils disturbed by Project activities into nearby waterbodies;
    b) Concrete (for the structure foundations) would be mixed, placed and disposed of to avoid or minimize the risk of concrete materials entering a watercourse; and
    c) Existing riparian vegetation within 25 feet of watercourse banks would be maintained or cut selectively to the extent practical.

    (UI 1, Vol. 1, p. 6-9)

514. There are no DEEP-designated Aquifer Protection Areas (APAs) near the Project area. The nearest APA is located in the Town of Westport, approximately 3 miles northwest of the proposed transmission line route. (UI 1, Vol. 1, p. 5-13; Council Administrative Notice Item No. 85 – DEEP Statewide APA Map)

515. The depth of the conduit and cables for Eversource's NBTRP is 40 feet below tidal wetlands and intertidal flats. This HDD profile meets the USACE minimum factor of safety for inadvertent releases. (Council Petition 1560)

Coastal Area Resources

516. None of the rivers in the Project area are designated under the federal Wild and Scenic Rivers Act. (UI 1, Vol. 1, p. 5-10)

517. The Project does not include any activities within the DEEP Long Island Sound Blue Plan Policy Area. (UI 3, response 49)

518. The rebuilt 115-kV lines would span the Mill River, Ash Creek (at two crossings) and the Pequonnock River. (UI 1, Vol. 1, p. 6-7; UI 1, Vol. 2)

519. For the temporary work that may be required in Ash Creek to remove the existing lattice steel tower from the small island near Ash Creek Substation and for the use of a barge in the Pequonnock River to stage construction along a small portion of the route in Bridgeport, UI would consult with the appropriate regulatory agencies. (UI 1, Vol. 1, p. 6-9)

520. The proposed barge locations would be outside the navigational channel of the Pequonnock River, and thus, it would have no impact on navigation and commerce in the Pequonnock River. (UI 3, response 42)

521. Approximately 4.7 miles of the Project extend across the designated coastal boundary. There are 3.1 miles in Fairfield and 1.6 miles in Bridgeport. (UI 1, Vol. 1, p. 5-24)

522. East of Sasco Creek, near Ash Creek, Ash Creek Substation and the Pequonnock River encompass tidal wetlands, tidally influenced waterbodies, intertidal flats, and/or estuarine embayment. (UI 1, Vol. 1, p. 5-24; UI 1, Vol. 2)

523. The Connecticut Coastal Management Act (CCMA) establishes coastal resource policies and coastal use policies. (C.G.S. §22a-90, *et seq*.; UI 1, Vol. 1, p. 5-24)

524. Public coastal access points identified by DEEP in proximity to the Project are Perry's Green, a small waterfront park that provides public fishing access along Southport Harbor that is located 0.23 mile southwest of the Project ROW and the Village at Black Rock, a coastal access site that provides wildlife viewing from a 250-foot waterfront walkway that is located immediately adjacent to Ash Creek Substation. (UI 1, Vol. 1, p. 5-24)

525. Watercourses within the Project area generally support water-based recreational activities, such as fishing, boating and swimming. (UI 1, Vol. 1, p. 5-26)

526. Seaside Park extends adjacent to Long Island Sound, approximately 0.8 mile south of the Project area. (UI 1, Vol. 1, p. 5-27)

527. The City is developing plans to restore public access to portions of its coastal waterfront, including a 3-acre parcel situated along the west bank of the Pequonnock River, east of the railroad ROW between the I-95 bridge and south of Congress Street Substation. The parcel, known as "the Sliver by the River," is currently vacant and prone to flooding. Passive recreation and green infrastructure use are under consideration for the parcel. (UI 1, Vol. 1, p. 5-30)

528. Areas of the Project within the coastal boundary consist of "shorelands," defined as areas exclusive of coastal hazard areas that are not subject to dynamic coastal process and consist of upland features. These areas generally do not contain tidal wetlands, FEMA flood or erosion hazard areas or other sensitive resources. (UI 1, Vol. I, p. 5-25)

529. Areas of the Project cross designated "Coastal Flood Hazard Areas," defined under the CCMA as lands inundated during coastal storm events or subject to erosion induced events as determined by the National Flood Insurance Act and DEEP. (UI 1, Vol. I, p. 5-25)

530. In coastal areas, structure foundations are designed for a 20-inch sea level rise. In floodplain areas, structure foundations are designed one foot above the 100-year flood elevation. (UI 3, responses 46 and 47)

Flood Zones

531. The Project would include a total of 26 proposed monopoles to be installed within the 100-year flood zone, and a total of 9 proposed monopoles* would be installed within the 500-year flood zone. The addition of these structures would have a negligible effect on floodplain storage capacity.

*This includes proposed Structure 714WS to be installed within Ash Creek Substation to support OPGW only.

(UI 1, Vol. 1, p. 6-7; Tr. 4, pp. 97-103)

532. With respect to underground transmission alternatives, there are concerns regarding flooding and water ingress into the splice vaults. UI notes that system corrosion issues on the racking of splice chambers have occurred and require additional maintenance to monitor and replace as necessary. Generally, UI would locate splice vaults outside of flood zones where feasible. (Tr. 4, pp. 80-81)

533. The Hannon-Morissette Alternative would result in five monopoles installed within the 100-year flood zone and 10 monopoles within the 500-year flood zone. (UI 19, Late Filed Exhibit 3-4)

534. From Catenary Structure 648S and Ash Creek Substation Connection, the proposed Project would have nine structures within the 100-year flood zone and four structures within the 500-year flood zone. (UI 19, Late Filed Exhibit 3-4)

535. The Hannon-Morissette Alternative would result in a net decrease in 100-year flood zone impacts of 154 square feet and a net increase of 231 square feet in 500-year flood zone impacts, relative to the proposed Project.*

*This is based on approximately 7-foot diameter structure foundations.

(UI 19, Late Filed Exhibit 3-4)

Groundwater

536. Based on subsurface investigations for the proposed transmission line structures, the depth to groundwater is estimated to range from 5 feet to 20 feet or more below grade. (UI 1, Vol. 1, p. 5-13)

537. The SPC property contains a building used for metal plating. SPC has been plating metal for over 70 years. Given the historical operations at this site and the use of hexavalent chromium and nickel at SPC's operations, there was historical contamination that occurred on this property several decades ago. Specifically, plating liquids containing hexavalent chromium had entered the subsurface soil and groundwater beneath the property via cracks in the floor of the SPC building and through subsurface ventilation tunnels and piping. (SPC 2, p. 2; UI 1, Vol. 2, 1" = 100' Maps – Mapsheet 5 of 29)

538. In 1982, the Town informed SPC that suspected chromium contaminated groundwater from SPC's property was seeping into the Mill Pond section of the Mill River. Subsequently, a series of orders

were issued by DEEP (f/k/a Department of Environmental Protection) beginning in 1988 and with the most recent issued on January 18, 2016. (SPC 2, p. 2)

539. In 1982, SPC installed a groundwater recovery trench system to help stop the flow of contaminated groundwater to the Mill River. From 1982 to 1990, SPC upgraded its manufacturing operations to prevent further discharges of plating compounds to the environment. In 1990, SPC made modifications to its wastewater treatment system before discharging the treated wastewater to the municipal sanitary sewer system. In 2000, SPC installed new linings on its deep sump chrome tanks to better prevent degradation of the tanks and then followed up with lining all of its plating sumps to prevent further degradation. (SPC 2, p. 3)

540. In 2006, DEEP approved the installation and operation of a hydraulic containment system to prevent the migration of chromium contaminated groundwater from discharging into an east/northeast direction to the Mill River and impacting sediments in the Mill River. In 2008, SPC installed eight bedrock groundwater extraction wells as part of this system. This system commenced operation in 2009 and is currently still in service. (SPC 2, p. 4)

541. There is a Superfund site, known as The Exide Corporation (Exide) site, located at 2190 Post Road, Fairfield. This site has been remediated to abate lead contamination. (SPC 2, p. 9)

542. No monopoles are proposed on the former Exide property. UI would install three monopoles within the southern portion of the railroad ROW east of the Mill River and adjacent to the northern boundary of the former Exide property. While DEEP has determined that site remediation has been completed and no further corrective actions are necessary, UI plans to take soil borings at each of these three monopole locations and perform laboratory analyses to characterize the soil. Soil would be handled per applicable regulations. UI would also minimize soil disturbance associated with the creation of proposed temporary access roads from the Post Road across the former Exide site to the railroad ROW. (UI 1, Vol. 1, p. 6-5)

543. UI would install seven monopoles along the perimeter of two parcels (219 and 300 Ash Creek Boulevard) that were formerly part of the Bullards Company metalworks property. These areas were remediated prior to the construction of the Fairfield Metro Station and associated parking area. Proposed Structures P714ES-1, P713WS-1, P719S, and P720S appear to be located within the limits of the geomembrane cap. UI would coordinate with DEEP, the property owner, and property's Licensed Environmental Professional to ensure that construction is compatible with the environmental controls present at the site and that the long-term integrity of the remedial solution is maintained. (UI 1, Vol. 1, p. 6-5)

544. In total, approximately 122 soil borings are planned by UI, including at the sites of monopoles proposed to be located near the Exide and Fairfield Metro properties. As of March 17, 2023, 71 of these soil borings, including soil sampling, have been completed. UI would continue such borings prior to construction. (UI 1, Vol. 1, pp. 5-45 and 5-46; Tr. 1, p. 36)

545. Based on the results of the groundwater analyses, groundwater along the Project route would be characterized as treatment not required or containment, treatment and/or disposal required. (UI 1, Vol. 1, p. 5-47)

546. If groundwater is encountered during any Project excavations, dewatering would be performed in accordance with applicable local and/or state permitting requirements. (UI 1, Vol. 1, p. 6-6)

547. Groundwater encountered during construction would be managed in accordance with the SWPCP and Materials Management Plan. (UI 1, Vol. 1, p. 5-47)

Fish, Aquaculture and Wildlife

548. Fish migration will not be impacted by staging the barge anchored near the west bank of the Pequonnock River. DEEP's Fisheries Division does not consider the use of barges to be in-water work. It is exempt from the time of year restriction established for fish migration. (UI 3, response 42)

549. Areas identified as "prohibited" in the Wetland Report refer to shellfish classification. Shellfish harvesting is prohibited in those areas due to contamination concerns in the corresponding water resource. (UI 1, Vol 1A, Appendix B; UI 3, response 63)

550. Prohibited shellfish areas have not been subject to a current sanitary survey or a survey determined shellfish cannot be harvested due to public health risks. (UI 1, Vol. 1, p. 5-21)

551. Tidal watercourses along Sasco Creek, Mill River, Ash Creek, Black Rock Harbor and the Pequonnock River support shellfish beds. West of Sasco Creek is mapped as "Restricted Relay" by DOAg. In these areas, shellfish can be harvested by special license and may not be directly harvested for market or consumption. (UI 1, Vol. 1, 5-21)

552. Several watercourses traversed by the Project are known to support or have the potential to support fisheries habitats. Anadromous fish species spend adult lives in saltwater but return to freshwater to spawn. Catadromous fish species spend adult lives in freshwater but return to saltwater to spawn. (UI 1, Vol. 1, p. 5-20)

553. The American eel is the only catadromous fish in Connecticut. It is found in all waterbodies of the state and certain watercourses in the Project area, including Ash Creek. (UI 1, Vol. 1, pp. 5-20 and 5-21)

554. The Mill River is stocked with cold-water trout species. It also supports anadromous fish runs, including alewife, blueback herring and sea lamprey. The Pequonnock River also supports alewife and sea lamprey fish runs. (UI 1, Vol. 1, p. 5-20)

555. Striped bass and gizzard shad may be found in the larger watercourses in the Project area. (UI 1, Vol. 1, p. 5-21)

556. The Project would not affect shellfish resources or either freshwater or marine fisheries because the rebuilt transmission lines would span all the watercourses that have been identified as potential fisheries habitat. (UI 1, Vol. 1, p. 6-16)

557. The Project area does not encompass any mapped National Oceanic Atmospheric Administration National Marine Fisheries Services Endangered Species Act critical habitats. (UI 1, Vol. 1, p. 5-21)

558. The Pequonnock River is considered essential habitat for various Mid-Atlantic fish species and migratory species. Consultations with the DEEP Fisheries Division indicate alewife, American eel and sea lamprey habituate the Pequonnock River and migratory fish runs typically begin in April and continue into late June. (UI 1, Vol. 1, p. 5-21)

559. No state-designated or wild trout management areas are located in the vicinity of the railroad ROW. (UI 1, Vol. 1, p. 5-20)

560. Osprey nests are located near catenary structure B647 located west of the Project in Westport; catenary structure B672 located near the Mill River in Fairfield; on a lattice tower on the island in Ash Creek; and on a lattice tower near the Bridgeport bus station adjacent to the Pequonnock River. (UI 1, Vol. 1, p. 5-15)

561. UI has been coordinating with DEEP about the osprey nests. UI has not employed any measures to deter osprey nesting but is amenable to adding a pole and platform for osprey in the area of the island in Ash Creek. (UI 1, Vol. 1, p. 5-15; UI 12, response 67; Tr. 1, p. 67)

562. The Avian Power Line Interaction Committee works with the utility industry, wildlife resource agencies, conservation groups and manufacturers of avian protection products to understand and reduce bird mortalities from electric line electrocutions and collisions and associated power outages. (Council Administrative Notice Item 79)

563. By letter dated January 28, 2022, DEEP indicated that its review of the Natural Diversity Database (NDDB) identified two state-listed species that may occur within or proximate to the Project area. The two state-listed species are listed below:

State-listed Bird Species	**Designation**
Peregrine falcon	Threatened
State-listed Fish Species	**Designation**
Blueback herring	Special Concern

(UI 1, Vol. 1A, Appendix A, DEEP NDDB Letter dated January 28, 2022)

564. DEEP records indicate the presence of a peregrine falcon nest located on the I-95 bridge over the Pequonnock River in Bridgeport. To be protective of the peregrine falcon, DEEP recommended that UI avoid work between April through July within 330 feet of active nests that are out of sight or within 660 feet of nests that are within line of sight. (UI 1, Vol. 1A, Appendix A, DEEP NDDB Letter dated January 28, 2022)

565. Subsequently, UI performed a field review to determine if any potential construction sites would be in the line-of-sight to the peregrine falcon nest. UI determined that no Project work would be located within 330 feet of the nest, but it would be located within 660 feet of the nest. However, no work would be performed within the line-of-sight of the peregrine falcon nest. UI provided this information DEEP and also indicated to DEEP that UI believes a time-of-year restriction is not warranted. DEEP concurred with UI. (UI 1, Vol. 1, p. 6-18)

566. The proposed barge locations would be located outside of the 330 feet distance from the nest and not within line-of-sight to the peregrine falcon nest. (UI 3, response 42)

567. DEEP records indicate the presence of blueback herring in the Mill River in Fairfield. To be protective of the blueback herring, DEEP recommends that UI consult with a DEEP Fisheries Biologist for any in-water work. (UI 1, Vol. 1A, Appendix A, DEEP NDDB Letter dated January 28, 2022)

568. UI does not plan any in-water work at the Mill River; thus, no further consultation with DEEP Fisheries Division regarding the blueback herring is required. (UI 1, Vol. 1, p. 5-24)

569. On December 8, 2022, UI consulted with the U.S. Fish and Wildlife Services (USFWS) Information for Planning and Consultation (IPaC) to determine if any federally-listed species may be present within the Project area. The IPaC review identified four species: northern long-eared bat (NLEB), a federally-listed Endangered* Species; red knot, a federally-listed Threatened Species; roseate tern, a federally-listed Endangered; and the monarch butterfly, a candidate for the Federal Endangered Species Act listing (but not currently listed as Threatened or Endangered).

*On March 23, 2022, the NLEB was reclassified from federally-listed Threatened to Endangered.

(UI 1, Vol. 1, pp. 5-22 and 5-23; UI 1, Vol. 1A, USFWS iPaC Determination dated December 8, 2022; UI 1, Vol. 1A, Appendix B, Ecological Assessment Report, pp. 8 to 11)

570. UI has run the data version of the USFWS NLEB determination key, and results indicate no effect on NLEB. Notwithstanding, UI will further consult with iPaC as part of the permitting process. Additionally, the Project area is not located within 150 feet of a known occupied maternity roost tree or within 0.25-mile of a known NLEB habitat resource. The nearest NLEB habitat resource to the Project area is located over 15 miles to the west in the Town of Greenwich. (Tr. 1, p. 36-37; UI 1, Vol. 1, p. 5-22; Council Administrative Notice Item No. 86 – DEEP NLEB Map)

571. The little brown bat is a state-listed endangered species. DEEP did not identify the Project area as within the range of the little brown bat in its NDDB Determination. (UI 1, Vol. 1A Appendix B; Council Administrative Notice Item 48 – Connecticut's Endangered, Threatened and Special Concern Species List 2015; Town 7)

572. The red knot is a shorebird associated with coastal habitats, which are not located along or near the railroad corridor or UI's ROW to Ash Creek Substation. Thus, the Project is not expected to affect the red knot. (UI 1, Vol. 1, p. 6-19)

573. Mallard and teal ducks, heron and egret are common species. DEEP did not indicate the presence of any of these species as a concern in its NDDB Determination. (Council Administrative Notice Item 48 – Connecticut's Endangered, Threatened and Special Concern Species List 2015; Town 7)

574. No critical habitat has been designated for the monarch butterfly at this time. (UI 1, Vol. 1, p. 5-23)

575. The Connecticut Audubon Birdcraft Museum and Sanctuary, a National Historic Landmark, was established in 1914 to support the ecology and habitat of birds. It is located in Fairfield south of I-95, north of the railroad ROW and approximately one mile from the shoreline of Long Island Sound. (UI 1, Vol. 1, p. 6-32; Town 7; Town 9)

Scenic, Historic and Recreational Values

576. The Project is consistent with the FERC Guidelines for the Protection of Natural, Historic, Scenic and Recreational Values in the Design and Location of Rights-of-Way and Transmission Facilities as it utilizes existing rights-of way within a railroad corridor to minimize conflicts with existing and future land uses. (UI 3, response 48; Council Administrative Notice Item Nos. 10 and 36)

577. There are no state or locally-designated scenic roads located within the one-mile Study Area. (UI 1, Vol. 1, p. 5-35; UI 12, response 88)

578. The Project is not located proximate to any DOT designated Scenic Land Strips. (UI 1, Vol. 1, p. 5-35)

579. The MNR railroad corridor, formerly the New York, New Haven & Hartford Railroad, is eligible for listing on the National Register of Historic Places (NRHP) under Criteria A, in the area of transportation, as well as in the development of the Connecticut shoreline. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #213)

580. SHPO does not object to UI and Eversource's plans to remove or modify the bonnets supporting the electric transmission line facilities along the railroad ROW provided the catenary structures are unaffected. (Council Petition 1560; Council Administrative Notice Item No. 39 – Docket No. 508 – UI 1, Vol. 1A, Appendix A.1, SHPO Letter dated December 22, 2021)

581. The Norwalk Bridge, which is being replaced by DOT and from which Eversource must remove its transmission line facilities is listed on the NRHP. (Council Petition 1560)

582. A direct effect to a historic property includes the destruction of, damage to, all or part of a historic property; alteration of a historic property in a way that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and applicable guidelines; or the removal of the property from its historic location. (Council Administrative Notice Item 6)

583. An indirect effect to a historic property changes the character of the property's use or of physical features within the property's setting that contribute to its historic significance, or introduce visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features. (Council Administrative Notice Item 6)

584. Since the underground portion of Eversource's NBTRP involves substantial ground disturbance, such as vibrations from trenching, along Elizabeth Street, which is located within the Haviland and Elizabeth Streets-Hanford Place Historic District in Norwalk, SHPO recommended a historic building protection plan be formulated and implemented to avoid any direct effects to historic properties. (Council Petition 1560)

585. DOT developed a Historic Building Protection Plan for the Walk Bridge Replacement Project. SHPO approved the recommended mitigation and protection measures in the plan. The cost of preparation and implementation of a Historic Building Protection Plan is approximately $225,000. (Council Petition 1560)

586. A Phase 1A Cultural Resources Assessment Survey was performed by Heritage Consultants (Heritage) and a report dated September 2022 (Phase 1A Report) identified 13 properties/districts listed on the NRHP within 500 feet of the Project. All of these properties/districts are also listed on the State Register of Historic Places (SRHP), and one is listed as a Local Historic District (LHD). The 13 properties/districts are identified in the table below:

Property/District	Address/Boundaries	Municipality	NRHP	SRHP	LHD
Southport Historic District	Bounded by MNR tracks to the north, the Mill River and Southport Harbor to the south, Old South Road to the west, and Rose Hill Road to the east	Fairfield	X	X	X

Southport Railroad Westbound and Eastbound Stations	96 Station Street and 100 Center Street	Fairfield	X	X	
Fairfield Railroad Stations	off Unquowa Road	Fairfield	X	X	
David Perry House	531 Lafayette Street	Bridgeport	X	X	
Barnum Museum	820 Main Street	Bridgeport	X	X	
United States Post Office (Bridgeport Main)	120 Middle Street	Bridgeport	X	X	
Connecticut Railway & Lighting Company Car Barn	55 Congress Street	Bridgeport	X	X	
Pequonnock River Railroad Bridge	Crosses Pequonnock River at Grand Street	Bridgeport	X	X	
Bridgeport Downtown South Historic District	Bounded by approximately Frontage Road to the south, Water Street to the east, and Lafayette Boulevard to the west.	Bridgeport	X	X	
Bridgeport Downtown North Historic District	Bounded by approximately Water Street to the east, Fairfield Avenue to the south, and Congress Street to the north.	Bridgeport	X	X	
Railroad Avenue Industrial District	Railroad Avenue	Bridgeport	X	X	
Division Street Historic District	Bounded by approximately State Street to the north, Iranistan Avenue to the west, Black Rock Avenue to the south, and West Avenue to the east	Bridgeport	X	X	
Barnum-Palliser Historic District	Bounded by approximately Austin Street, Myrtle Avenue, Atlantic Street, and Park Avenue	Bridgeport	X	X	

(UI 1, Vol. 1A, Appendix D, Phase 1A Report, pp. 10-14)

587. The Phase 1A Report also identified six previously identified archaeological sites within 500 feet of the Project. The six sites and their respective NRHP/SRHP listings are identified in the table below:

Site#	Site	Municipality	NRHP	SRHP
15-2	Berkshire No. 7 & Priscilla Dailey	Bridgeport	X	
15-3	Elmer S. Dailey	Bridgeport	X	
15-10	BR-11	Bridgeport		
15-22	Mary and Eliza Freeman Houses	Bridgeport	X	X
15-2	Pequot Swamp Battlefield	Fairfield		
51-32	CSB#1	Fairfield		

(UI 1, Vol. 1A, Appendix D, Phase 1A Report, pp. 6-8; UI 1, Vol. 2, Sheet 7 of 7)

588. Sites 15-2 and 15-3 are historic period shipwrecks that are submerged along the bank line of the Pequonnock River. However, the bank of the river has changed since the vessels sunk, and the sites may now be buried under terrestrial soil. These archaeological resources are not likely to be disturbed by the Project. (UI 1, Vol. 1A, Appendix D, Phase 1A Report, pp. 6-7; UI 1, Vol. 1, p. 5-37)

589. Site 15-10 was once part of the Golden Hill Paugussett Tribal Reservation Land. This site has been developed by the construction Bridgeport High School and the nearby Foreign Legion building. Thus, this former archaeological site would not be impacted by the Project. (UI 1, Vol. 1A, Appendix D, Phase 1A Report, pp. 7-8)

590. Site 15-22 consists of mid-nineteenth century historical residences and associated archaeological deposits. These two houses are located approximately 490 feet from the Project ROW. Some proposed Project features would be visible from these houses. (UI 1, Vol. 1A, Appendix D, Phase 1A Report, p. 8)

591. Site 15-2 is also known as the Pequot Swamp Battlefield Site (PSBS). The PSBS is located approximately 400 feet northwest of the Project ROW. PSBS previously contained Native American burials that were excavated in 1947. Thus, Site 15-2 has been destroyed, and it would not be impacted by the Project. (UI 1, Vol. 1A, Appendix D, Phase 1A Report, p. 8)

592. Site 51-32 has a state form that is blank. No pertinent information is available regarding this site. It is located approximately 500 feet to the northwest of the Project. The Project is not expected to impact this site. (UI 1, Vol. 1A, Appendix D, Phase 1A Report, p. 8)

593. A 500-foot search distance (from the Project) was selected to identify archaeological sites within the vicinity of the Project to provide a context for the general patterns of settlement and the use of the site from the pre-contact period Native American era to the beginning of the modern era. This is consistent with SHPO requirements for providing contextual information for use during agency review of the Project. (UI 3, response 51)

594. On September 23, 2022, UI submitted a Project Notification Form (PNF) including the Phase 1A Report to SHPO. (UI 1, Vol. 1A – Appendices – Part I, Appendix A, PNF)

595. By letter dated October 31, 2022, SHPO indicated that is has reviewed the Phase 1A Report and indicated the following:

a) SHPO concurs that the MNR railroad alignment is eligible for listed on the NHRP;
b) Sites 15-2 and 15-3 are not definitively mapped, and due to potential change in the Housatonic River banks over time, timber matting should be used in these areas to mitigate impacts, or an archaeologist should be on site for any excavation performed between proposed Structures 775S and 779S;
c) The existing NRHP/SRHP properties listed in Phase 1A Report were identified by SHPO as being within the study area;
d) Additionally, SHPO identified the following NRHP properties: 678 Pequot Avenue, 560 Pequot Avenue, and Walters Memorial AME Zion Church;
e) Out of the identified NRHP resources, 12 would be visually impacted by the Project to varying degrees, and thus, the Project is expected to have an adverse effect on historic resources;
f) The study area for visual impacts should be increased to 0.5 mile similar to the Federal Communications Commission (FCC) *National Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process* (NPA), and resources within this new study area should be subject to viewshed analysis;
g) 12 proposed structures would be installed within areas that have potential to contain intact archaeological deposits: Structures P657S, P659S, P739N, P740N, P742N, P743N, P744N, P744EN, P745N, P745S, P746S, and P748S; and
h) Phase 1B Cultural Resources Assessment and Reconnaissance Survey (Phase 1B Survey) is recommended prior to construction.

(UI 1, Vol. 1A, Part I, Appendix A1, SHPO Letter dated October 31, 2022)

596. The 0.5-mile study area for visual impacts (APE-VE) under the FCC NPA for new cellular tower installations under 200 feet was selected by SHPO. SHPO does not currently have review guidelines for the replacement of transmission lines. While the FCC NPA does not strictly apply to the replacement of transmission lines, SHPO referenced the FCC NPA because the Project structure heights would be taller than the existing structures, and the FCC NPA provides a basis from which to review potential Project effects on above-ground historic resources from proposed structures that may reach up to 200 feet in height. (UI 1, Vol. 1, p. 5-40; UI 3, responses 53 and 54; Tr. 1, p. 32)

597. SHPO does not have a prescribed methodology for defining a visual area of potential effect (APE). (Council Administrative Notice 34)

598. Subsequent to the SHPO Letter dated October 31, 2022, UI and Heritage determined that typical Phase 1B investigations (e.g. hand shovel testing) would not be feasible at the 12 identified monopole locations due to factors such as the presence of non-native fill, buried utilities, pavement, gravel, and the potential for deeply buried cultural deposits. UI and Heritage proposed that archaeological monitoring be performed at the monopole locations in lieu of shovel testing. The monitoring would be performed including a combination of vacuum soil removal from the upper layers non-native fill pavement and gravel followed by a review of the underlying soils for the presence of archaeological deposits using appropriate heavy equipment. This monitoring is planned to be performed prior to or during the initial stages of Project construction. (UI 1, Vol. 1, p. 6-26)

599. For Eversource's NBTRP, soil borings in the HDD path across the river indicated the soil is in a degraded condition. SHPO recommended an archaeological monitor be present during construction in areas where archaeological features may be present, including the eastern back line of the Fort Point Island Native American fort and within the streets on the western river bank due to the presence of the Haviland and Elizabeth Streets-Hanford Place Historic District. (Council Petition 1560)

600. By letter dated January 17, 2023, SHPO noted that the additional analysis for potential visual impacts was being prepared, and SHPO acknowledged UI's and Heritage's proposed vacuum soil removal technique in lieu of a traditional Phase 1B shovel test would be performed prior to or during the initial stages of construction. SHPO notes that the proposed monitoring is consistent with the *Environmental Review Primer for Connecticut's Archaeological Resources*, and SHPO has no objection to the scope of work. (UI 1, Vol. 1A, Part I, Appendix A1, SHPO Letter dated October 31, 2022)

601. On or about June 29, 2023, UI submitted supplemental information to the Phase 1A Report including photo-simulations of the proposed monopoles from visually impacted historic structures. The photo-simulations correspond to certain previously identified NRHP, SRHP and LHDs identified within 0.5-mile of the Project. (UI 6)

602. SHPO reviewed the June 29, 2023 supplemental information to the Phase 1A Report and concurs that there would be an adverse effect on viewsheds, and additional consultation between UI and SHPO regarding mitigation plans should occur prior to development of the Project. (Tr. 1, pp. 33, 40)

603. The adverse visual impacts would be along the edge of the railroad corridor. The dominant impacts would be close to the proposed lines, particularly in the City of Bridgeport and near the Southport Historic District. The impacts would be less at more distant locations such as Seaside Park, where views would be more intermittent. (Tr. 1, p. 39)

604. The visual impacts would not be mitigated by burying the cables underground only in designated historic districts due to the need for riser/transition structures. (UI 22, response 22(b); Tr. 1, p. 6)

605. The proposed barge(s) are not expected to have any adverse impacts to resources listed on the NRHP. (UI 3, response 42)

606. The proposed barge(s) are not expected to have a significant impact on recreational uses in the Pequonnock River. (UI 3, response 42)

Visibility

607. Elevations along the railroad corridor range from at or near sea level to approximately 40 feet above mean sea level (amsl). The highest elevation is located in Fairfield. The lowest elevation is located in both Fairfield and Bridgeport. (UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 1; UI 12, response 78)

608. The height of the exhaust stack for former Bridgeport Harbor Unit No. 3 is 498 feet. The height of the exhaust stack of the new Bridgeport Harbor Unit No. 5 is 300 feet. Both exhaust stacks are located to the east of Pequonnock Substation. (UI 1, Vol. 2, Sheet 7 of 7 and Sheet 26 of 29; UI 3, response 58)

609. UI used a combination of predictive computer modeling, in-field analysis, and a review of various data sources to evaluate the visibility of the proposed facility. (UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 1)

610. Information obtained during the field reconnaissance was incorporated into a viewshed map that depicts areas with year-round and seasonal visibility for areas within a one-mile radius Study Area (11,609 acres) from the route of the proposed structures based on computer modeling and in-field

observations from publicly-accessible locations. (UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 1 and Attachment 2, Viewshed Analysis Map Sheets 1 through 3)

611. Existing visibility of the transmission infrastructure generally extends to distances within 0.25 mile to 0.5 mile of the railroad corridor. At the eastern and western ends of the Project and to the south, views extend over undeveloped, open water and marsh to beyond 1.0 mile. (UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 3)

612. Based on the final viewshed analysis (refer to Figure Nos. 20 and 21), the existing UI infrastructure is visible year-round from approximately 2,424 acres* (20.9% of the Study Area) and seasonally visible from about 431 acres (3.7% of the Study Area).

*Approximately 1,044 acres out of the 2,424 acres is over open water.

(UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 3)

613. Based on the final viewshed analysis (refer to Figure Nos. 22 and 23), the Project would be visible year-round from approximately 2,843 acres* (24.5% of the Study Area) and seasonally visible from about 687 acres (5.9% of the Study Area).

*Approximately 1,264 acres out of the 2,843 acres is over open water.

(UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 3)

614. At distances greater than 0.5 mile from the Project area, the tops of the new transmission line structures and associated circuits would not be prominent features, particularly with the amount of intervening existing development and infrastructure within the Project area. (UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 3)

615. While some locations would experience changes in visibility from existing conditions due to the relocation and modified heights of new structures, these visual effects would be balanced by the removal of bonnets and other supporting infrastructure, particularly along the southern side of the railroad corridor. (UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 3)

616. For the Hannon-Morissette Alternative involving using double-circuit structures from Catenary Structure 648S and Ash Creek Substation Connection, the existing UI infrastructure for this portion of the transmission route is visible year-round from approximately 761 acres* (11.0% of the Study Area**) and seasonally visible from about 600 acres (8.7% of the Study Area).

*Approximately 265 acres out of the 761 acres is over open water.

**The one-mile radius Study Area for this portion of the route is approximately 6,910 acres.

(UI 19, Late Filed Exhibit 3-5; UI 19, Late Filed Exhibit 3-11, p. ii)

617. Construction of facilities defined under CGS §16-50i, including but not limited to, electric transmission line facilities, is permissible on ridgelines within the state. (CGS §8-1aa (2023); CGS §8-2 (2023); C.G.S. §16-50x (2023))

618. The Hannon-Morissette Alternative would include structures approximately 20 to 25 feet taller than the existing structures. (Tr. 6, pp. 163-164)

619. The Hannon-Morissette Alternative would not appreciably reduce the indirect visual impacts south of the railroad tracks, relative to the proposed Project. Notwithstanding, this alternative would increase the distance by shifting the transmission line centerline to the north by ~84 feet, subject to railroad ROW widths and other factors. (UI 19, Late Filed Exhibit 3-6; UI 1, Vol. 2, 1" = 400' Maps – Mapsheets 1 through 4)

Forest and Parks

620. The Project is not located proximate to any state parks. (UI 1, Vol. 1, p. 5-26)

621. There are no "blue-blazed" hiking trails maintained by the Connecticut Forest and Park Association within one-mile of the Project route. (UI 12, response 89; Council Administrative Notice Item No. 88 – Blue Blazed Hiking Trail System)

622. The Project is not located proximate to any National Heritage Corridors or any State designated heritage areas. (UI 1, Vol. 1, p. 5-35)

623. The closest publicly accessible recreational resource is Jennings Park at 900 Post Road in Fairfield, located approximately 0.01-mile southeast of the proposed Project. (UI 1, Vol. 1, p. 5-33)

Agriculture

624. The site includes a total of less than 0.10 acres of prime farmland soil. These soils are not located in areas of agricultural zoning nor are they being actively farmed. Within the less than 0.10 acre area, only temporary impacts from matting and/or clearing would result from the Project. (UI 3, response 68)

Vegetation

625. The edges of the railroad corridor are interspersed with mature mixed deciduous hardwood trees among narrow strips of primarily non-native, shrub/scrub invasive vegetation, escaped ornamentals associated with residential landscaping, and species common to freshwater and tidal wetlands. (UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, p. 1)

626. Existing vegetation would be removed from construction sites (including access roads and work pads) and as required both to provide access for construction equipment and to maintain clearance from the rebuilt 115-kV line conductors. Vegetation clearing would be required along the southern sides of the railroad corridor in Fairfield as well as the northern and southern sides of the railroad corridor in Bridgeport. (UI 1, Vol. 1, p. 3-6)

627. Clearing and grubbing would be performed via conventional methods such as a combination of chain saws, hand labor, and mechanized equipment. Trees would be directionally felled to minimize impacts. (UI 1, Vol. 1, p. 3-6)

628. Total tree clearing for construction activities for the Project would be approximately 6.5 acres. After completion of construction, approximately 1 acre of these areas would be allowed to revegetate naturally, including with trees. The remaining approximately 5.5 acres would be permanently

managed in low-growth species consistent with overhead transmission line operation and vegetation maintenance. (UI 1, Vol. 1, p. 6-15)

629. The Hannon-Morissette Alternative would result in a net increase in tree clearing of approximately 0.5 acre versus the proposed Project. This does not include any clearing that may be necessary for temporary access roads or work pads that may be located outside of the double-circuit UI easement boundary. (UI 19, Late Filed Exhibit 3-3)

630. In wetlands, trees and brush would be cut flush to the ground, and stumps would be left in place unless removal is required for Project construction. (UI 1, Vol. 1, p. 3-7)

631. In certain areas, "danger trees" or "hazard trees" (i.e. trees deemed a potential risk to overhead transmission lines) might also need to be trimmed or removed. Such trees would typically be identified after the rebuilt lines are installed. If these trees require trimming or removal and are located on private property, UI would coordinate with the property owner. (UI 1, Vol. 1, p. 3-6; UI 3, response 61)

632. UI's Vegetation Management would comply with the NERC Reliability Standard FAC-003 to maintain Minimum Vegetation Clearance Distance as outlined in the TVOP to prevent vegetation-related outages under various weather and operating conditions. (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #166)

633. UI's TVOP are based on the following industry standards and procedures:
    a) OSHA 29 CFR 1910.269 Electric Power Generation, Transmission and Distribution;
    b) ANSI Z133.3 "Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush Requirements";
    c) ANSI A300 Part 1 "Tree, Shrub, and other Woody Plant Maintenance – Standard Practices;
    d) ANSI A300 Part 7 "Integrated Vegetation Management, Electric Utility Rights-of-way; and
    e) NESC Rule 2018.

    (Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #167; UI 3, response 60)

Public Health and Safety

Critical Infrastructure Protection

634. In December 2009, President Obama proclaimed power grids as critical infrastructure vital to the United States. The Department of Homeland Security, in collaboration with other federal stakeholders, state, local, and tribal governments, and private sector partners, has developed the National Infrastructure Protection Plan (NIPP) to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice 3)

635. On February 12, 2013, President Obama signed Executive Order 13636 on Improving Cyber Security for Critical Infrastructure, along with an accompanying Presidential Policy Directive on Critical Infrastructure Security and Resilience. The order established the U.S. policy to "enhance the security and resilience of the nation's critical infrastructure." The Secretary of Homeland Security has been given the overall responsibility for critical infrastructure protection, and identifies the Department of Energy as the sector-specific agency responsible for the energy sector. The Department of Energy may draw upon NERC expertise. (Council Administrative Notice 4; Council Administrative Notice 63, p. 9)

636. NERC developed Physical Security Reliability Standard CIP-014-1 to address threats and vulnerabilities to the physical security of critical infrastructure on the bulk power system. CIP-014-1 consists of standards and requirements related to security of electronic perimeters, protection of critical cyber assets including personnel, training, security management and disaster recovery planning. CIP-014-1 requires transmission owners to deploy systems for monitoring security events and to have comprehensive contingency plans for cyberattacks, natural disasters and other unplanned events. (Council Administrative Notice 9; Council Administrative Notice 63, p. 9)

637. The Council approved requests from UI in the Project area for transmission substation remediation activities to comply with the NERC Reliability Standards for Critical Infrastructure Protection. (Council Petition 1157, June 11, 2015, contains CEII subject to Protective Order)

638. The Council issued declaratory rulings to UI associated with its 2016 Coastal Substation Flood Mitigation Asset Condition Review Study, including, but not limited to, installation of a perimeter floodwall system at Congress Street Substation. (Council Administrative Notice Item No. 75 – UI 2023 FLR Report; UI 3, response 47)

639. Conductor clearance requirements to billboards are 15.1 feet vertical clearance to 115-kV conductors, or horizontal clearances of 9.1 feet with the conductor in an at-rest condition and 6.1 feet with the conductor in a blowout condition. (UI 12, response 86)

640. A train derailment could impact any existing or future electric transmission line whether it's installed on a monopole or a bonnet. (Tr. 6, pp. 98, 160)

641. Maintenance issues with underground XLPE cables are rare, usually resulting from a faulty cable splice or an unauthorized excavation. (Tr. 6, p. 98; Council Administrative Notice Item 37, Finding of Fact 292)

642. The NBTRP will comply with the 2023 NESC, which became effective February 1, 2023. (Council Petition 1560)

643. The proposed Project would be constructed in full compliance with the NESC*, standards of the Institute of Electrical and Electronic Engineers, the American National Standards Institute, good utility practice, and UI's technical specifications.

*While the 2023 NESC has an effective date in Connecticut of February 1, 2023, the design of the proposed Project began in early 2021. Thus, the Project is subject to the 2017 NESC which was in effect at that time.

(UI 1, Vol. 1, p. 3-1; UI 3, response 29)

644. UI would utilize existing protective relaying equipment to automatically detect abnormal operational system conditions and to send a protective trip signal to circuit breakers to isolate the faulted section of the transmission system. (UI 1, Vol. 1, p. 3-20)

645. Fiber optic cable would be installed on the replacement transmission lines to provide a reliable communications path for the existing protective relaying systems. (UI 1, Vol. 1, p. 3-20)

646. Protective relaying and associated equipment, along with a Supervisory Control and Data Acquisition (SCADA) system for 24/7 remote control and equipment monitoring is housed at UI's System Operations Center. (UI 1, Vol. 1, p. 3-21)

647. Smoke detection systems are already in place in the existing relay and control enclosures at the five UI substations. In the event smoke is detected, an alarm would be activated at UI's Electric Control Center, and system operators would take appropriate action. (UI 1, Vol. 1, p. 3-21)

648. The relay and control enclosures are also equipment manual/portable fire extinguishers that comply with NFPA standards. (UI 1, Vol. 1, p. 3-21)

649. The Project would be consistent with the Council's *White Paper on the Security of Siting Energy Facilities*. The white paper guidelines focused on security issues related to intentional physical destruction of substation equipment. (Council Administrative Notice Item No. 27; UI 1, Vol. 1, pp. 3-21 to 3-23)

650. The four substations are equipped with lighting to facilitate work at night under emergency conditions or during inclement weather. (UI 1, Vol. 1, pp. 1-2 and 3-21)

651. Lighting would be required for Project construction activities that must occur during nighttime hours. For such work, temporary portable lighting would be needed. (UI 1, p. 6-40)

652. Operation of the Project would not require any lighting along the replacement 115-kV transmission route or any new lightning at the four substations. (UI 1, Vol. 1, p. 6-40)

653. Signs are installed at each substation to alert the public to the presence of high voltage at the facilities. (UI 1, p. 3-21)

Aviation Safety

654. The nearest airport to the Project is Sikorsky Airport, located approximately 2.95 miles east-southeast of Congress Street Substation. (UI 1, Vol. 1, pp. 5-41 and 5-42)

655. For each of the proposed monopoles, the FAA issued Determinations of No Hazard to Air Navigation (No Hazard Determinations) which indicated that the structures do not exceed obstruction standards and no lighting or marking would be required. (UI 1, Vol. 1, p. 6-36; UI 1, Vol. 1A – Appendices – Part I, Appendix A, FAA No Hazard Determinations)

656. Certain No Hazard Determinations require Notice of Construction to FAA within 5 days after construction reaches its greatest height. UI would comply with such requirements. (UI 1, Vol. 1A – Appendices – Part I, Appendix A, FAA No Hazard Determinations; Tr. 1, p. 30)

657. If Project design modifications result in increased monopole heights that exceed obstruction standards, UI would consult with FAA as necessary to seek to update and/or extend the No Hazard Determinations. (UI 1, Vol. 1, p. 6-36)

658. UI would file with FAA for review of temporary structures such as cranes. (UI 3, response 41)

Noise

659. UI expects only minor and short-term construction-related noise effects from the Project. Typical construction related noise would occur during normal work hours of 7 AM to 7 PM Monday through Saturday. Construction may occur on nights and Sundays as necessary to perform work during non-peak railroad use periods in order to minimize impacts to the rail system. Furthermore, 24/7 work would be necessary during certain critical periods requiring electrical outages on the UI system. (UI 1, pp. 6-38 to 6-40)

660. In some areas along the Project route, bedrock will be encountered at a shallow depth. UI anticipates utilizing mechanical means to remove the bedrock. Blasting is not expected to be necessary. Additionally, DOT does not allow blasting to be performed within the railroad ROW, and DOT concurs that all means of mechanical rock removal be explored first. However, should blasting be necessary, UI would develop a Blasting Control Plan in compliance with industry, state and UI procedures. If blasting is required, UI would consult with DOT and MNR prior to securing approvals for its Blasting Plans. (UI 1, Vol. 1, p. 6-2; Tr. 1, pp. 29-30; DOT Comments dated August 15, 2023, p. 3)

661. Construction noise is exempt from the State of Connecticut Noise Control Regulations §22a-69-1.8(g), which includes, but is not limited to, "physical activity at a site necessary or incidental to the erection, placement, demolition, assembling, altering, blasting, cleaning, repairing, installing, or equipping of buildings or other structures, public or private highways, roads, premises, parks, utility lines, or other property." (R.C.S.A. §22a-69-1.8(g))

662. Once completed, operation of the Project would comply with DEEP Noise Control Regulations. (Tr. 1, p. 29)

Electric and Magnetic Fields

663. Electric fields (EF) and magnetic fields (MF) are two forms of energy that surround an electrical device. Transmission lines are a source of both EF and MF. In the United States, electric utilities provide power at 60 hertz (oscillates 60 times per second). (Council Administrative Notice Item No. 25 – Council's Best Management Practices for Electric and Magnetic Fields, p. 1)

664. Electric fields result from voltages applied to electrical conductors and equipment. Appliances within homes and the workplace are the major sources of electric fields indoors, and power lines are the major sources of electric fields outdoors. EF levels decrease rapidly with distance from the source, diminishing even faster when interrupted by conductive materials, such as buildings and vegetation. The scientific community does not regard EF levels to be a concern to the general public, and thus studies of health effects from electrical transmission lines and equipment has focused on MF. (Council Administrative Notice Item No. 25 – Council's Best Management Practices for Electric and Magnetic Fields, p. 1; Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #239)

665. MF are produced by the flow of electric currents. The level of a magnetic field is commonly expressed as magnetic flux density in units called gauss (G), or in milliGauss (mG). The magnetic field level at any point depends on characteristics of the source, which can include the arrangement of conductors, the amount of current flow through the source, and its distance from the point of measurement. MF levels decrease rapidly with distance from the source but are not easily interrupted as they pass through most materials. (Council Administrative Notice Item No. 25 – Council's Best Management Practices for Electric and Magnetic Fields, p. 2; Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #240)

666. In the United States, no state or federal exposure standards for 60-hertz MF based on demonstrated health effects have been established. Nor are there any such standards established world-wide. However, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) has established a level of 2,000 mG, based on extrapolation from scientific experimentation, and the International Committee on Electromagnetic Safety (ICES) has calculated a guideline of 9,040 mG for exposure to workers and the general public. (Council Administrative Notice Item No. 25 – Council's Best Management Practices for Electric and Magnetic Fields, p. 3; Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #241)

667. In accordance to the Council's *Electric and Magnetic Fields Best Management Practices for the Construction of Electric Transmission Lines in Connecticut* guidelines (EMF BMP), UI is required to provide an analysis of recent scientific literature regarding MF exposure, an analysis of pre and post construction MF levels, and investigate "no cost" and "low cost" transmission line design alternatives to reduce MF levels at the edge of a ROW and in areas of particular interest, as long as such designs do not compromise system reliability or worker safety, or environmental and aesthetic project goals. (Council Administrative Notice Item No. 25 – Council's Best Management Practices for Electric and Magnetic Fields, pp. 4-10; Council Administrative Notice Item No. 39 – Docket No. 508 Finding of Fact #242)

668. As required by the Council's EMF BMPs, UI provided an analysis of recent scientific literature regarding MF exposure and determined there were no relevant changes in current research conclusions or the recommended exposure standards established by ICES and ICNIRP. (UI 1, Vol. 1A, Appendix E – EMF Report, p. 16; Council Administrative Notice Item No. 25 – Council's Best Management Practices for Electric and Magnetic Fields, p. 3)

669. As required by the Council's EMF BMP, UI examined the Project route to determine the location of any statutory facilities, such as schools, daycare facilities, playgrounds, hospitals, and residential areas, as defined under C.G.S. § 16-50p(a)(3)(D), for specific MF analysis. Such locations are identified below.

Location Name	Category	Address	Distance from proposed transmission line
Wakeman Boys and Girls Summer Camp	Day Care	385 Center Street, Southport	105 to 590 feet north
Southport Congregational Preschool	Day Care	524 Pequot Avenue, Southport	160 to 350 feet south
Palmer's Neck	Parks & Recreation	Post Road, Southport	210 to 465 feet south
Cajal Academy	School	303 Linwood Avenue, Fairfield	75 to 145 feet north
Sportsplex Camp	Youth Camp	85 Mill Plain Road, Fairfield	70 to 180 feet north
Gymnastics and Cheerleading Academy FFLD	Youth Camp	85 Mill Plain Road, Fairfield	70 to 225 feet north
Tomlinson Middle School	School	200 Unquowa Road, Fairfield	155 to 550 feet north
Jennings Park	Parks & Recreation	Post Road, Fairfield	55 to 245 feet south
Great Oaks Charter School – Bridgeport	School	375 Howard Avenue, Bridgeport	60 to 475 feet south

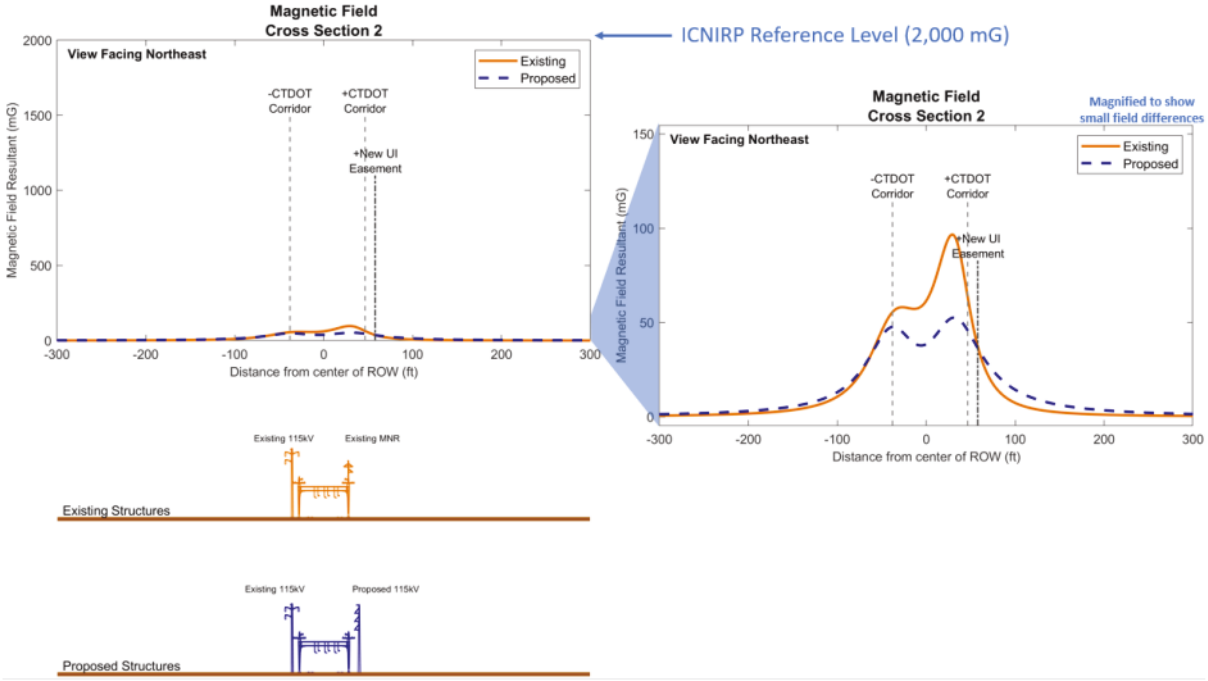
Went Field	Parks & Recreation	120 Wordin Avenue, Bridgeport	83 to 545 feet north
New Beginnings Family Academy	School	184 Garden Street, Bridgeport	50 to 300 feet north
Mercy Learning Center	School	637 Park Avenue, Bridgeport	250 to 370 feet north
Jaime A. Hulley Childcare Center	School	460 Lafayette Street, Bridgeport	90 to 270 feet south
Playground	Playground	504 Railroad Avenue, Bridgeport	60 to 130 feet south

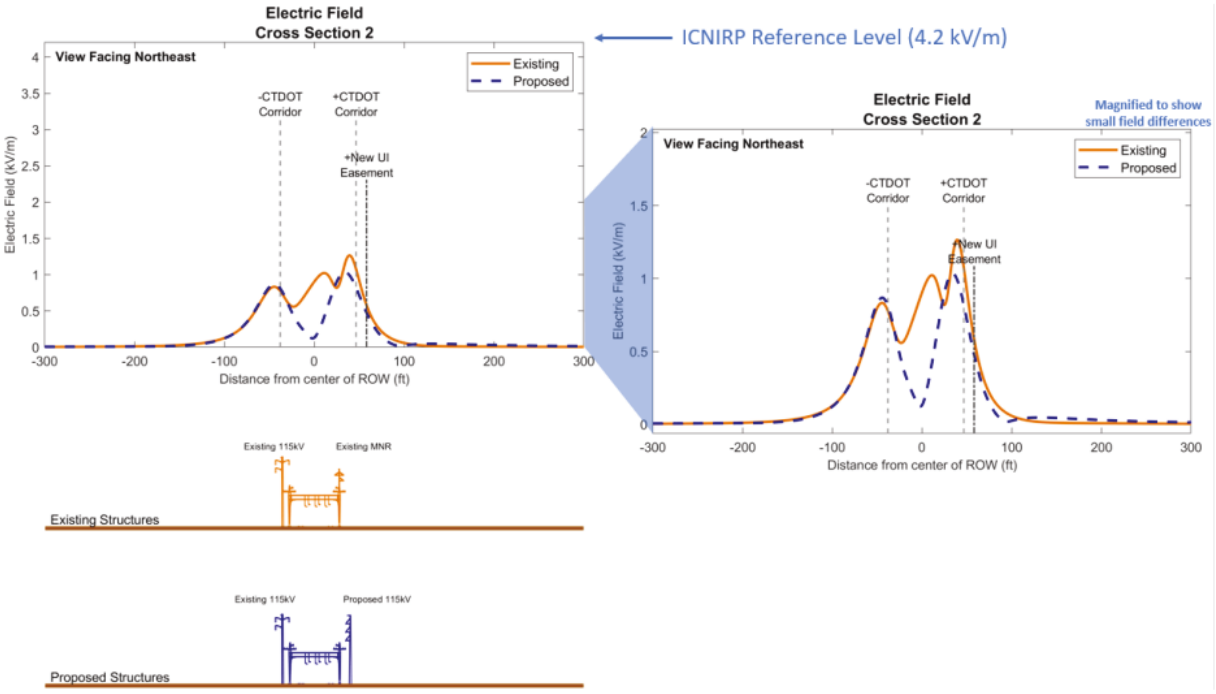
(UI 1, Vol. 1A, Appendix E – EMF Report, p. D-2; UI 1, Vol. 1, p. 5-33; Grouped Intervenors 21, pp. 3 and 5)

670. On May 2 and 22, 2022, field measurements of existing, preconstruction MF and EF were taken along the existing DOT corridor and adjacent areas including residences and community facilities. (UI 1, Vol. 1A, Appendix E – EMF Report, p. 17)

671. Measured MF levels within the railroad ROW averaged between 5.9 mG and 27 mG. Measured EF levels within the railroad ROW varied between less than 0.1 kV/m and 0.2 kV/m to a maximum of 0.4 kV/m. (UI 1, Vol. 1A, Appendix E – EMF Report, p. 21)

672. Cross-section XS-2 is representative of more of the Project route than any other single portion of route. Existing MF and EF Field measurements and proposed post-construction calculated MF and EF levels along this cross section of the railroad ROW is depicted below.





(UI 1, Vol. 1A, Appendix E – EMF Report, pp. 23-24)

673. UI has provided one MF mitigation option for the apartment building 79 Unquowa Place in Fairfield, and three MF mitigation options for the Windward apartment building at 20 Johnson Street, Bridgeport. Associated transmission configurations, percent MF reductions relative to the proposed design and costs are indicated below.

Table 1. Summary of magnetic-field reduction at apartment buildings in Fairfield and Bridgeport

Location	Redesign Option	Reduction at 1 meter (3.28 feet) above ground	Reduction at the Roof	Estimated Cost*
79 Unquowa Place in Fairfield	Option 1†	30%	47%	$36,000
Windward Apartment Building Complex in Bridgeport	Option 1‡	9%	27%	$31,000
	Option 2§	88%	97%	$7,480,000
	Option 3¶	Similar to Option 2	Similar to Option 2	$41,765,000

* Estimated cost provided by UI.
† Increase the minimum conductor height to from 75 ft-2 in. to 84 ft-5 in., and decrease the phase spacing from 14 ft to 12 ft.
‡ Increase the minimum conductor height to from 75 ft-2 in. to 80 ft-2 in.
§ Reroute the transmission line in a double-circuit configuration north of the CT DOT Corridor.
¶ Install the transmission line in an underground duct bank north of CT DOT Corridor.

(UI 3, response 69; UI 12, responses 90 and 91)

674. The closest residential structure to the proposed rebuilt transmission lines is the Windward apartment building at 20 Johnson Street, Bridgeport. This is also the residential structure with the largest increase in magnetic field levels from pre-construction to post-construction for the Project, based on

the roof level of 55 feet agl and Option 1 for MF mitigation. The table below depicts the pre-construction and proposed post-construction MF levels for this building.

Height above ground (ft)	Magnetic-field levels (mG) at front edge of the Windward apartment building		
	Pre-Construction	Post-Construction Redesigned (Option 1)	Difference between Pre-construction and Post-Construction
5	21	23	2.1
15	28	30	1.3
25	39	40	1.1
35	51	46	-4.2
45	49	61	12
55 (roof level)	48	106	58

(UI 12, responses 90 and 91)

675. The EMF BMPs directs an applicant to initially develop a baseline Field Management Design Plan that incorporates "no-cost" MF mitigation design features. The Applicant shall then study potential design alternatives by adding "low-cost" MF mitigation design features specifically where portions of the project are adjacent to residential areas, public or private schools, licensed child day-care facilities, licensed youth camps, or public playgrounds. The overall cost of "low-cost" design features are to be calculated at four percent of the initial Field Management Design Plan. The four percent guideline for "low-cost" mitigation should aim at a magnetic field reduction of 15 percent or more at the edge of the utility's ROW. This 15 percent reduction should relate specifically to those portions of the project where the expenditures would be made. (Council Administrative Notice Item No. 25 – Council's Best Management Practices for Electric and Magnetic Fields, pp. 4-10

676. UI's base Field Management Design Plan incorporates "no cost/low cost" magnetic field reduction measures, consistent with the Council's EMF BMPs, through the use of the following: distance via the use the permanent easements (where necessary) outside of the DOT boundary; taller structures to raise the heights of the transmission conductors; and arranging the conductor phases to minimize MF at the edge of the CDOT corridor or new easement. This "no cost/low cost" design was used to develop the pre and post project MF calculations. (UI 1, Vol. 1A, Appendix E – EMF Report, pp. 15-16)

677. The Hannon-Morissette Alternative involving double-circuit structures from Catenary Structure 648S to the Ash Creek Substation Connection results in a decrease in overall MF levels relative to either the existing or proposed configurations. This includes a decrease in maximum MF levels, a large decrease in MF levels on the south side of the tracks, and a smaller decrease MF levels on the north side of the tracks. The dominant factor driving the MF reductions is the optimal phasing of the two circuits such that the MF generated by one line effectively cancels MF from the other line. (UI 19, Late Filed Exhibit 3-11, p. ii; Tr. 6, pp. 162-163)

678. The Hannon-Morissette Alternative would reduce MF along the south side of the existing railroad corridor by between 20 mG and 54 mG. At a distance of approximately 100 feet south of the railroad corridor, the MF reductions would range between 3.4 mG and 6.9 mG. Along the northern edge of the existing railroad corridor, the MF reductions would range between 3.1 mG and 10 mG. At a

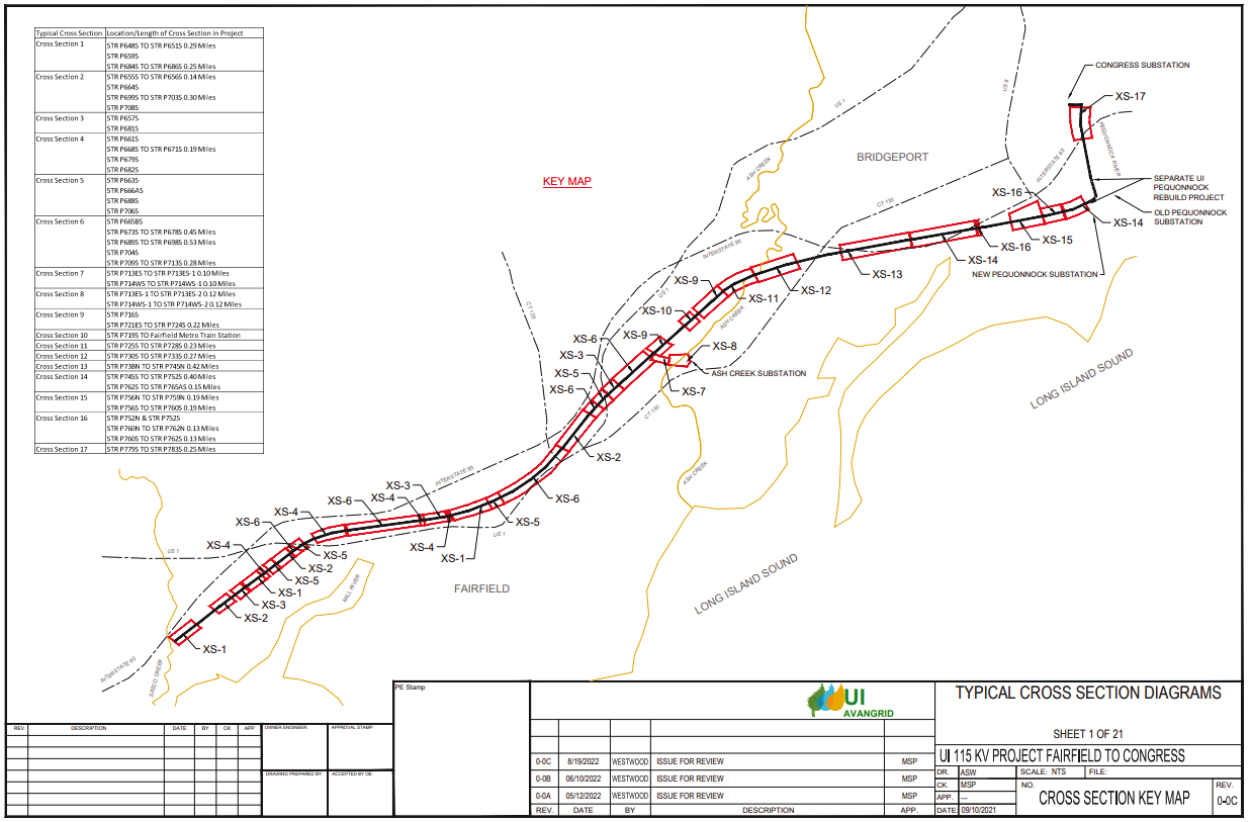
distance of 100 feet from the northern edge of the existing railroad corridor, MF would decrease by between 2.2 mG and 4.8 mG. (UI 19, Late Filed Exhibit 3-11)

679. All MF levels for the proposed Project or the Hannon-Morissette Alternative would be below ICNIRP and ICES guidelines. (UI 19, Late Filed Exhibit 3-11)

680. The Hannon-Morissette Alternative would decrease EF levels at the southern portion of the railroad corridor and would have smaller reductions in EF for the majority of the northern portion of the railroad corridor. EF would increase in certain portions of the route on the northern side of the railroad corridor. All EF levels would be below ICNIRP and ICES guidelines. (UI 19, Late Filed Exhibit 3-11)

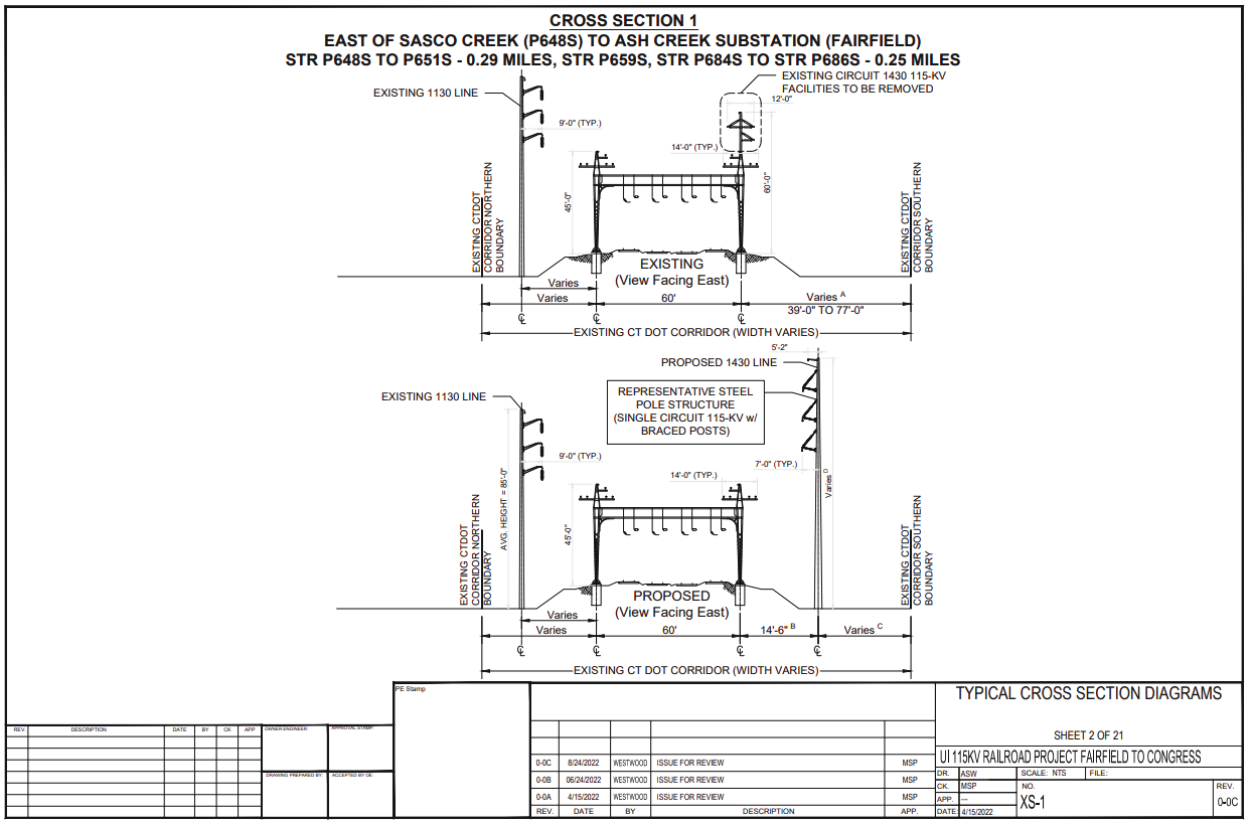
681. EMF from the Project is not expected to impact potential solar photovoltaic installations on SPC's roof. Similarly, the operation of FSL's rooftop solar facility is not expected to be impacted by the proposed transmission line operation. (Tr. 4, p. 85; Tr. 6, p. 170)

Figure 1 – Map Key



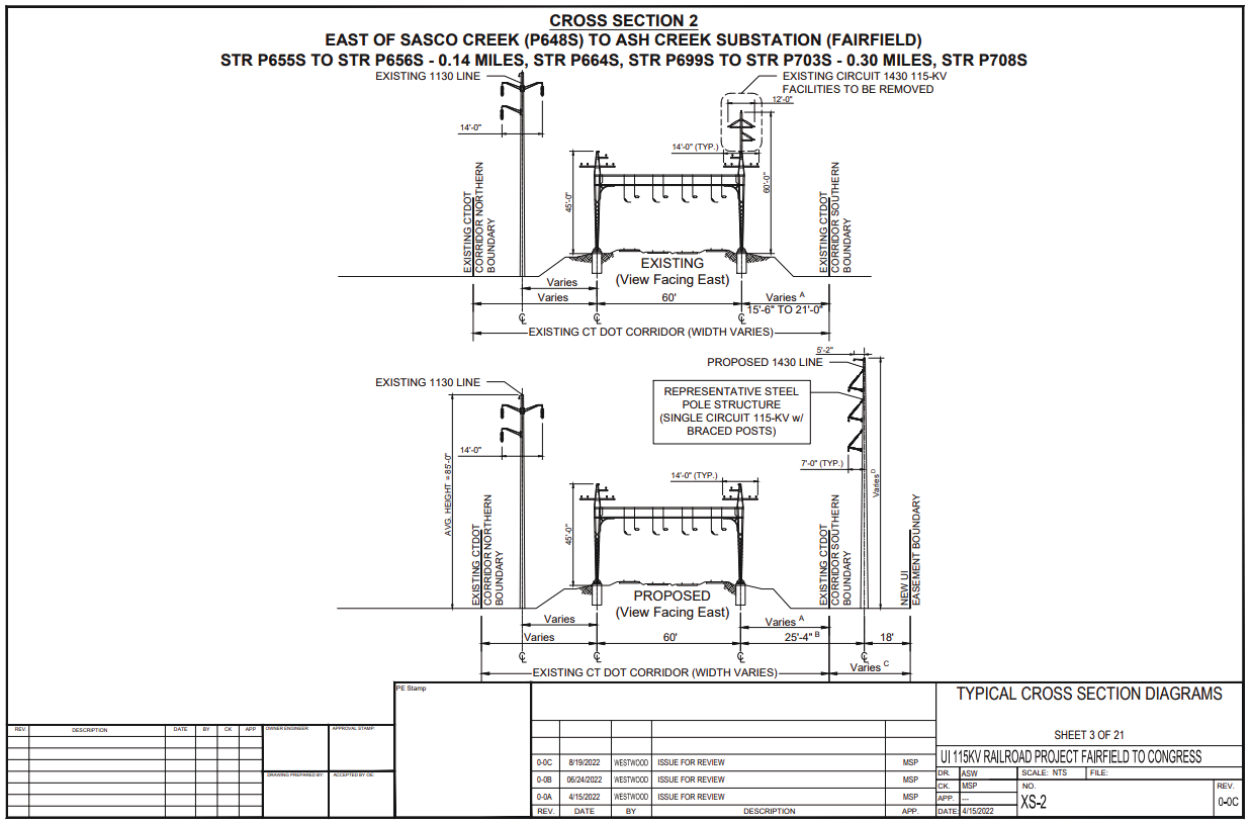
(UI 1, Vol. 2, Attachment V2.1)

Figure 2 – East of Sasco Creek to Ash Creek Substation
Structures P648S to P651S, P659S, and P684S to P686S – Cross Section 1



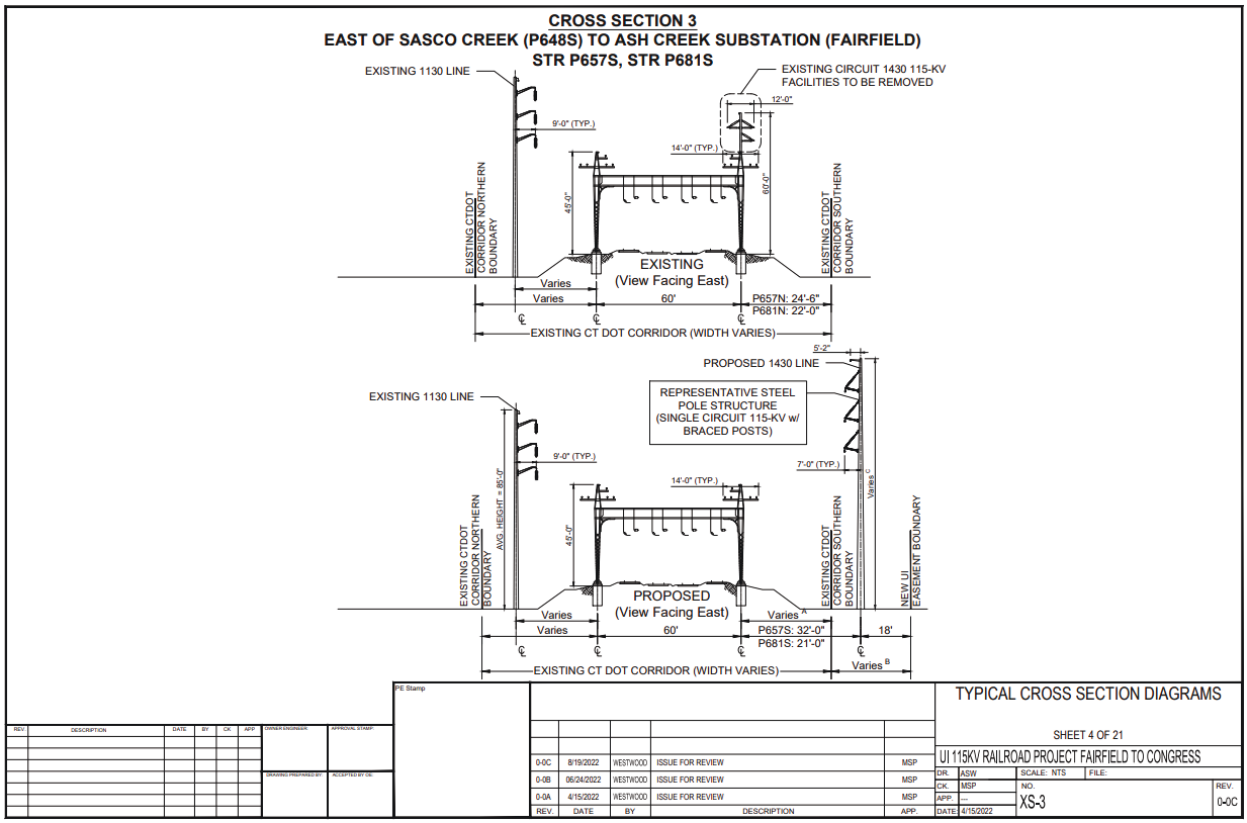
(UI 1, Vol. 2, Attachment V2.1)

Figure 3 – East of Sasco Creek to Ash Creek Substation
Structures P655S to P656S, P664S, P699S to P703S, and P708S – Cross Section 2



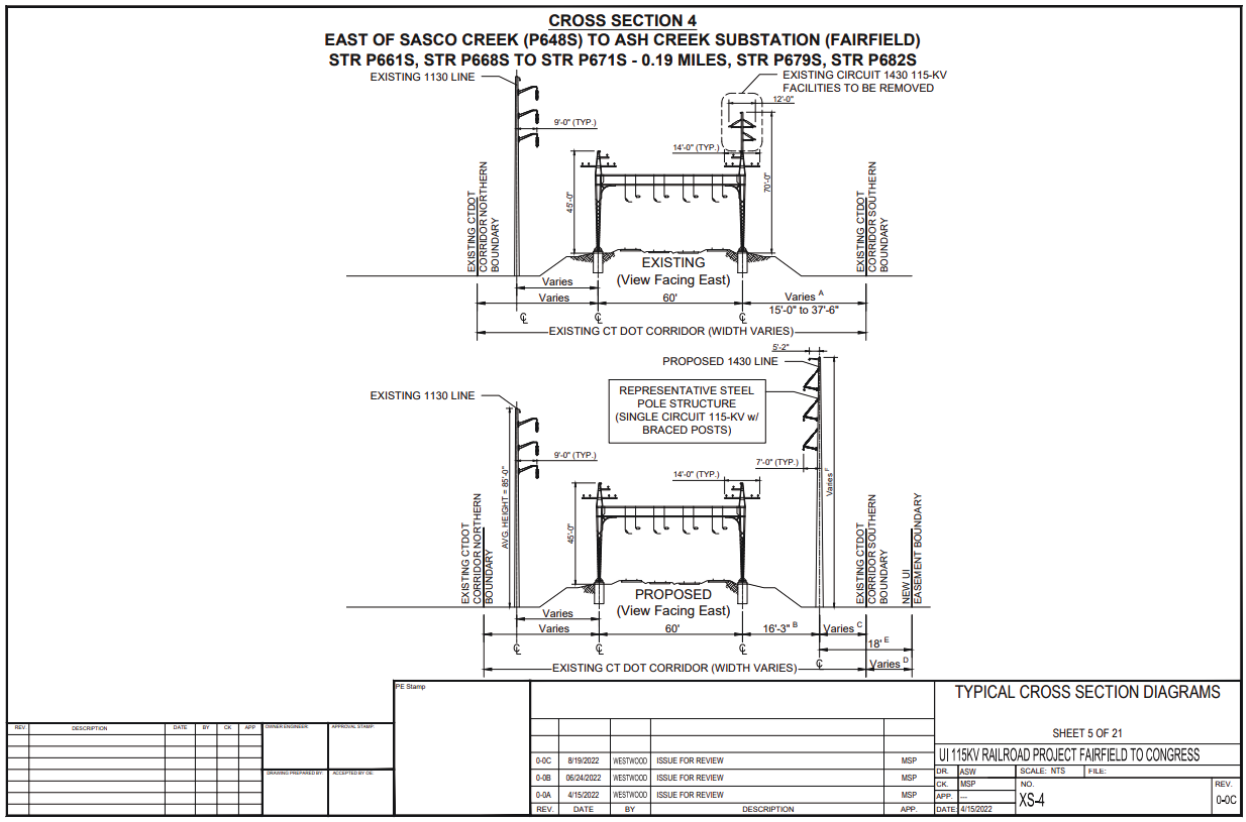
(UI 1, Vol. 2, Attachment V2.1)

Figure 4 – East of Sasco Creek to Ash Creek Substation
Structures P657S and P681S – Cross Section 3



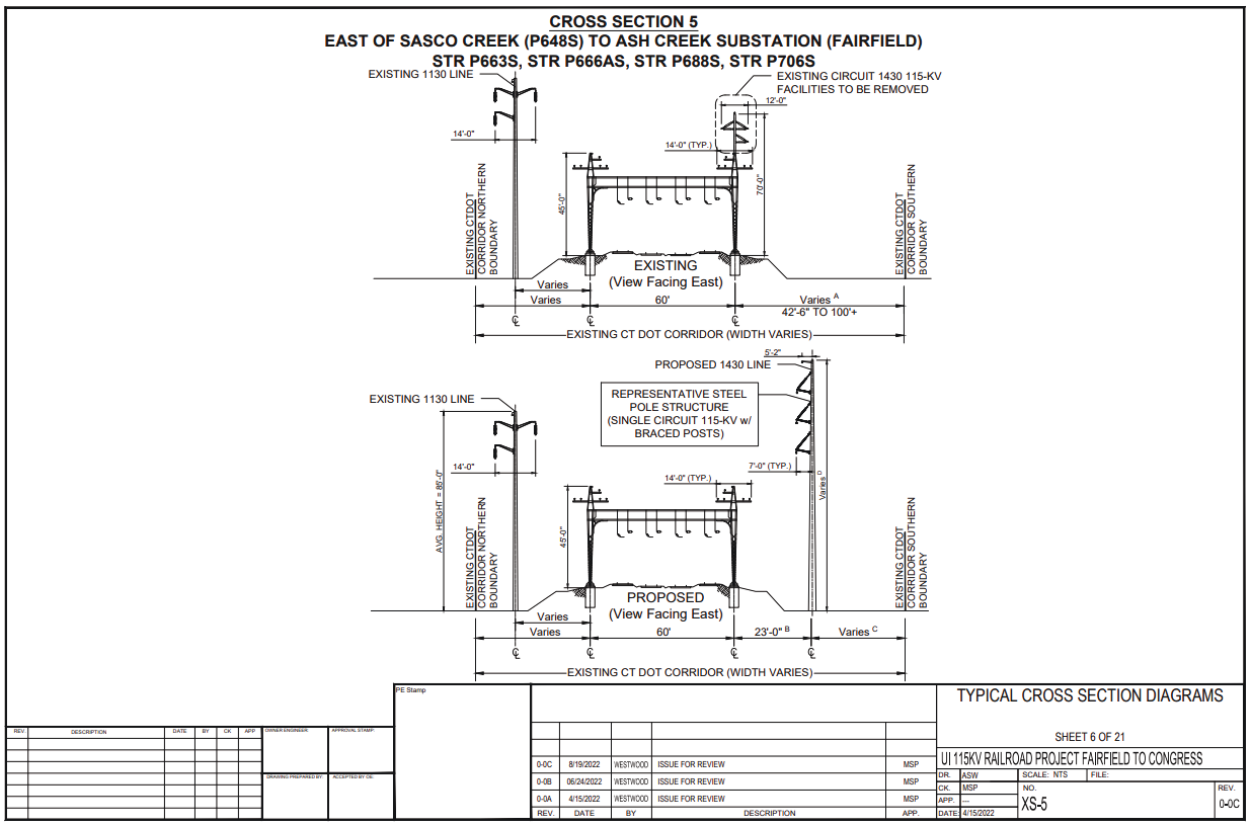
(UI 1, Vol. 2, Attachment V2.1)

Figure 5 – East of Sasco Creek to Ash Creek Substation
Structures P661S, P668S to P671S, P679S, and P682S – Cross Section 4



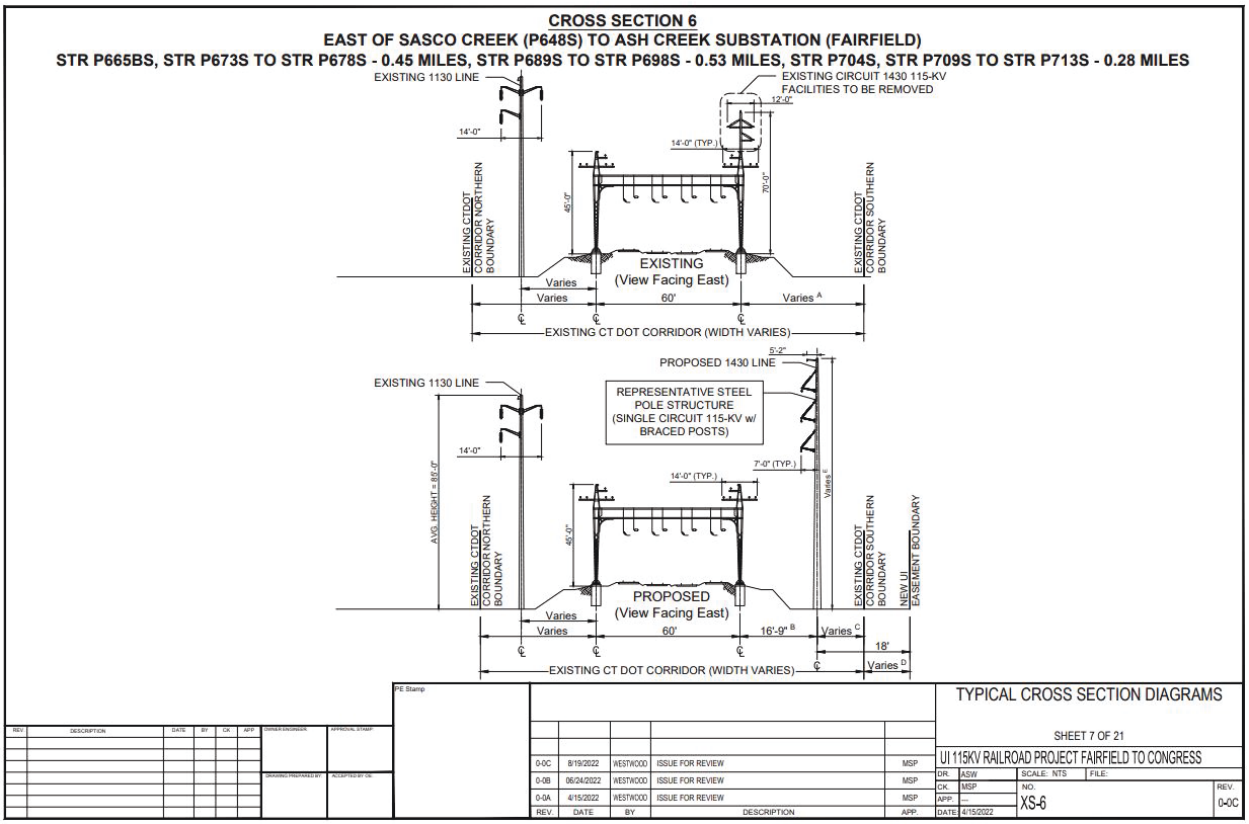
(UI 1, Vol. 2, Attachment V2.1)

Figure 6 – East of Sasco Creek to Ash Creek Substation
Structures P663S, P666AS, P688S, and P706S – Cross Section 5



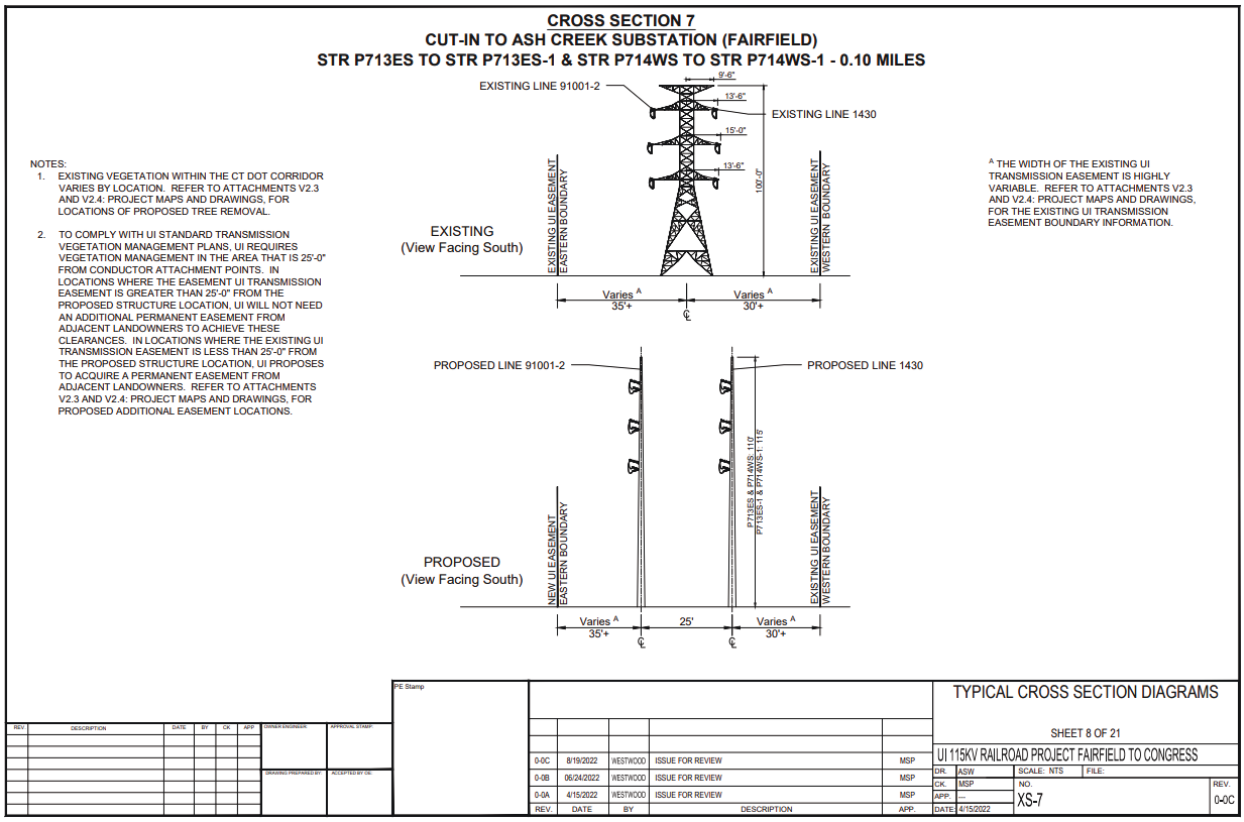
(UI 1, Vol. 2, Attachment V2.1)

Figure 7 – East of Sasco Creek to Ash Creek Substation
Structures P665BS, P673S to P678S, P689S to P689S, P704S, and P709S to P713S – Cross Section 6



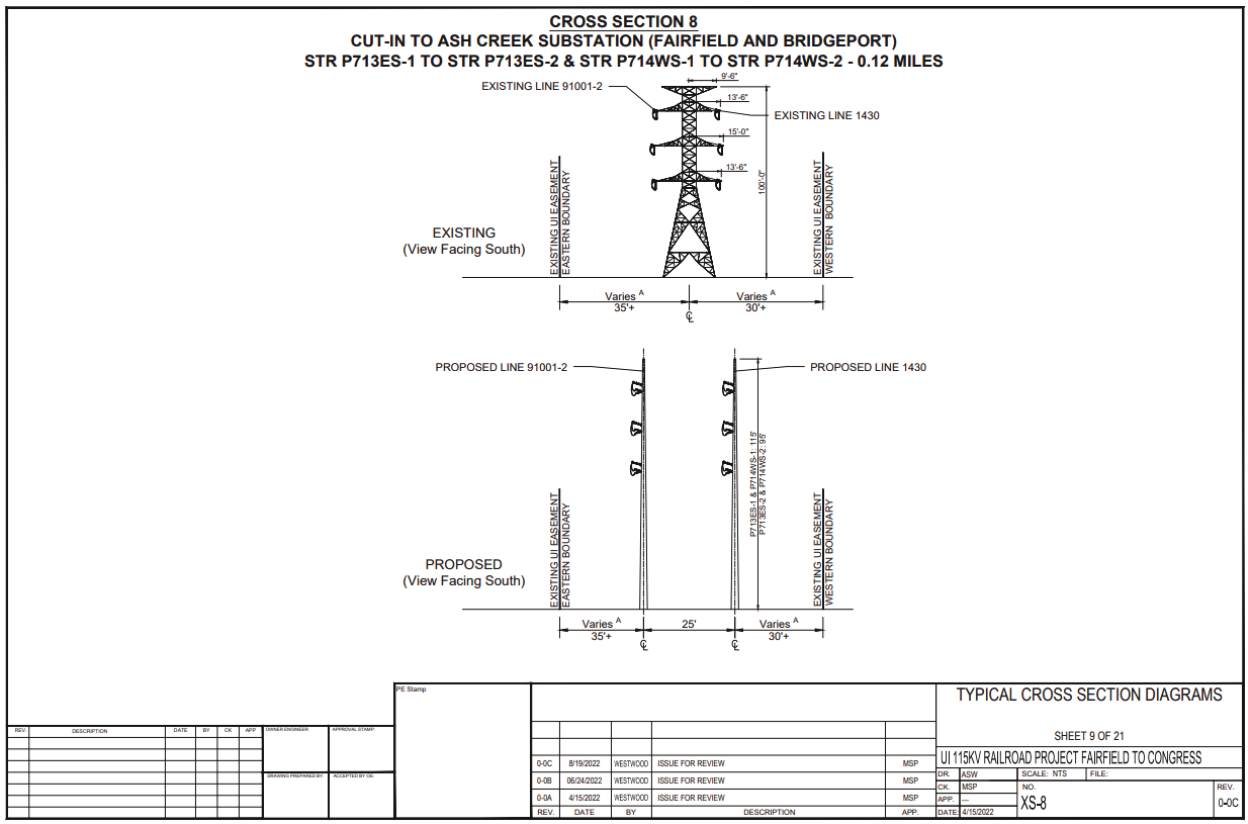
(UI 1, Vol. 2, Attachment V2.1)

Figure 8 – Ash Creek Substation
Structures P713ES to P713ES-1, and P714WS to P714WS-1 – Cross Section 7



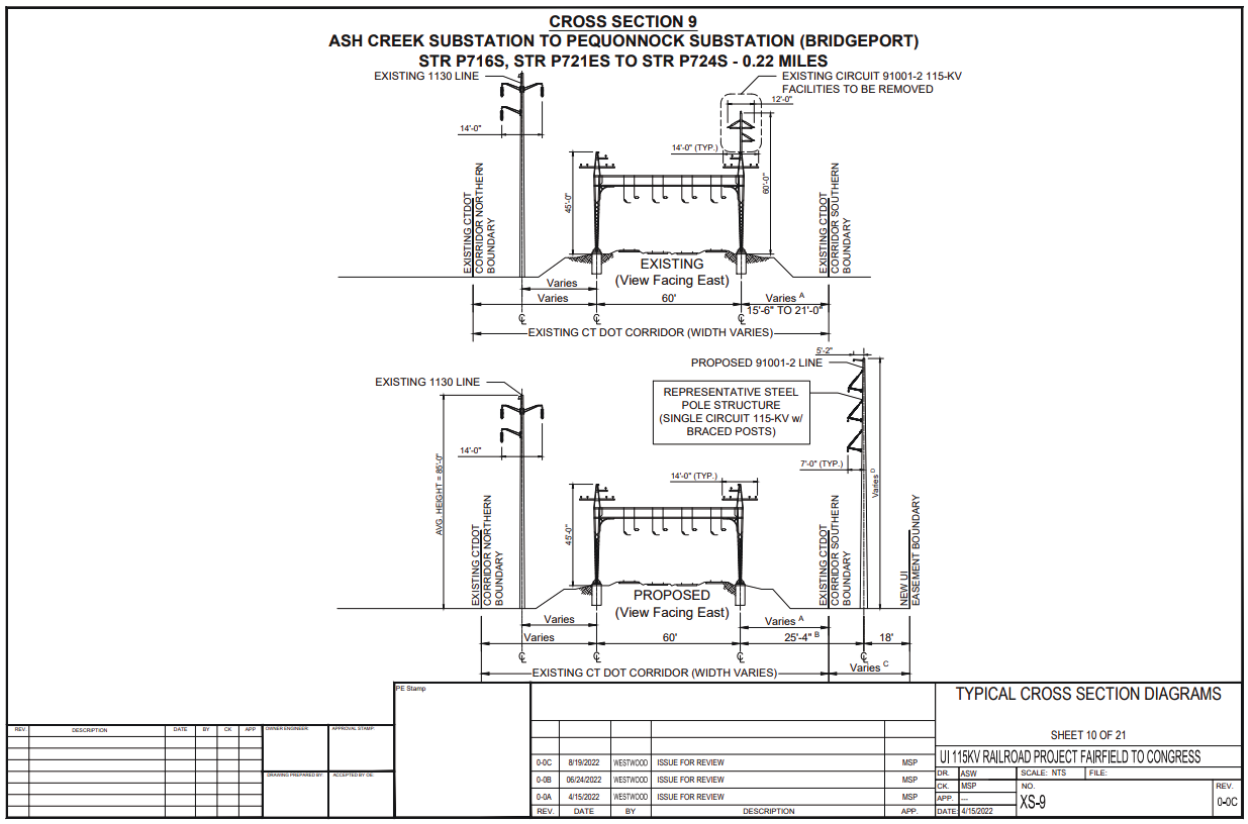
(UI 1, Vol. 2, Attachment V2.1)

Figure 9 – Ash Creek Substation
Structures P713ES-1 to P713ES-2, and P714WS-1 to P714WS-2 – Cross Section 8



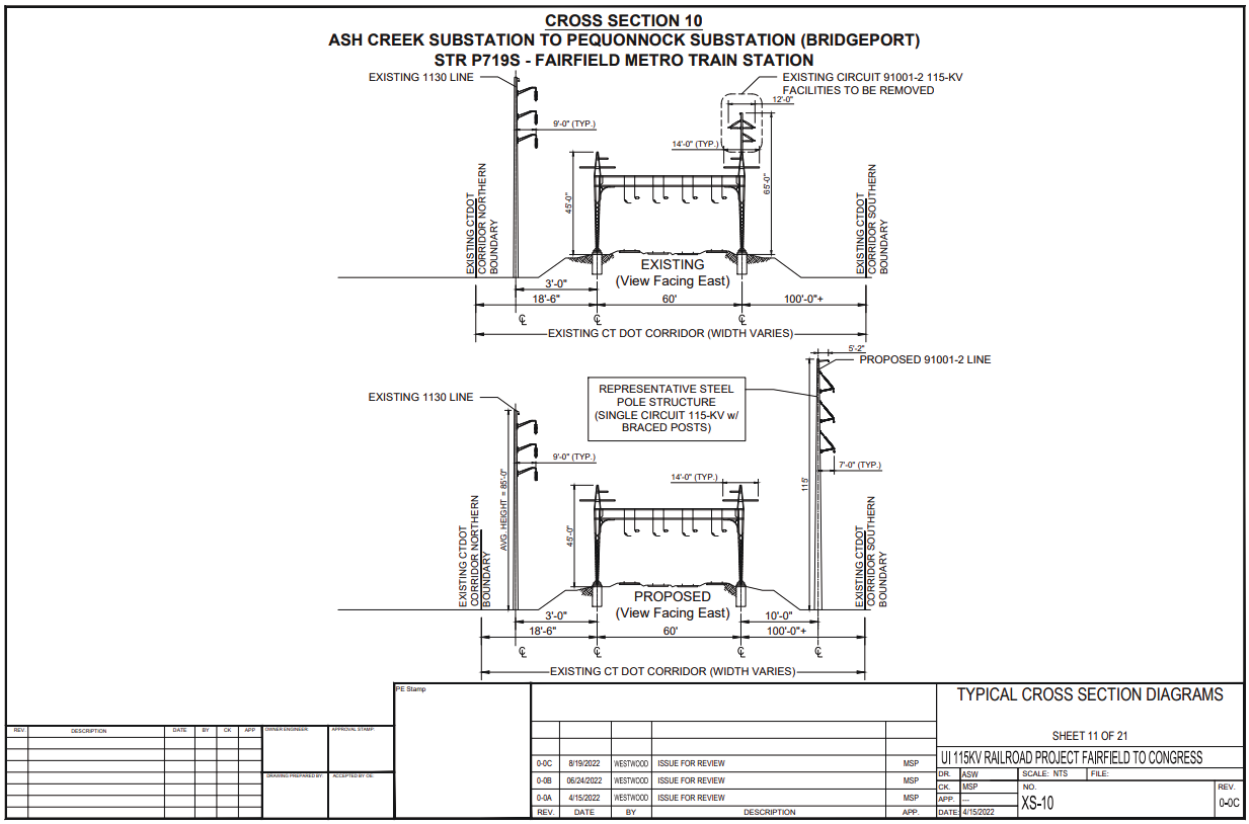
(UI 1, Vol. 2, Attachment V2.1)

Figure 10 – Ash Creek Substation to Pequonnock Substation Structures P716S, and P721ES to P724S – Cross Section 9



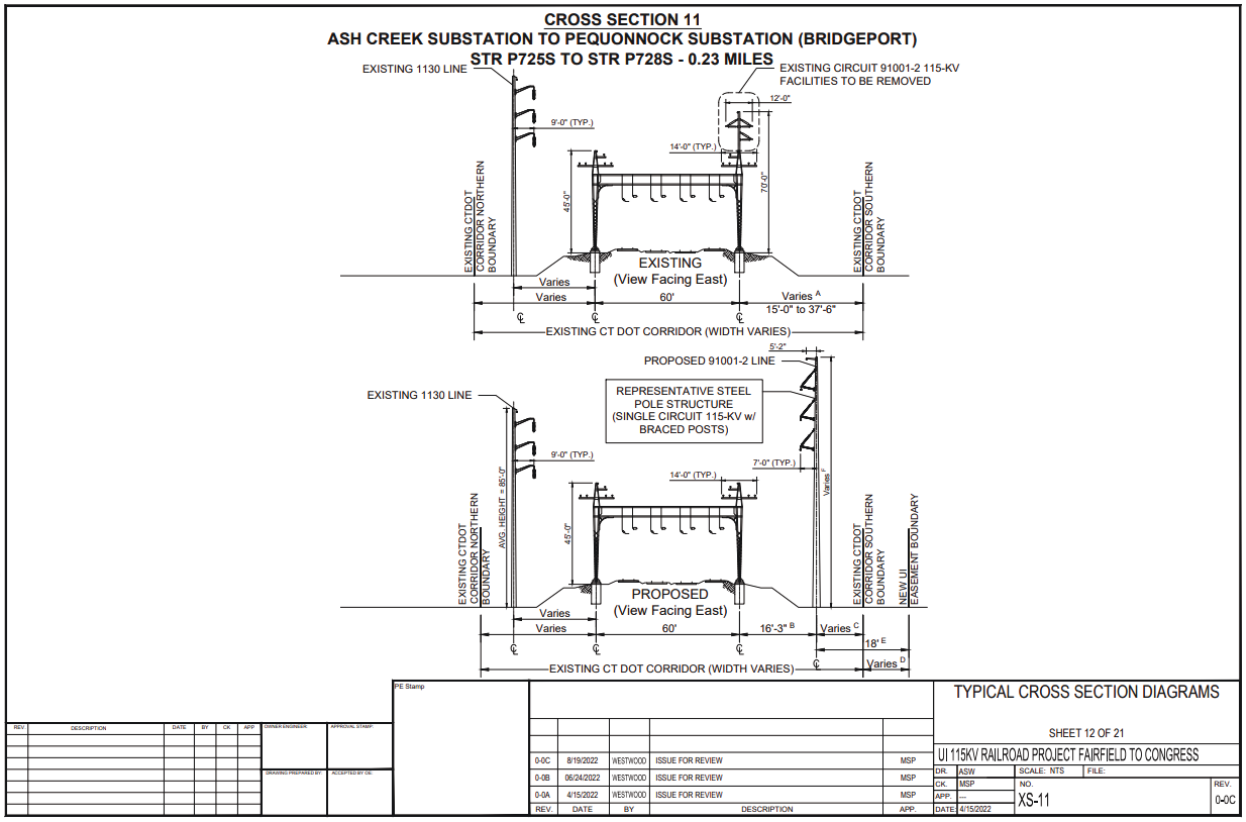
(UI 1, Vol. 2, Attachment V2.1)

Figure 11 – Ash Creek Substation to Pequonnock Substation
Structure P719S – Cross Section 10



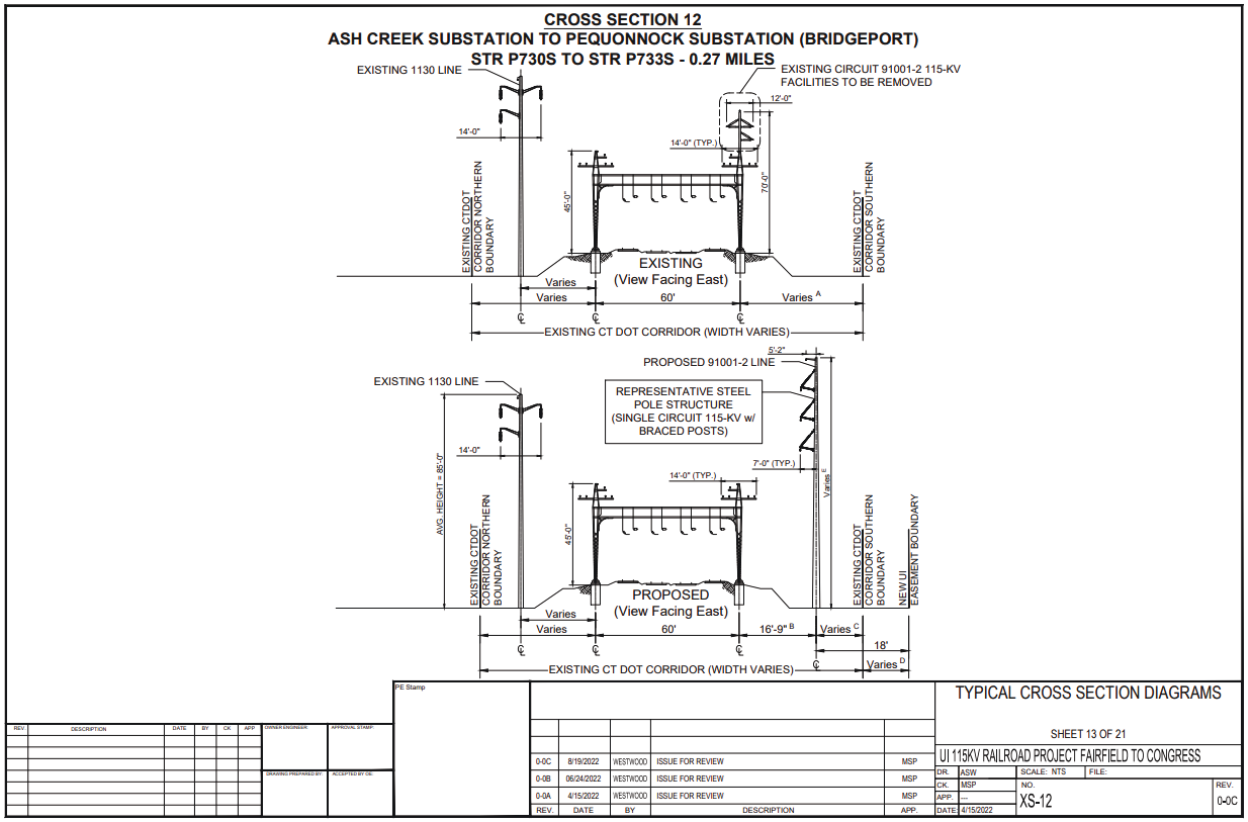
(UI 1, Vol. 2, Attachment V2.1)

Figure 12 – Ash Creek Substation to Pequonnock Substation
Structures P725S to P728S – Cross Section 11



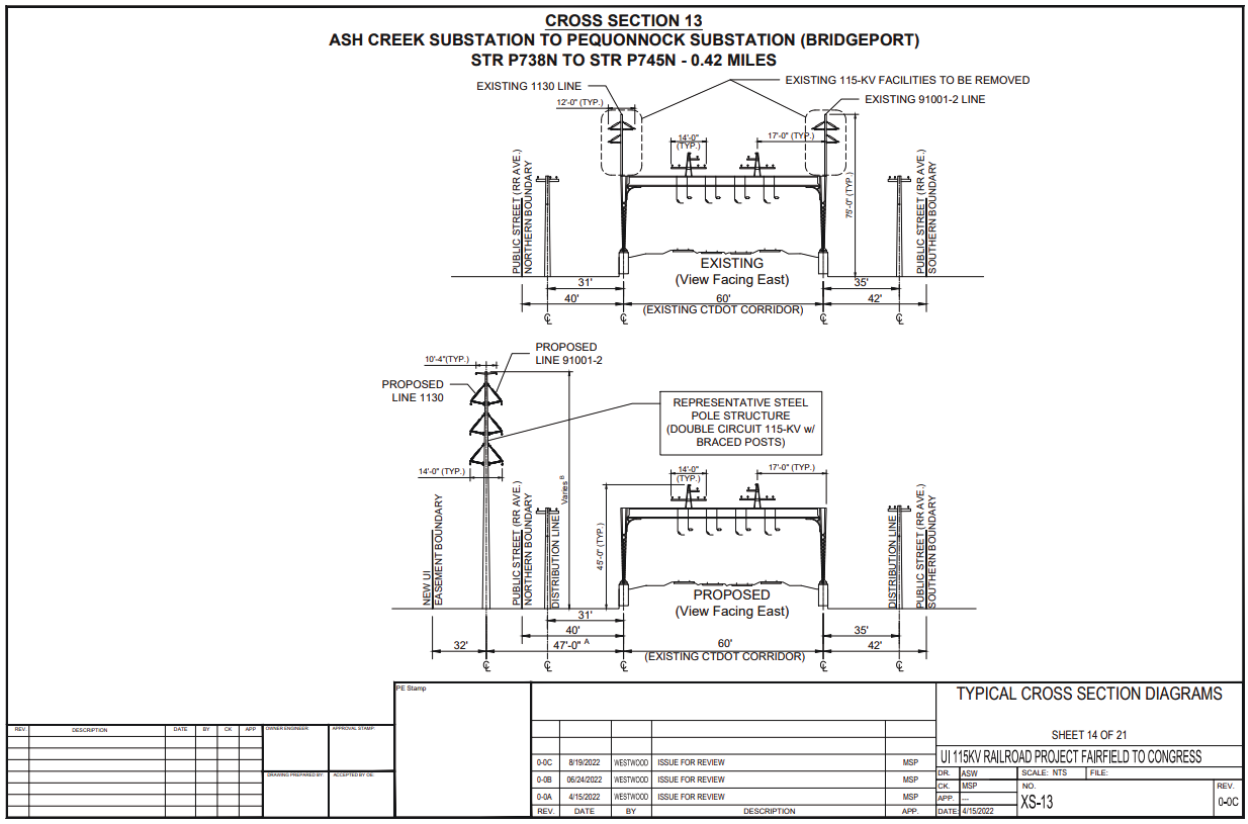
(UI 1, Vol. 2, Attachment V2.1)

Figure 13 – Ash Creek Substation to Pequonnock Substation
Structures P730S to P733S – Cross Section 12



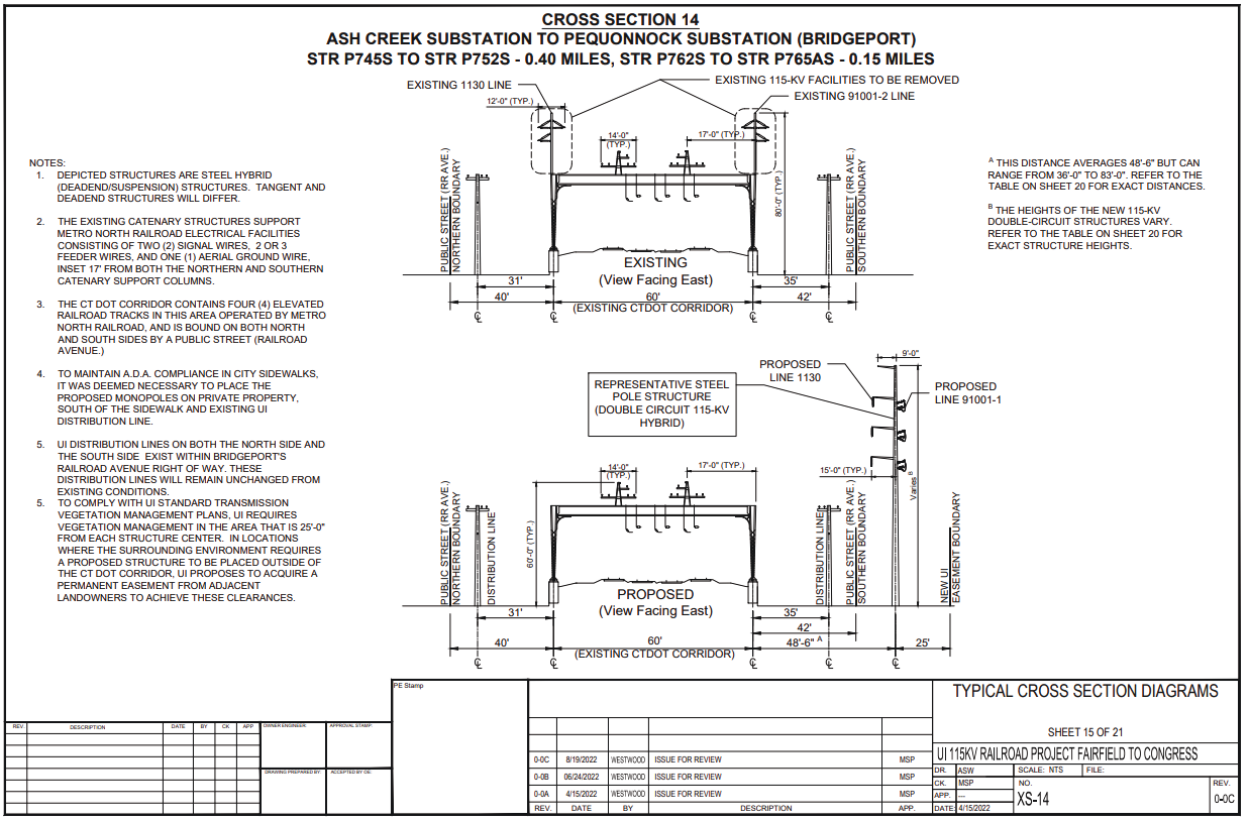
(UI 1, Vol. 2, Attachment V2.1)

Figure 14 – Ash Creek Substation to Pequonnock Substation
Structures P738N to P745N – Cross Section 13



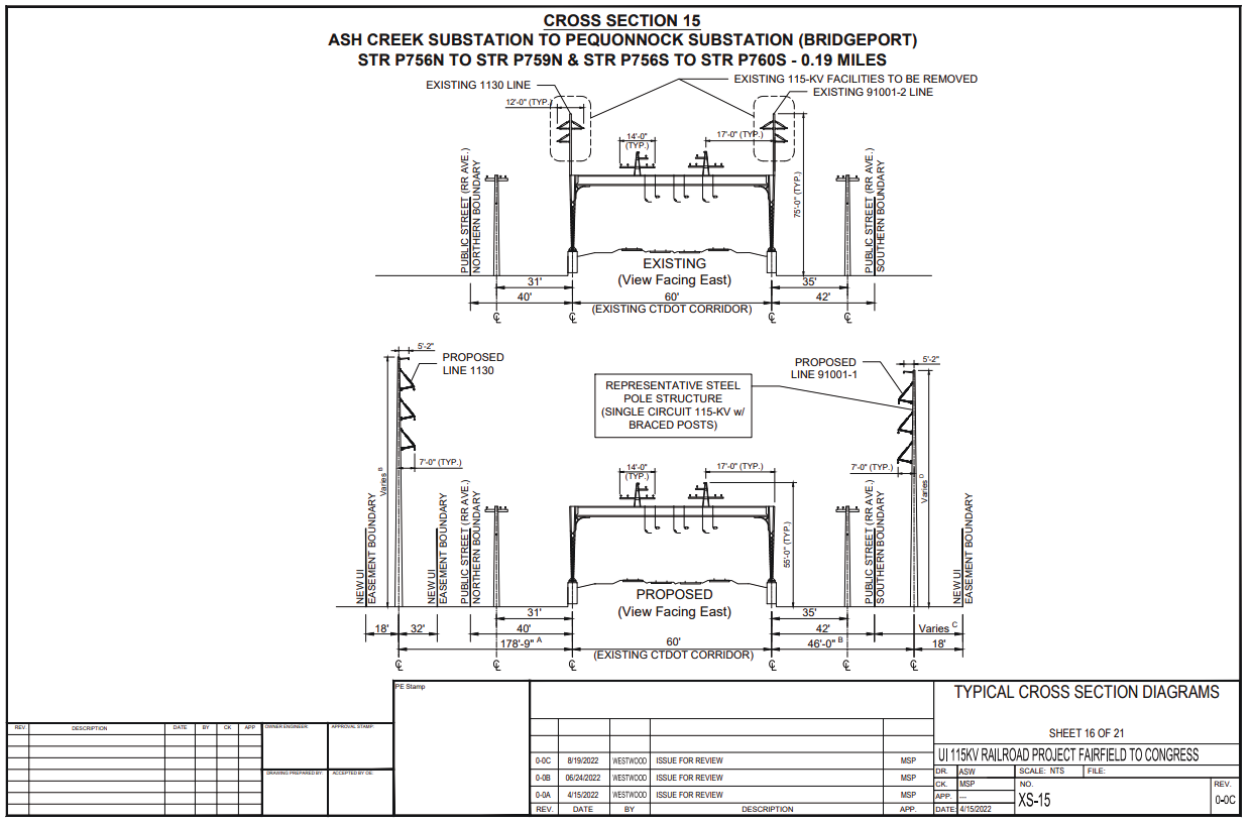
(UI 1, Vol. 2, Attachment V2.1)

Figure 15 – Ash Creek Substation to Pequonnock Substation
Structures P745S to P752S and P762S to P765AS – Cross Section 14



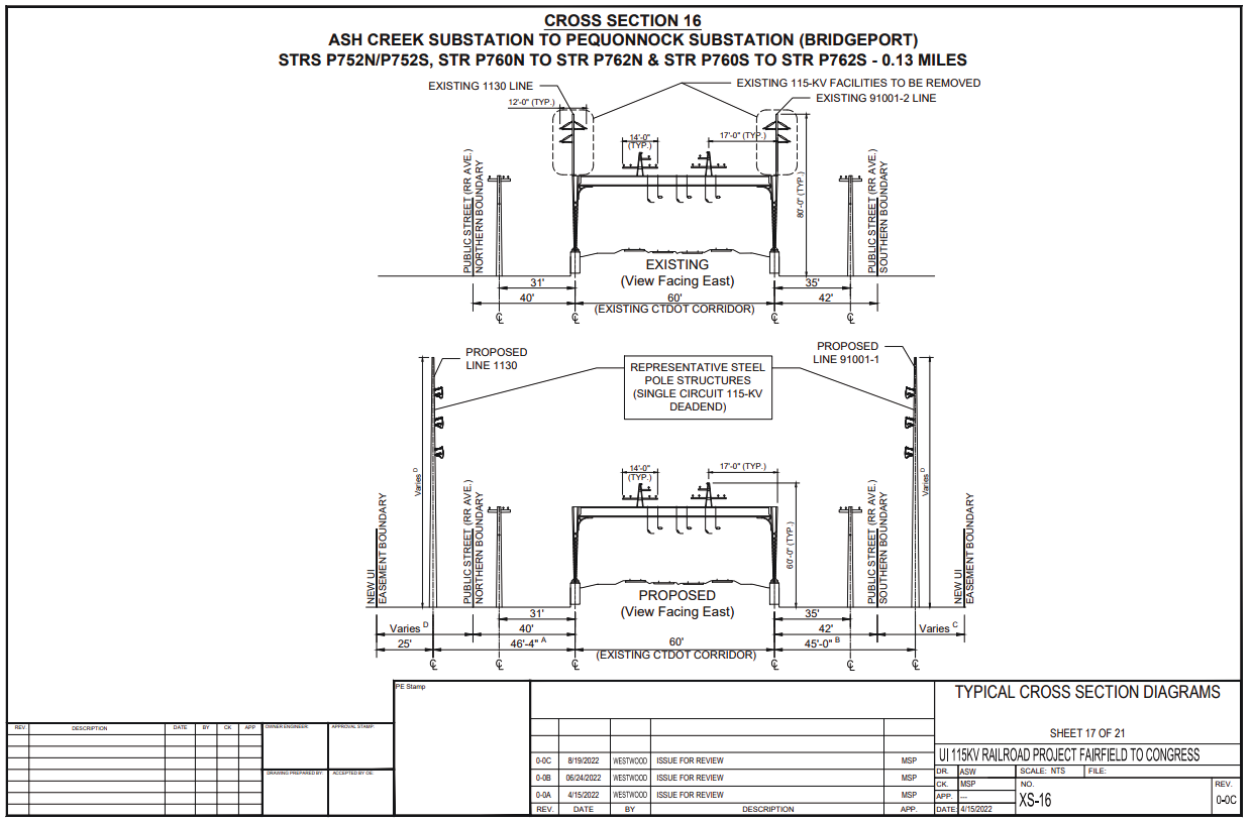
(UI 1, Vol. 2, Attachment V2.1)

Figure 16 – Ash Creek Substation to Pequonnock Substation
Structures P756N to P759N and P756S to P760S – Cross Section 15



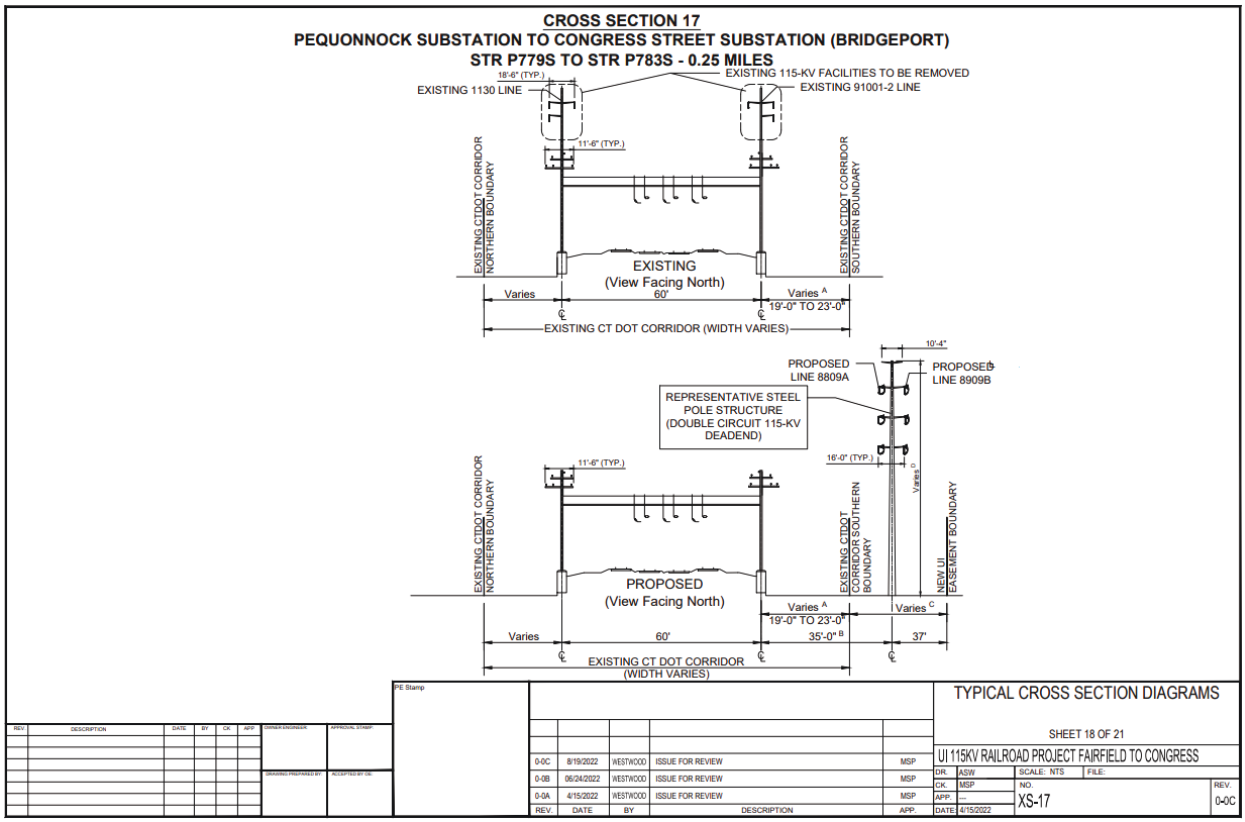
(UI 1, Vol. 2, Attachment V2.1)

Figure 17 – Ash Creek Substation to Pequonnock Substation
Structures P752N/P752S, P760N to P762N, and P760S to P762S – Cross Section 16



(UI 1, Vol. 2, Attachment V2.1)

Figure 18 – Pequonnock Substation to Congress Street Substation Structures P779S to P783S – Cross Section 17



(UI 1, Vol. 2, Attachment V2.1)

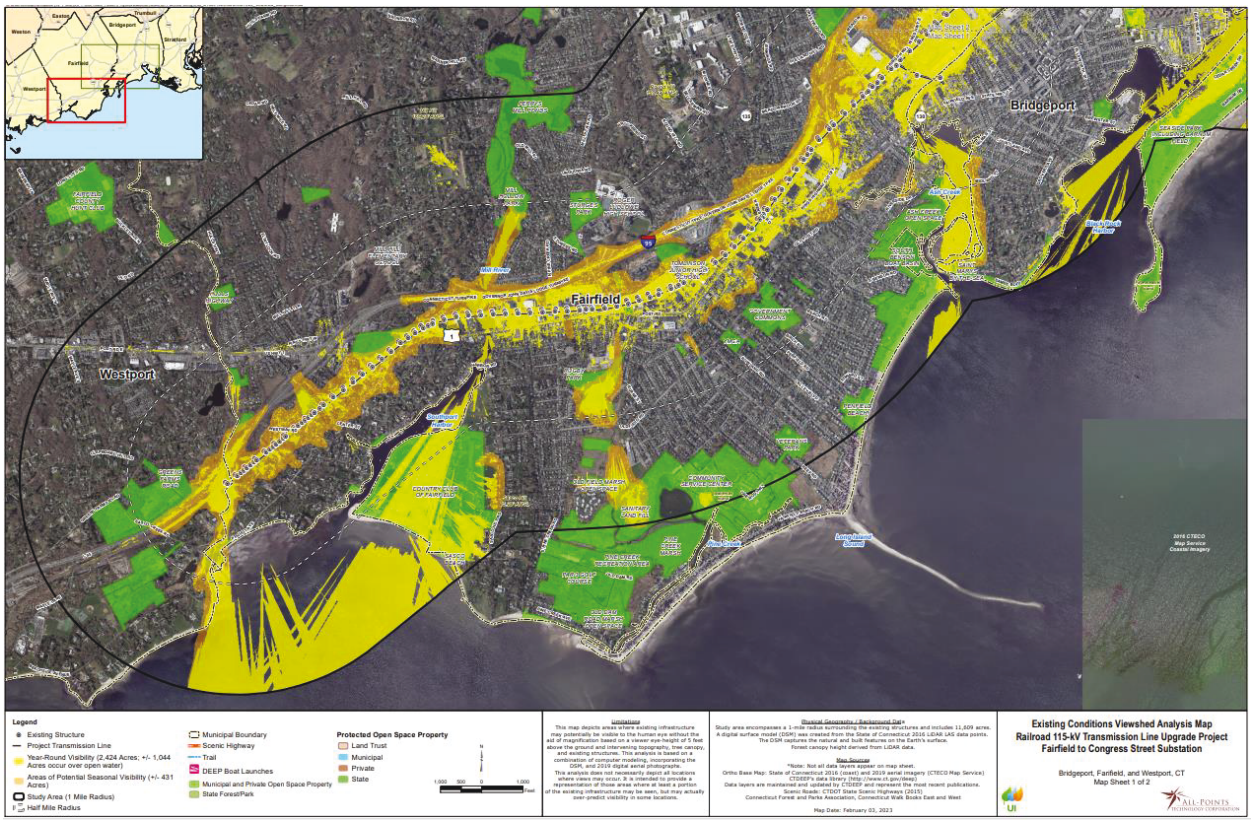
Figure 19 – Cost Tables

Alternative	Project Component	Section Length in Linear Miles	Transmission Line Costs (A)	Distribution Related Costs (B)	Substation Costs (C)	Transition Station Costs (D)	HDD Costs (E)	Jack & Bore Costs (F)	Misc. Costs (e.g. bonnet decommissioning) (G)	Total Cost Estimate (H)[1] =[A+B+C+D+E+F+G]
2	Overhead Transmission Line Single Circuit Monopoles	9.0	$267,981,358	$0	$1,372,000	$0	$0	$0	$9,800,000	$279,153,358
3	Overhead Transmission Line[2] Single-Circuit, RR Structure Modifications	9.0	$528,986,377	$0	$1,372,000	$0	$0	$0	$9,800,000	$540,158,377
4	Overhead Transmission Line Double-Circuit, RR Structure Modifications	9.0	$504,987,729	$0	$1,372,000	$0	$0	$0	$9,800,000	$516,159,729
5	Overhead Transmission Line Hybrid Option		$266,806,161	$0	$1,372,000	$0	$0	$0	$9,800,000	$277,978,161
6	Unground Transmission Line Public Streets	9.14	$976,504,000	$0	$6,996,000	$0	$6,767,500	$518,000	$9,800,000	$1,000,585,500

Project Component	Section Length in Linear Miles	Transmission Line Costs (A)	Substation Costs (B)	HDD Costs (C)	Misc. Costs (e.g. bonnet decommissioning) (D)	Total Cost Estimate (E)[1] =[A+B+C+D]	Preferred Solution Cost (F)	Cost Delta (E-F)
Overhead Transmission Line Double Circuit Monopoles (North-side only) B648S to Ash Creek	10.16	$311,475,000	$446,000	$0	$9,800,000	$321,721,000	$255,000,000	$66,721,000
Underground Transmission Line Single Circuit Duct Bank (South-side only) B648S to Ash Creek	10.85	$475,163,300	$694,100	$2,443,600	$9,800,000	$488,101,000	$255,000,000	$233,101,000

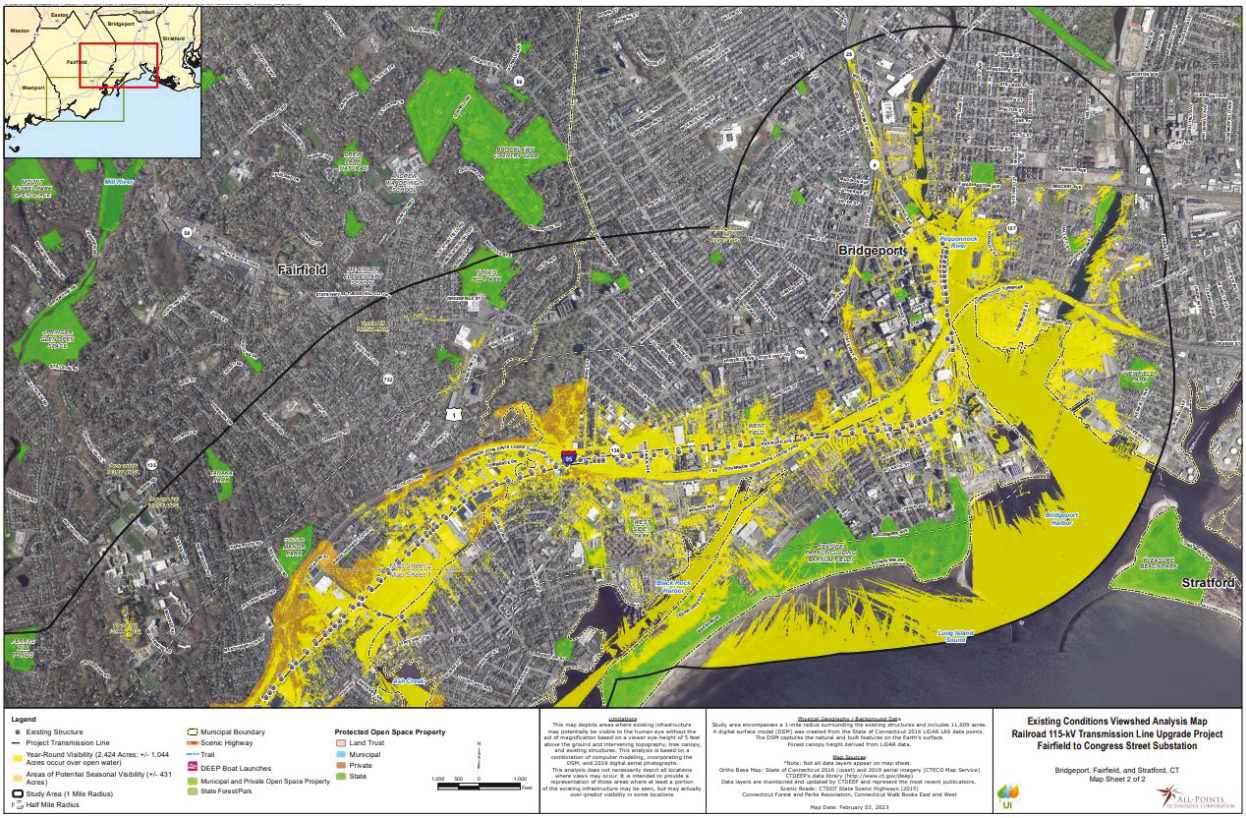
(UI 3, response 14; UI 18, Late Filed Exhibit 2-5)

Figure 20 – Existing Visibility (Map 1 of 2)



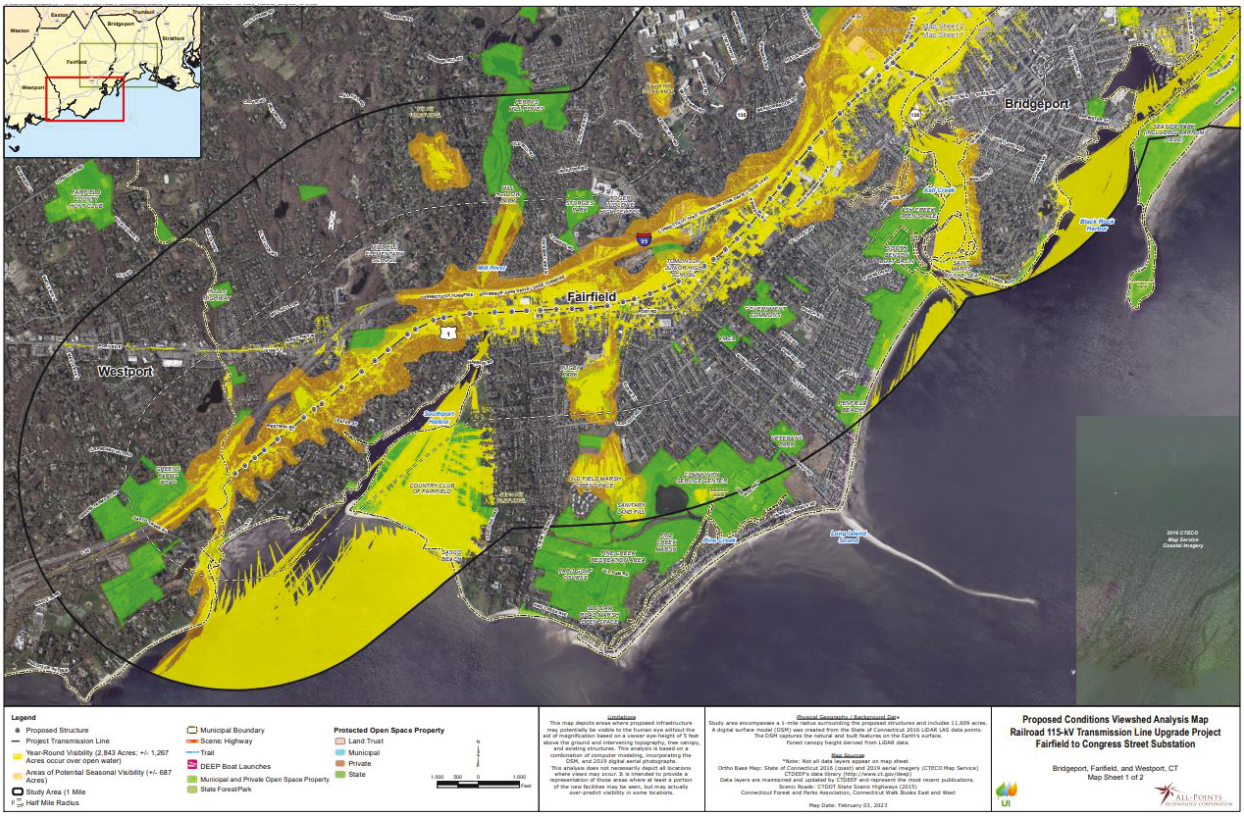
(UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, Attachment 2, Viewshed Analysis Mapping – Map Sheet 1 of 2)

Figure 21– Existing Visibility (Map 2 of 2)



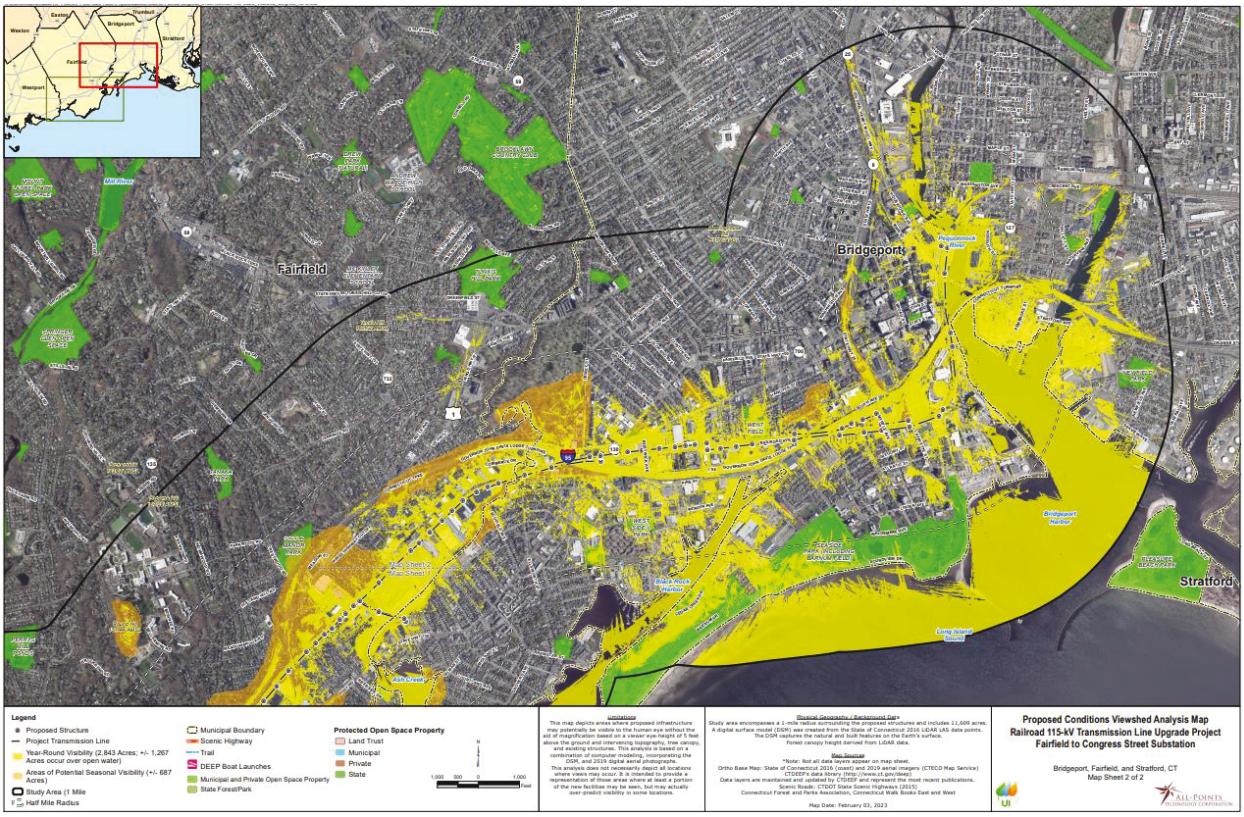
(UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, Attachment 2, Viewshed Analysis Mapping – Map Sheet 2 of 2)

Figure 22 – Proposed Project Visibility (Map 1 of 2)



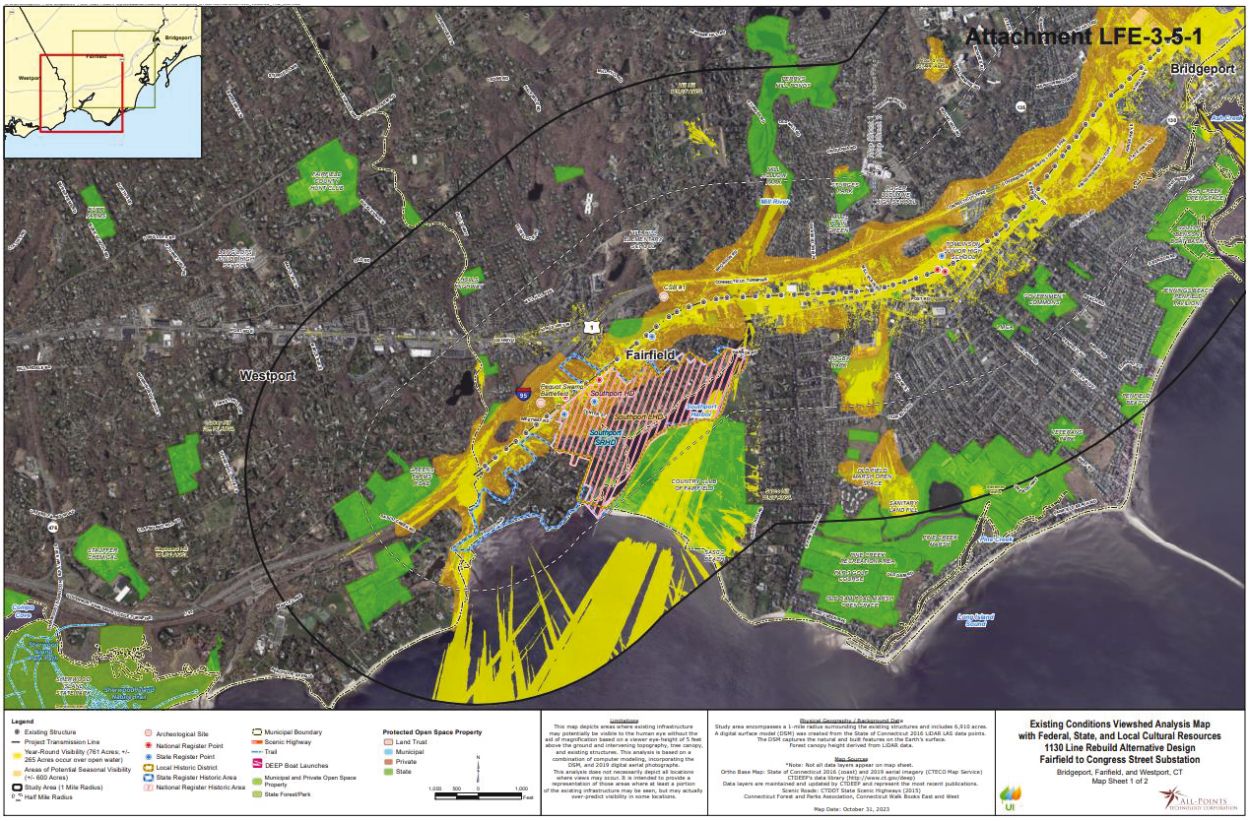
(UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, Attachment 2, Viewshed Analysis Mapping – Map Sheet 1 of 2)

Figure 23 – Proposed Project Visibility (Map 2 of 2)



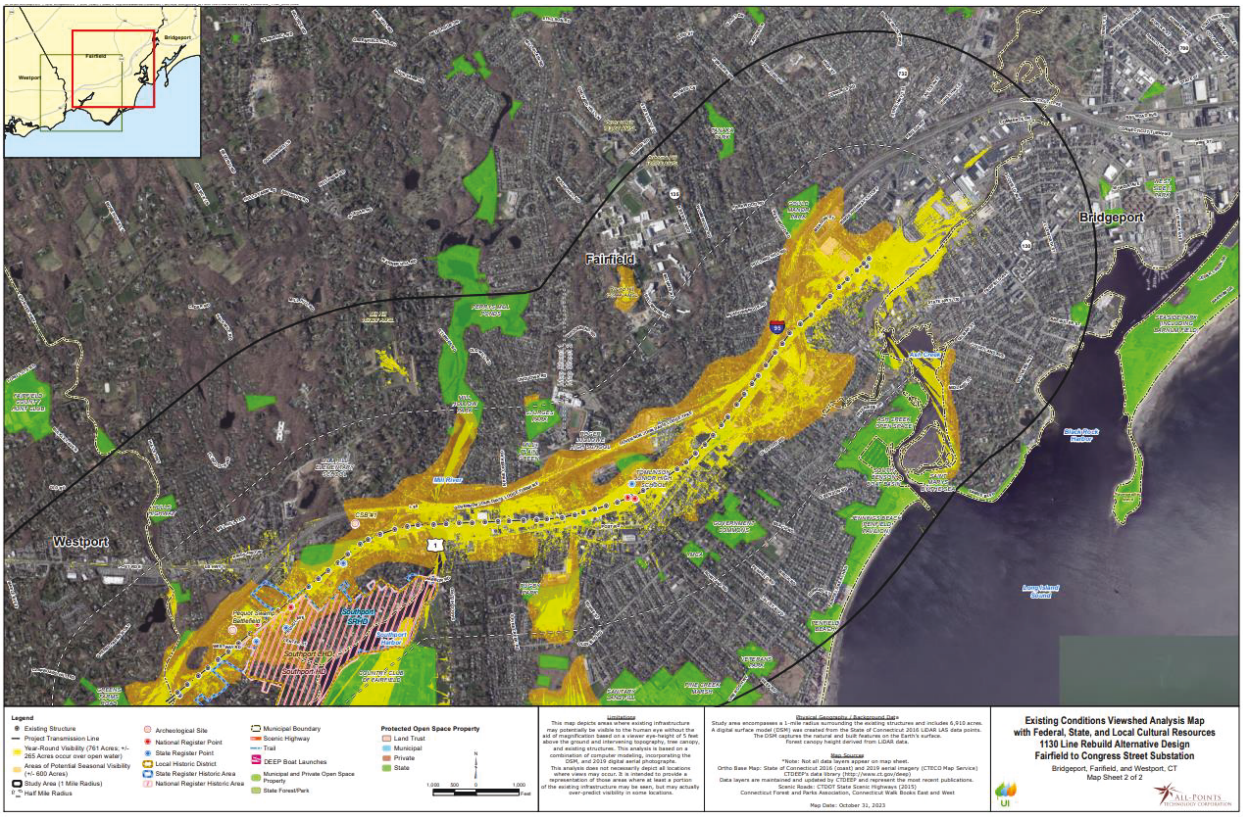
(UI 1, Vol. 1A – Appendices – Part II, Appendix C, Visual Assessment, Attachment 2, Viewshed Analysis Mapping – Map Sheet 2 of 2)

Figure 24 – Existing Visibility – Catenary Structure 648S to Ash Creek Substation Connection (Map 1 of 2)



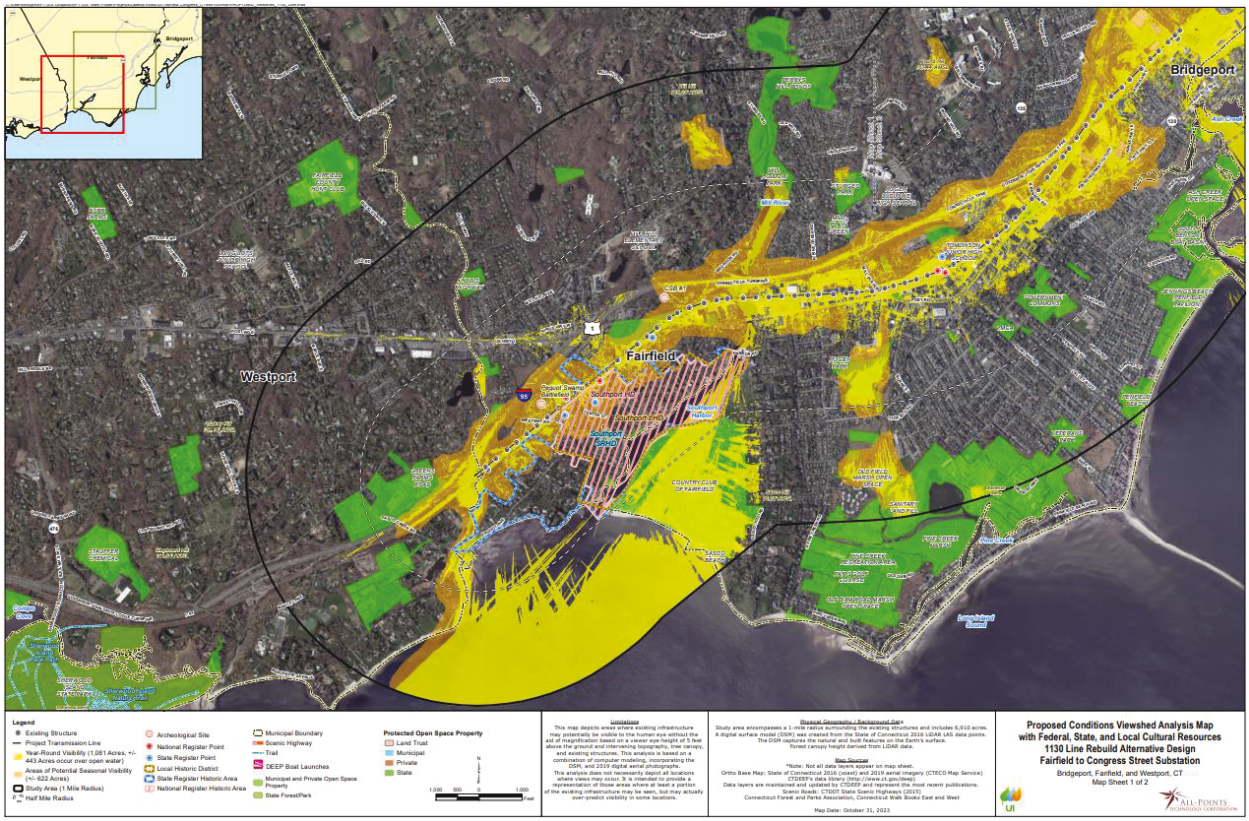
(UI 19, Late Filed Exhibit 3-5)

Figure 25 – Existing Visibility – Catenary Structure 648S to Ash Creek Substation Connection (Map 2 of 2)



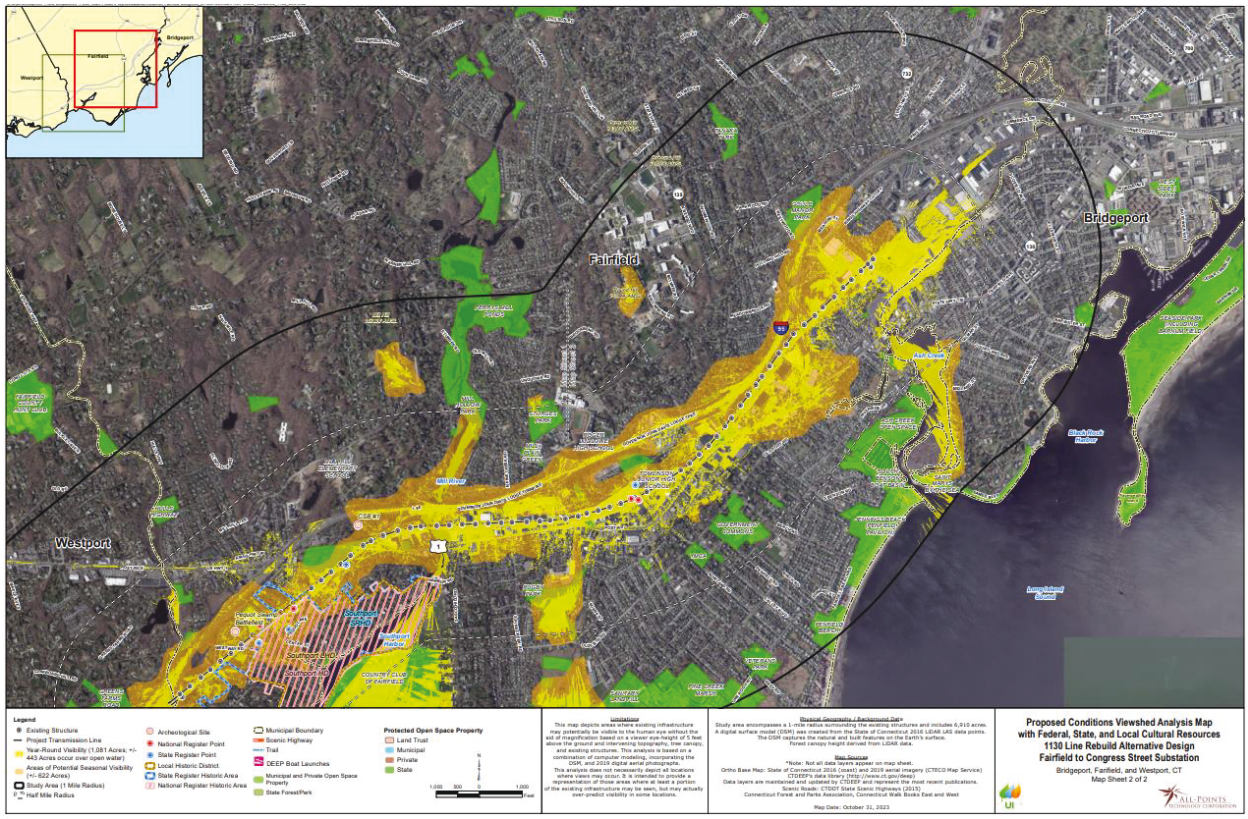
(UI 19, Late Filed Exhibit 3-5)

Figure 26 – Hannon-Morissette Alternative Visibility – Catenary Structure 648S to Ash Creek Substation Connection (Map 1 of 2)



(UI 19, Late Filed Exhibit 3-5)

Figure 27 – Hannon-Morissette Alternative Visibility – Catenary Structure 648S to Ash Creek Substation Connection (Map 2 of 2)



(UI 19, Late Filed Exhibit 3-5)

Figure 28 – Party and Intervenor Chart

	Name	Status	Attorney	Group	Granted
1	UI	Party/Applicant	McDermott		4/13/2023
2	BJ's Wholesale Club, Inc. (BWC)	Party	Casagrande Mortelliti		7/20/2023
3	Sasco Creek Environmental Trust, Inc., et al (SCNET)	Intervenor CEPA Intervenor	Coppola	SCNET Group	8/29/2023
4	2190 Post Road, LLC	Intervenor CEPA Intervenor	Coppola	SCNET Group	8/29/2023
5	Invest II	Intervenor CEPA Intervenor	Coppola	SCNET Group	8/29/2023
6	International Investors	Intervenor CEPA Intervenor	Coppola	SCNET Group	8/29/2023
7	Trinity Episcopal Church	Intervenor CEPA Intervenor	Coppola	SCNET Group	10/17/2023
8	Pequot Library Association	Intervenor CEPA Intervenor	Coppola	SCNET Group	10/17/2023
9	Sasquanaug Association for Southport Improvement	Intervenor CEPA Intervenor	Coppola	SCNET Group	10/17/2023
10	Southport Congregational Church	Intervenor CEPA Intervenor	Coppola Bogan (10/26/2023)	SCNET Group	10/17/2023
11	Pequot Realty, LLC	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
12	1916 Post Road Associates, LLC	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023

13	SF Station Street, LLC	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
14	Maura Garych	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
15	Metro Holding Company, LLC	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
16	SG Pequot 200, LLC	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
17	516 Paci Restaurant	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
18	461 Broad Street, LLC	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
19	Bridgeport 11823, LLC	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	8/29/2023
20	Stephen F. Boccarossa	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	10/17/2023
21	James Sherwood Bok	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	10/17/2023
22	Jacquelyn Thunfors	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	11/16/2023
23	Sean Cowan	Intervenor CEPA Intervenor	Russo	Grouped LLC Intervenors	11/16/2023
24	National Trust for Historic Preservation	Intervenor CEPA Intervenor	Russo Mayes	Grouped LLC Intervenors	11/16/2023
25	Fairfield Station Lofts, LLC (FSL)	Intervenor CEPA Intervenor	Schaefer		8/29/2023
26	Town of Fairfield	Party	Ball		8/29/2023
27	Superior Plating Company	Intervenor CEPA Intervenor	Hoffman		10/17/2023
28	City of Bridgeport	Party CEPA Intervenor	Hoffman		11/28/2023