



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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CERTIFIED MAIL RETURN RECEIPT REQUESTED

October 25, 2019

Kathleen Shanley
Project Manager-Transmission Siting
Eversource Energy
56 Prospect Street
P.O. Box 270
Hartford, CT 06141-0270

RE: **PETITION NO. 1382** – The Connecticut Light and Power Company d/b/a Eversource Energy petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed 1355 Line Rebuild Project consisting of the replacement and reconductoring of approximately 1.38 miles of its existing No. 1355 115-kilovolt (kV) electric transmission line structures within existing Eversource electric transmission line right-of-way between a location just east of the existing Schwab Junction off of Chimney Hill Road and Colony Substation off of Old Colony Road in Wallingford, Connecticut, and related substation and electric transmission line structure improvements.

Dear Ms. Shanley:

At a public meeting held on October 24, 2019, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need, with the following conditions:

1. Approval of any minor project changes be delegated to Council staff;
2. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
3. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of Wallingford;
4. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

5. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;
6. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v; and
7. If the facility owner/operator is a wholly owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated September 17, 2019 and additional information received on October 9, 2019.

Enclosed for your information is a copy of the staff report on this project.

Sincerely,



Melanie A. Bachman
Executive Director

MAB/RDM/lm

Enclosure: Staff Report dated October 24, 2019

c: The Honorable William W. Dickinson, Jr., Mayor, Town of Wallingford
Kacie Hand, Town Planner, Town of Wallingford



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Petition No. 1382

Eversource Energy 1355 Line Rebuild Project, Wallingford

Staff Report

October 24, 2019

Introduction

On September 18, 2019, the Connecticut Siting Council (Council) received a petition (Petition) from The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed modifications to a portion of its existing 1355 115-kV Transmission Line (1355 Line) in the Town of Wallingford.

The purpose of the proposed project is to replace structures and re-conductor approximately 1.4 miles of the 1355 Line entirely within Eversource's right-of-way (ROW) east of Schwab Junction to its Colony Substation in Wallingford. The 1355 Line in this segment consists of 18 embedded wood poles and 3 lattice towers. The wood poles and lattice towers are no longer reliable due to splitting wood, degraded bolts and bent structural members. The conductors and associated shield wire, installed in 1927, are obsolete and are in need of replacement.

The Council submitted interrogatories to Eversource on September 25, 2019. Eversource submitted responses to the Council's interrogatories on October 9, 2019.

On September 19, 2019, the Council sent correspondence to the Town stating that the Council has received the Petition and invited the municipality to contact the Council with any questions or comments by October 18, 2019. The Council has not received any comments to date.

Municipal and Abutter Notice

In June 2019, Eversource consulted with the Town and provided written notice of the Petition filing to Town representatives. From the Spring of 2019 through June 2019, Eversource conducted outreach to property owners located along the ROW. On September 13, 2019, Eversource provided the Town and abutting and underlying property owners with written notice of the Petition filing.

Proposed Project

The transmission line in the Project area is configured as a double circuit line with conductors located on 2 sets of wood poles, with exception of the lattice structures where the double circuit is supported by a single lattice tower.

The Project entails the following:

- a. Replace 3 double-circuit steel lattice structures (Structures 3647, 3648 and 3649) with light duty monopole structures;
- b. Replace 11 wood H-frame structures with weathering steel H-frame structures (Structures: 3650-3660);
- c. Remove 7 wood H-frame structures (Structures 3646A, 4573-4578);
- d. Replace 6 copper conductors with three 556 kcmil 26/7 (DOV) Aluminum Conductor Steel Supported (ACSS);
- e. Replacement of two Copperweld shield wires with 2 fiber optic ground wires (OPGW);



- f. Installation of new hardware, insulators, counterpoise, and lightning arresters on the replacement structures;
- g. Install Federal Aviation Administration (FAA) required lighting on 8 structures (Structures 3652 through 3656 and 3658 through 3660); and
- h. Install FAA required lighted marker balls on 4 conductor spans between Structures 3651 through 3655.

The replacement structures would be installed to meet current National Electric Safety Code (NESC) clearance requirements with 12 of the 14 replacement structures requiring an increase in height, ranging from 1 to 20 feet taller than the existing structures, depending on location. The replacement H-frame structures would range in height from 61 feet to 72 feet above ground level and the replacement lattice structures would range in height from 98 feet to 107.5 feet above ground level. Two replacement structures would be lower in height than the existing structures. The proposed replacement structures would be located in-line with the existing structures to the extent possible. Eleven new structures would be directly embedded, with three of these being guyed, and the remaining 3 structures supported on drilled foundations.

Project Construction and Work Procedures

The existing Eversource ROW in the Project area varies in width from 125 to 200 feet with the maintained portion varying in width from 60 to 110 feet. All work would occur within the existing ROW or on Eversource property. Land use adjacent to the Project area consists of a mix of residential areas, woodland and the Meriden Markham Airport.

Access to the ROW would be from existing access roads extending from off-ROW areas or where the ROW intersects with a public road. Specific work areas within the ROW would be accessed via existing roads that extend along the ROW corridor. Some of the existing access roads may need to be graded, widened, and/or reinforced with additional material in order to accommodate the safe passage of construction vehicles and equipment. A minimum travel surface of 12 to 16 feet is required although some road turning locations will be wider. In some areas, temporary or new gravel access roads would be constructed to access work areas. Where ROW access roads traverse streams and wetlands, temporary timber construction matting would be used to avoid significant disturbance to waterways and underlying soils.

Various types of construction equipment would be used for the work including, but not limited to, drill rigs, dump trucks, flatbed trucks, bucket trucks, cranes, and conductor rigging and reel vehicles. Helicopters may also be used to install the initial pulling lines for the conductors and OPGW.

A Project staging area would be established at 528 South Cherry Street in Wallingford. The staging area is approximately 6.46 acres in size and is currently being utilized by Eversource as a staging area for general maintenance-related work on the transmission system.

Eversource would consult with representatives of the Town and/or the Connecticut Department of Transportation to develop and implement traffic management procedures, as necessary. Construction warning signs would be installed along public roads near work sites and flaggers or police personnel would be used to direct traffic, as necessary.

Upon completion of the Project, access roads and work pads located in uplands would be left in place to facilitate future transmission line maintenance, unless the underlying property owner requests their removal. Access roads and work pads located within improved areas would typically be removed and the areas restored unless the underlying property owner requests that they remain. No new permanent access roads or work pads are proposed in wetlands or streams.

Gravel work pads, typically 100 feet by 100 feet, would be constructed at each structure location to create a safe level workspace for Project activities. Pull pads would be 75 feet by 150 feet. All work pads may vary in size due to environmental and topographical constraints. Once the new structures have been installed and the transmission line relocated and energized, the existing transmission structures would be removed and disposed of in accordance with Eversource's *Best Management Practices Manual for Massachusetts and Connecticut*, September 2016 (BMPs) and applicable regulations or recycled consistent with regulations and Eversource policies.

Eversource anticipates commencing work in late 2019 with completion by fall 2020. Multiple work crews would be deployed along the ROW. Normal work hours would be Monday through Saturday from 7:00 a.m. to 7:00 p.m. Sunday work hours or hours beyond normal work hours may be required for time sensitive work, delays caused by weather, and line outages. In addition, work activities along or over the Amtrak ROW adjacent to Old Colony Road may require conformance to an Amtrak approved schedule. This schedule could involve work at night or on Sundays.

Environmental Considerations

In order to comply with NESC requirements, the maintained portion of the ROW would be increased by 5 to 15 feet depending on location. Additional tree clearing (0.23 acre) is proposed to establish access roads and work pads. During clearing within wetland areas, temporary construction mats may be used to provide access for mechanized equipment when hand clearing work is not feasible.

Construction areas would be isolated by establishing erosion and sedimentation controls (E&S controls) in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource's BMPs. Typical E&S controls include, but are not limited to, the use of hay bales and silt fence, straw blankets, check dams, berms, swales, water bars, and sediment basins.

Foundation installation would require the use of equipment such as augers, drill rigs, and dump trucks. Excavated soils for foundation installation would not be stored within or adjacent to wetlands or watercourses. Materials that cannot be utilized as backfill would be disposed of in accordance with Department of Energy and Environmental Protection's (DEEP) regulations. If groundwater is encountered, and when working within wetlands, vacuum trucks or other suitable equipment would be used to pump water from the excavated areas as the shaft is being drilled or as the structure is being set. The collected water would then be discharged in accordance with applicable requirements. A project specific Stormwater Pollution Control Plan would be developed for registration under the DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities*.

Following the completion of construction, topsoil would be replaced and disturbed areas seeded or mulched to provide stabilization until new vegetation can grow. Temporary E&S controls would remain in place until all disturbed areas are stabilized. Any remaining soil stockpiles would be spread in surrounding upland areas.

Water resources within the Project area include inland wetlands, watercourses (perennial and intermittent streams), vernal pools, and Federal Emergency Management Agency (FEMA) Flood Zones. All work in or near these areas would be conducted in accordance with Eversource's BMPs and with the requirements of applicable regulatory permit conditions and approvals.

A total of 8 wetland areas, consisting of both federal/state jurisdictional and state-only jurisdictional wetlands, were identified in or proximate to the Project area. Approximately 720 square feet of wetlands would be filled for the replacement of 4 structures. For wood structures removed from wetland areas, existing wooden 3-pole H-Frame structures would be cut at the surface and the pole butts would be left below grade to prevent soil subsidence and eliminate the need to backfill holes with imported fill material.

Temporary wetland impacts through the use of temporary construction matting would total approximately 1.4 acres. In addition, tree removal in wetland areas to facilitate work pad installation would total approximately 1,814 square feet, converting these forested areas to a shrub-scrub wetland type.

Work activities are proposed within two vernal pool envelopes. Eversource would employ BMPs to protect these resources including, but not limited to, the use of temporary construction matting, the use of E&S controls to minimize sediment discharge, deployment of exclusionary fencing to direct wildlife away from the construction areas, and avoidance of dewatering discharge to the vernal pools.

Approximately 0.35 mile of the Project area extends across the 100-year FEMA flood zone associated with the Quinnipiac River. No impact to flood stage capacity is expected since the volume displacement from the removal of existing wood poles is greater than the displacement with associated with new steel structures.

Construction related work within flood zones would be performed in accordance with their BMPs and would utilize temporary construction matting to prevent permanent impacts to flood zone areas. Prior to significant storm events, vulnerable construction equipment would be removed and temporary matting secured to prevent movement during any subsequent flooding that could occur.

No watercourses or waterbodies would be directly impacted by the Project.

The entire Project area is located within a Level A Aquifer Protection area. Eversource would require its contractors to employ best practices for the proper storage, secondary containment, and handling of diesel fuel, motor oil, grease and other lubricants, to protect area water resources. Construction activities would conform to Eversource's BMP Manual, as well as to the requirements of Project specific plans such as a Stormwater Pollution Control Plan and Spill Prevention and Control Plan.

In July 2018, Eversource submitted a Natural Diversity Database (NDDB) State-listed Species Review request to DEEP for the Project. DEEP request field surveys for six NDDB-listed species that may occur within the Project area. In June 2019, Eversource submitted the results of the surveys to DEEP, along with proposed measures to avoid impacts to the listed species and their habitats during Project construction, including, but not limited to, construction matting.

Connecticut is within the range of the northern long-eared bat (NLEB), a federally-listed Threatened species and State-listed Endangered species. Review of DEEP and US Fish and Wildlife Service (USFWS) databases indicates the Project work areas are not near any known NLEB hibernacula or known maternity roost trees. Further, Project construction activities, including any clearing, are scheduled to occur in the winter, when bats are hibernating.

The Project ROW is not near any state or local scenic roads. There are no designated public recreational use areas or trails within the ROW.

According to State Historic Preservation Office files, no properties or districts listed on the National or State Register of Historic Places are located within 500 feet of the proposed work areas. Based on a review of historic maps, aerial photographs, and soil profiles, two work area locations were identified as possessing a potential for moderate to high archaeological sensitivity. These locations were subsequently field surveyed and no evidence of archaeological significance was found. No additional action or protective measures are required.

Construction-related noise would be short-term and localized to the work site areas. Construction-related noise is exempt per DEEP noise regulations. There would be no permanent change to the existing sound levels along the transmission ROW after completion of the Project.

Although some of the lit structures and conductors are near residential areas, the anticipated visual impact would be minimal due to existing vegetation. The ROW section with marked OPGW and lit conductors is located adjacent to the airport perimeter and is buffered from 5 area residences by a 180-foot to 270-foot wide wooded area. One new structure (#3657) adjacent to the residence at 132 Grove Street was initially proposed to be lit, but upon further review of FAA obstruction classification, the structure is not required to be lit due to its height of less than 200 feet above ground level.

Aviation Safety

In December 2015, the FAA issued a new Advisory Circular 70/7460-1L (AC-1L) setting forth revised standards for marking and lighting obstructions determined to be a hazard to navigable airspace in response to 10 fatal aircraft accidents involving collisions with obstructions since 2000. AC-1L establishes the minimum lighting standards necessary for aviation safety. The minimum lighting standards include lighted spherical markers for increased night conspicuity of high voltage (69-kV or greater) transmission line catenary wires to be employed on transmission line catenary wires near airports. Lighted markers are to be installed on the highest energized line evenly spaced along the wire at approximately 200 foot intervals and shall not violate the sag requirements of the transmission line design (See Figures A-3 and A-6 below). The spherical marker lighting unit is to emit a steady-burning, red light.

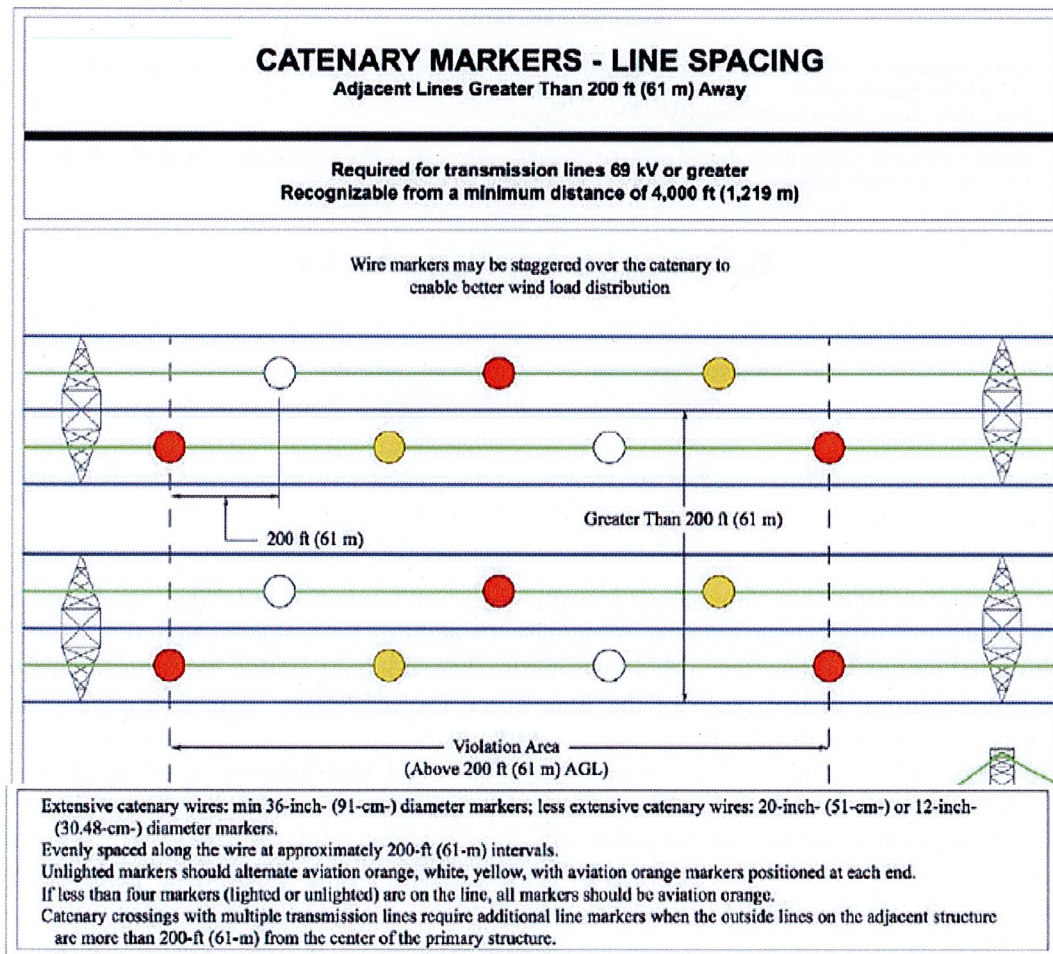


Figure A-3. Catenary Markers - Line Spacing (Adjacent Lines Greater Than 200 ft (61 m) Away)

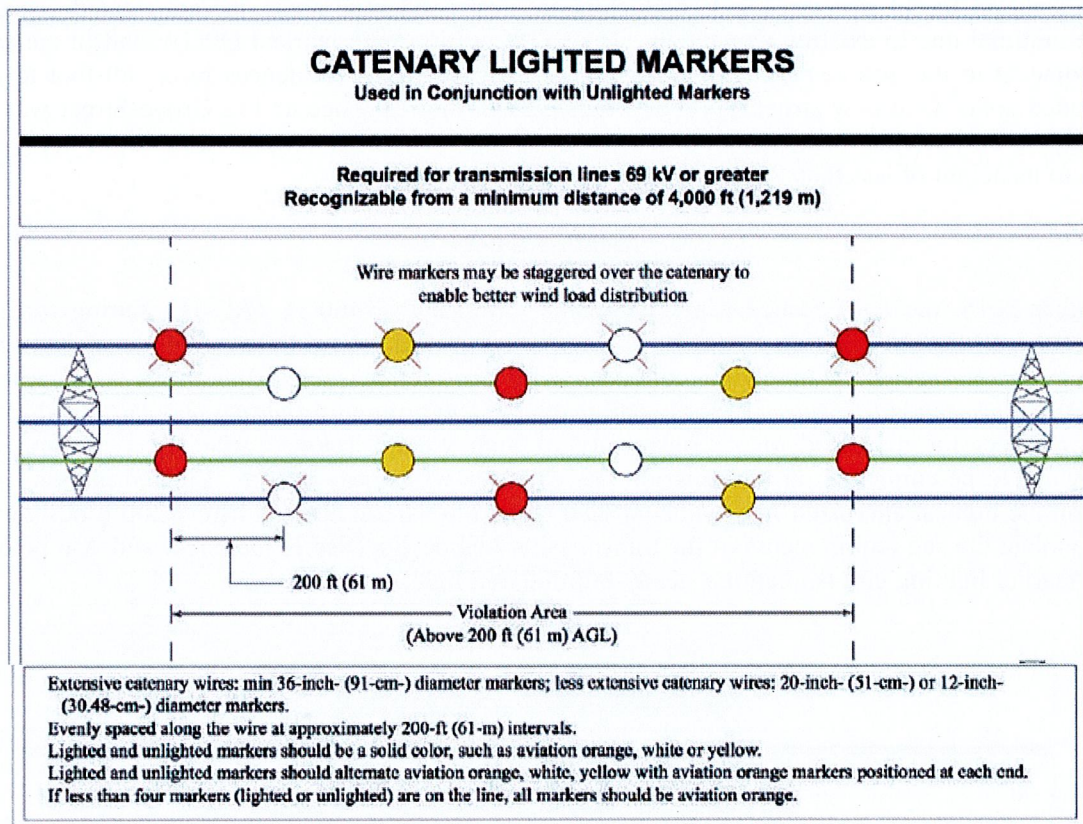
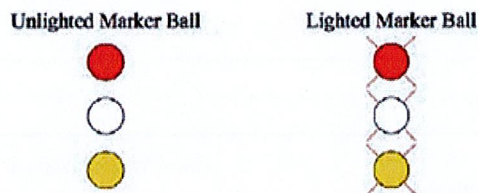


Figure A-6. Catenary Lighted Markers



Portions of the Project ROW are immediately south and southwest of the Meriden Markham Airport and FAA-required aviation safety measures are necessary. Generally, FAA notification is necessary for new structures installed within 4 miles of an airport. Currently, there are unlit marker balls on structures owned by the Town of Wallingford 50 feet north of the Eversource Project ROW. Although none of the existing structures in the Eversource Project ROW are currently marked or lighted for aviation safety, the FAA conducted an aeronautical study of the Project and determined that lighting of eight structures and an approximate 0.4-mile segment of conductors is required in this area. The aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules and the cumulative impact resulting from each studied structure when combined with the impact of other existing or proposed structures.

Specifically, the FAA determined that 8 structures would not be a hazard to air navigation provided the structures are continuously lit with a 7.9-inch steady-burning, red light at the top of each structure. The FAA also determined that the OPGW lines that span between the top of the structures be marked with 3 unlit 36-inch diameter orange marker balls, installed in an offset pattern. Consistent with AC-11L standards, the 3 conductors between each structure would each feature a continuously lit 12-inch diameter orange marker ball

installed in an offset pattern. Eversource would be responsible for monitoring and maintaining the FAA-required structure lighting, and lighted marker balls.

Magnetic Fields

In the United States, no state or federal exposure standards for 60-hertz magnetic field (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 milliGauss (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, and recognized in the Council's *Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut*.

The Project would slightly increase MF values along the edge of the ROW but the values are far below the recommended ICNIRP and ICES exposure values. A table demonstrating changes in MF levels is presented in the table below.

<i>Magnetic Field Calculation Summary</i>						
Line Section	South Edge of ROW		Max in ROW		North Edge of ROW	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Colony S/S to Oak St	0.9	1.1	5.4	7.8	3.9	3.9
Oak St to Hanover St	0.2	0.6	8.0	14.8	1.2	5.2
Hanover St to Schwab Jet	1.7	1.9	7.8	14.8	3.2	5.2

Recommended Condition

If approved, Staff recommends including the following condition:

1. Approval of any minor project changes be delegated to Council staff.

Project Route

