

**ATTACHMENT P: NE 185TH STREET AND MERIDIAN
AVENUE N TRAFFIC SIGNAL
MODIFICATIONS SCOPE AND COST
ESTIMATE**

Discretionary Work Request for King County Road Services

FORM A

City of: shoreline **Request Number:** SH-654 **Date:** 05/03/2018

Problem Description: Convert protected NBLT/SBLT to FYA at Meridian Ave N & N 185th St

Nature of Request: Convert NBLT/SBLT from protected to FYA, with 3-section signal head, with bi-modal display at bottom. Install new cabinet to TS2-Type 2 cabinet stock with Econolite Cobalt signal controller, MMU to support flashing yellow operations, power supply, BIUs, loop amps, load switches, flash transfer relays, solid state flashers, etc.

Location: Meridian Ave N & N 185th St

Attachments: Scope of Work

City Priority: Medium

Special scheduling requirements:

City Project Manager-Telephone Number: Quang Nguyen - 206-801-2432

Authorized By: Kendra Dedinsky **Date:** 05/03/2018

FORM B

ARMS Project #: **EBS Project #:** **Work Order #:** **Form B Sent to City Date:** 06/06/2018

Recommended Action: Install FYA, replace cabinet and controller as per city's request. Cost Estimate: Labor - \$10,100, Equipment - \$2,600, Materials - \$21,200, Contract Work - \$1,800.

Proposed Schedule: Scheduled

County Project Manager: Rick Thibodeau

Cost Estimate: \$35,700.00

Authorized By (City - \$500):K. Dedinsky **Date:** 6/6/2018

Comments:

NE 185TH STREET & MERIDIAN AVENUE NORTH TRAFFIC SIGNAL MODIFICATIONS

Record of Decision (ROD) Mitigation Commitment

The Lynnwood Link Extension Final Environmental Impact Statement (FEIS) ROD identified mitigation for level of service impacts at the intersection of NE 185th Street and Meridian Avenue North as follows:

- Add protected-permissive phasing to the northbound and southbound left turns

The City of Shoreline contracts with King County for traffic signal maintenance. The traffic signal modifications required to fulfill the ROD commitment are proposed to be implemented by King County signal maintenance forces, with reimbursement from Sound Transit.

The existing condition provides three-section optically-programmed left-arrow signal heads mounted on mast arm signal standards for the northbound and southbound left turn movements:



Source: Google Street View, September 2017

An inspection of the existing signal installation conducted by King County for the City in March 2018 indicated that the existing mast arms could be retrofitted with new left-turn signal heads, and that the existing conduit was suitable for the signal head replacement. A traffic signal controller replacement, including the controller cabinet, will be required to implement flashing yellow arrow (FYA) protected-permissive phasing, consistent with current City and industry practice for this situation.

NE 185TH STREET & MERIDIAN AVENUE NORTH TRAFFIC SIGNAL MODIFICATIONS

Assumptions

- Protected/Permissive left-turn phasing will be implemented as Flashing Yellow Arrow (FYA) for permissive phase.
- Three-section signal heads will be used for FYA implementation, to match existing three-section left-turn signal head wind loads and to maintain existing vertical clearance over the roadways.
- Existing traffic signal standards (poles) and mast arms are adequate and will remain in place.
- The existing traffic signal controller and cabinet will be replaced to allow implementation of FYA protection/permissive phasing on the north and south approaches to the intersection.
- The traffic signal controller cabinet can be replaced in kind with only minor foundation and/or lead-in conduit modifications.
- Existing electrical service provisions are adequate and no revisions to electrical service agreements are required.
- Existing detection is adequate and will remain in place with the revised north-south left-turn phasing.
- Existing conduits can be used for new wire runs, per the March 2018 site inspection performed by King County for the City.
- The protected-permissive left-turn phase modifications will not trigger pedestrian curb ramp modifications, pedestrian push-button upgrades, or pedestrian signal upgrades.
- Channelization modifications will not be required – existing pavement markings will remain in place.

Scope of Work

- Based on the scope of work described below, provide design support as required to accomplish the work via a maintenance work order.
- Provide and install two (2) 12-inch LED three-section left arrow vehicular signal heads with back plates and all required mounting hardware. The lower section shall be bimodal capable of displaying a flashing yellow left arrow or steady green left arrow signal indication.
- Provide and install one (1) new Type __ traffic signal controller cabinet assembly with a Type ___ traffic signal controller.
- Provide traffic control during the traffic signal equipment installation, including Uniformed Police Officer services for any signal shutdowns required during installation.
- Provide as-built plan mark-ups for the installation, including wiring diagrams.
- WSDOT / APWA *Standard Specifications for Road, Bridge, and Municipal Construction*, 2018 edition, will apply to the work.