

City of Bellingham

Classification Specification

CLASS TITLE	Traffic Operations Engineer
DEPARTMENT	Public Works\Engineering
UNION:	231
SG:	S-10
CS:	N
FLSA:	N
EE04CODE:	PR

NATURE OF WORK:

Supports the Transportation Engineering Manager in the day-to-day operation of the City's transportation systems. Develops and implements traffic signal timing and coordination plans. Utilizes Intelligent Transportation System (ITS) components such as video surveillance equipment, data collection stations, variable message signs, and closed-loop traffic signal software to remotely monitor and enhance arterial street traffic safety and efficiency. Conducts traffic studies and performs traffic signal warrant and level-of-service (LOS) calculations. Assists in developing proposals and funding applications to enhance traffic safety and efficiency. Provides technical assistance regarding traffic signal and street lighting design. Handles requests for information and resolves complaints. Provides technical support to City managers, consultants and developers.

DISTINGUISHING CHARACTERISTICS:

This is a stand-alone classification distinguished from the other engineering classifications by its responsibility for transportation systems.

SUPERVISORY RELATIONSHIPS:

Reports to the Transportation Engineering Manager and assigns work to the Signal Systems Specialist. Works independently under the direction of the Transportation Engineering Manager and the guidance of applicable federal, State, City and departmental laws, regulations, rules, policies and guidelines.

ESSENTIAL FUNCTIONS:

1. Develops and implements signal timing and coordination plans for stand-alone signalized intersections and closed-loop Econolite and PEEK signal systems.
2. Operates ITS equipment and monitors peak traffic congestion. Develops and implements special traffic responsive signal timing parameters to accommodate unusual traffic flows caused by traffic accidents, construction detours, holidays, etc.

3. Coordinates with Washington State Department of Transportation (WSDOT) and other relevant agencies in developing signal timing plans and implementing modifications to traffic signals, street lighting, and channelization plans.
4. Develops plans for improving the safety and efficiency of the City's arterial street system by implementing ITS programs or other improvements to traffic signal operations such as adding protected/permissive or protected only left turn phasing, restricting driveway access, and modifying channelization plans to incorporate new or longer left-turn storage lanes.
5. Assists in the design of traffic signal and street lighting systems.
6. Conducts traffic studies and evaluates traffic accidents to determine if modifications to traffic signal timing, phasing or operations are necessary.

ADDITIONAL WORK PERFORMED:

1. Performs related duties within general scope of the classification.

KNOWLEDGE AND SKILLS:

- Knowledge of:
 - Traffic engineering principles, standardized practices, and nationally recognized guidelines related to transportation studies and systems;
 - Local, State and federal laws related to traffic and transportation; and
 - Traffic signal system management, traffic signal controllers and field equipment, closed-loop signal software and signal timing optimization software including Synchro, Aries, and CLMATS.
- Demonstrated skill in using the Manual on Uniform Traffic Control Devices (MUTCD) as it relates to traffic signals, signing and pavement marking.
- Skill in implementing effective programs related to traffic and transportation by conducting studies and analyzing information.
- Demonstrated skill in drafting time-space diagrams, analyzing closed-loop signal system detector information, and implementing coordinated signal timing plans. Skill in uploading and downloading signal timing information in the field via a laptop PC and optimizing signal timing plans for stand-alone intersections.
- Skill in designing traffic signal and street lighting systems and writing specifications for bidding signal construction projects.
- Ability to communicate effectively both orally and in writing, and to foster a team work environment.
- Demonstrated skill in establishing and maintaining effective working relationships with diverse groups including fellow employees, City officials, governmental agencies, community groups, developers, transportation consultants and the general public.

WORKING ENVIRONMENT:

Works in an office setting with extensive work at a computer work station and occasional fieldwork. Works outside in all weather conditions to observe traffic patterns and adjust signal timing and to conduct traffic studies.

EXPERIENCE AND TRAINING REQUIREMENTS:

- Bachelor's degree in civil engineering, transportation planning or related field with special emphasis on transportation. Four years of progressively responsible general transportation planning experience may substitute for bachelor's degree.
- Three years of specialized experience in working with traffic signal and lighting systems.
- A combination of experience and training that provides the applicant with the knowledge, skills to perform the job will be considered.

NECESSARY SPECIAL REQUIREMENT:

- Valid Washington State driver's license and good driving record. Must submit a three-year driving abstract prior to hire.

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1/01

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