



# 2018 and 2020 Regional Congestion Mitigation Air Quality Improvement Program (CMAQ) Grant Application

<b>PROJECT TITLE: TRAFFIC SIGNAL CONTROLLER UPGRADE TO SUPPORT TSP AND ENHANCED SIGNAL COORDINATION</b>		TRPC use only	
<b>GENERAL PROJECT INFORMATION</b>			
Agency or Organization	City of Olympia		
Contact Person	Mark Russell, P.E., Director of Transportation		
Phone Number	(360) 753-8762		
Email Address	<a href="mailto:mrussell@ci.olympia.wa.us">mrussell@ci.olympia.wa.us</a>		
<b>PRIORITY OR ALTERNATE PROPOSAL</b> (Select preferred award type)		<b>SELECT YEAR OF OBLIGATION</b> (Select the federal fiscal year the project will obligate)	
Priority	<input checked="" type="checkbox"/>	2018	<input checked="" type="checkbox"/>
Alternate		2020	
<b>THRESHOLD CRITERIA</b> (check all that apply)			
The project is in the Air Quality Maintenance Area (see application instructions)	<input checked="" type="checkbox"/>	Yes	No
Project elements meet all regional eligibility requirements	<input checked="" type="checkbox"/>		
Project elements and administration meet all federal eligibility requirements	<input checked="" type="checkbox"/>		
Applicant can demonstrate ability to obligate funding as proposed	<input checked="" type="checkbox"/>		
<b>STATUS OF EXISTING FEDERAL PROJECTS</b>			
<b>Is this proposal part of an existing project with other secure federal funding?</b> (yes or no)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>If yes to either, attach separate documentation describing status of each project including project name, funding source, year of award, progress to date, future obligation commitments and strategy for meeting those obligation commitments in addition to those associated with new project funding.</i>			
<b>Applicant's Project Priority</b>			
Are you submitting more than one CMAQ application (3 maximum)?	<input type="checkbox"/>	Yes	No
<b>Application Priority</b>			
Select preference for funding selection	<input checked="" type="checkbox"/>	Priority	Alternate
<b>TYPE OF PROJECT OR PROGRAM</b>			
<i>Identify project type that applies to this proposal</i>			
Alternative Fuels and Vehicles	<input type="checkbox"/>		
Congestion Reduction and Traffic Flow Improvements	<input checked="" type="checkbox"/>		
Transit Vehicle Acquisition	<input type="checkbox"/>		
Transit Capital Facilities	<input type="checkbox"/>		
Transit Incentives Program	<input type="checkbox"/>		
Bicycle and Pedestrian Facilities and Programs	<input type="checkbox"/>		
Travel Demand Management	<input type="checkbox"/>		
Public Education and Outreach Activities Related to Air Quality	<input type="checkbox"/>		
Carpooling and Vanpooling	<input type="checkbox"/>		
Freight / Intermodal	<input type="checkbox"/>		
Diesel Engine Retrofits and Other Advanced Truck Technologies	<input type="checkbox"/>		
Idle Reduction Programs	<input type="checkbox"/>		
Training for Implementation of Air Quality Programs	<input type="checkbox"/>		
Inspection / Maintenance (I/M) Program	<input type="checkbox"/>		

**PROJECT OVERVIEW**

*Brief abstract (~ 150 words) of proposal identifying problem or need, how the proposal will address it, and anticipated benefits. This is a high-level summary suitable for reports and on-line descriptions. Provide detailed project information on page 4.*

This project will upgrade 42 intersections in the City of Olympia with 2070 Traffic Signal Controllers, associated intersection software, and conflict monitors. The project will expand the ability to implement Transit Signal Priority (TSP), where beneficial, throughout Downtown Olympia and the west side of Olympia. This will help make transit more desirable and predictable.

This project expands on the previous Smart Corridors Signal Upgrade and Transit Signal Priority project, funded in 2012, which upgraded 37 intersections in Olympia from 170 Traffic Signal Controllers to 2070 Traffic Signal Controllers. Traffic signal controllers were upgraded along transit corridors experiencing high levels of delay. The City’s central software, QuicNet, which communicates with its interconnected signals, was also upgraded.

The additional upgraded 42 signal controllers will provide TSP and enhanced signal coordination capabilities along more corridors.

**PROJECT LOCATION AND DETAILS – applicants may submit a map of the project or program/service area**

<b>Construction Projects</b>	Project Location	42 intersections located within Olympia City Limits
	Type of Construction Project	Replacement of traffic signal controllers
	Length/Size of Construction Project	
<b>Programs/Services</b>	Delivery Area of Program/Service	
	Duration of Program/Service	

**PROJECT PHASING AND COSTS**

Identify project phases and costs	Phase	Cost
<b>Construction Element</b> (mark the appropriate phase and enter cost)	Preliminary Engineering/Design:	X <input type="text"/> \$60,860
	Right-of-Way:	<input type="text"/> \$
	Construction:	X <input type="text"/> \$359,350
<b>Program or Operational Element</b>	Program or Operations:	<input type="text"/> \$
	Other Cost:	<input type="text"/> \$
<b>Total Project Cost (Sum of all project phase costs identified above):</b>		<input type="text"/> \$420,210

**FEDERAL FUNDING REQUEST AND MATCH**

<i>From Project Applicant*</i>	Local funding or other sources	<input type="text"/> \$56,730	<i>*Applicants must provide a minimum of 13.5% non-federal share to federal share.</i> <u>Example</u> Total Project Cost is \$100,000 Non-federal share: \$13,500 Federal STP Funds: \$86,500
	State funding	<input type="text"/> \$0	
	<b>STP Grant Request</b>	<input type="text"/> 363,480	
	<b>Total Project/Phase Revenue</b>	<input type="text"/> 420,210	

### PM10 AIR QUALITY BENEFITS

*Briefly describe how this project will reduce PM10 emissions and improve air quality within the Air Quality Maintenance Area.*

Transit Signal Priority (TSP) and Signal Coordination are identified as regional priorities and ways to reduce PM10 emissions and improve air quality. Vehicle sources of particulates include tailpipe emission, road dust, and tire and brake wear. This project will reduce the idle time of buses along congested corridors reducing tailpipe emissions and reduce particulates caused by brake wear. TSP allows buses to extend the green light at signals so that they are not delayed behind queues of vehicles. This will help improve transit on-time performance, reliability, and be more desirable and predictable for users of the transit system.

This project can potentially reduce the need to add buses along a corridor to maintain headways and increasing on-time service reliability.

Effective transit service can reduce the number of vehicle miles traveled each year, and therefore reduces the generation of greenhouse gases.

### PM10 AIR QUALITY ANALYSIS AND DATA

*An air quality improvement report is submitted to WSDOT Local Programs when a CMAQ-funded project obligates. TRPC will assist grant recipients with the air quality analysis prior to project obligation. Describe the type and availability of data that will support analysis to measure this proposal's PM10 air quality improvements.*

According to the Washington State Department of Ecology inputs for the MOBILE6 air quality emissions model, tire and brake wear generate about 46% of the PM10 emissions in the Thurston Region. An increase in trips by bus reduces the number of vehicle miles traveled each year, which reduces greenhouse gases. Air quality benefits will be assessed by estimating reduced delay to buses along corridors through a combination of TRPC's travel demand models, and field travel/running time survey's.

### SUPPORT FOR SUSTAINABLE THURSTON OR OTHER RECOGNIZED REGIONAL INITIATIVES

*Identify ways in which the proposed project supports the goals and policies of the Regional Transportation Plan, implementation of Sustainable Thurston transportation initiatives, or other regional initiatives. Examples of other initiatives include, but are not limited to, The Thurston Regional Trails Plan, Urban Corridor Communities and associated District Plans, Healthy Kids Safe Streets Action Plan, South Thurston Economic Development Initiative, Walk and Roll, Commute Trip Reduction, I-5 Action Plan, Bountiful Byways, Smart Corridors, and the Human Services Coordinated Transportation Plan.*

This project is consistent with the Regional Transportation Plan (RTP) goal of using technology to address congestion, safety, efficiency and operations. Implementing TSP along strategy corridors, where street widening is not the preferred option, supports adjacent land uses and mobility in these corridors.

It supports multiple goals and policies in the RTP by encouraging the use of multiple modes of travel. People may bike or walk to a location and use transit for part of their trip. Having on-time and reliable transit service is key to supporting a multimodal transportation system.

The project is consistent with Sustainable Thurston and Thurston Thrives. It provides transit service that is reliable, desirable, and predictable and reduces vehicle miles traveled, which in turn reduces greenhouse gases and improves air quality.

**PROJECT DESCRIPTION & SIGNIFICANCE (2 PAGES MAX, 10 POINT FONT MINIMUM)**

*Using the space provided on pages 3 and 4 below, please address the following in your narrative: Describe the proposed project and why it is a regional funding priority, paying attention to anticipated benefits to be realized. Specify ways in which this project will reduce vehicle miles of travel or increase overall system operating efficiency in the Air Quality Maintenance Area. Identify any collaboration or partnership with other entities with a vested interest in this project. Note whether this project leverages previous work, such as an implementation phase of a previous study or design phase, or whether it lays the groundwork for subsequent implementation phases. Describe any efforts that will help ensure this project can meet its obligation commitments.*

**Proposed Project:**

Upgrade 42 intersections from 170 Traffic Signal Controllers to 2070 Traffic Signal Controllers. This includes upgraded intersection controller software and conflict monitors. This upgrade will expand the City's ability to implement Transit Signal Priority, where determined to be beneficial, throughout Downtown Olympia and the west side of Olympia.

The upgraded signal controllers will also provide enhanced signal coordination capabilities.

**Background:**

This project is an extension of the original Smart Corridors Signal Upgrade and TSP project, funded in 2012, which upgraded 37 intersections in Olympia from 170 Traffic Signal Controllers to 2070 Traffic Signal Controllers. The first phase of this project upgraded traffic signal controllers along transit corridors experiencing high levels of delay. This included the Pacific Avenue, Martin Way and portions of the 4<sup>th</sup> Avenue, State Avenue and Capitol Way corridors. The upgraded traffic signal controller equipment allows for TSP to be used at these intersections. The City's central software, QuicNet, which communicates with its interconnected signals, was also upgraded.

Transit Signal Priority allows buses to request City traffic signals hold a green light until they pass through the intersection. This helps buses stay on schedule (reduces travel time) and also improves air quality by reducing bus idle time. This will help make transit more desirable and predictable.

Commuters who use buses reduces the number of vehicle miles traveled each year, which reduces greenhouse gases.

**Partnerships:**

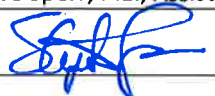
As part of the Phase 1 work, the City worked with Intercity Transit (IT) to develop an interlocal agreement which describes the TSP system and how the City and IT staff will work together to operate and maintain it. As part of the proposed project, this agreement will be used as the foundation to expand TSP implementation where it may be beneficial along other corridors in the City.

**Obligation Commitments:**

The City plans to use the same procurement process used as part of the original Smart Corridors Signal Upgrade and TSP project, which reduced costs and will help ensure we can meet the required obligation commitments for this grant funding.

PROJECT DESCRIPTION & SIGNIFICANCE (continued)

[This area is currently blank, intended for project description and significance.]

CERTIFICATION ACCEPTANCE	
CA Agency and Representative	City of Olympia Steve Sperr, P.E., Assistant City Engineer
CA Signature and Date	 10/30/17

**Project Verification and Endorsement**

This project proposal reflects established local funding priorities consistent with the Regional Transportation Plan. Costs represent accurate planning level estimates needed to accomplish the work described herein. The project described is financially feasible, and local match revenue identified above is available and will be committed to the project if TRPC awards the requested CMAQ grant. **If selected, the project will obligate funding by June 30, 2018 or June 30, 2020 as specified on the award letter.** Failure to do so will result in loss of funding for the project and an alternate project will be funded instead. I realize that the use of federal funds for this project entails administrative and project compliance requirements over which TRPC has no control, and for which this agency or organization will be responsible. This project has the full endorsement of the governing body/leadership of this agency or organization.

AUTHORIZATION	
Mark Russell, P.E.	Director of Transportation
Name of Representative Authorized to Submit Application	Title
	10/30/17
Signature	Date

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