### PROJECT TITLE:

Smart Corridors Signal Upgrade and Transit Signal Priority project: **Phase II**

### GENERAL PROJECT INFORMATION

<table>
<thead>
<tr>
<th>Agency or Organization</th>
<th>TRPC on behalf of Intercity Transit, Olympia, and Tumwater, with Lacey, WSDOT, and Thurston County as supporting partners. Intercity Transit will be the fiscal agent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Person</td>
<td>Veena Tabbutt</td>
</tr>
<tr>
<td>Phone Number</td>
<td>360.741.2550</td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:tabbutt@trpc.org">tabbutt@trpc.org</a></td>
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### PRIORITY OR ALTERNATE PROPOSAL

<table>
<thead>
<tr>
<th>(Select preferred award type)</th>
<th>SELECT YEAR OF OBLIGATION</th>
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<tbody>
<tr>
<td>Priority</td>
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<tr>
<td>Alternate</td>
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<td></td>
<td>2018</td>
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<td>x</td>
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<td>2020</td>
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### Threshold Criteria (check all that apply)

- The project is in the Air Quality Maintenance Area (see application instructions) **X**
- Project elements meet all regional eligibility requirements **X**
- Project elements and administration meet all federal eligibility requirements **X**
- Applicant can demonstrate ability to obligate funding as proposed **X**

### STATUS OF EXISTING FEDERAL PROJECTS

- Is this proposal part of an existing project with other secure federal funding? (yes or no) **X**

*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.*

### Applicant's Project Priority

- Are you submitting more than one CMAQ application (3 maximum)? **X**

### TYPE OF PROJECT OR PROGRAM

- Identify project type that applies to this proposal
  - Alternative Fuels and Vehicles
  - Congestion Reduction and Traffic Flow Improvements **X**
  - Transit Vehicle Acquisition
  - Transit Capital Facilities
  - Transit Incentives Program
  - Bicycle and Pedestrian Facilities and Programs
  - Travel Demand Management
  - Public Education and Outreach Activities Related to Air Quality
  - Carpooling and Vanpooling
  - Freight / Intermodal
  - Diesel Engine Retrofits and Other Advanced Truck Technologies
  - Idle Reduction Programs
  - Training for Implementation of Air Quality Programs
  - Inspection / Maintenance (I/M) Program
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.

In 2012, regional policy-makers funded the Smart Corridors Signal Upgrade and Transit Signal Priority project (“Smart Corridors Project”), which upgraded signals at 83 intersections on or interconnected with the region’s premier transit corridor. It includes Transit Signal Priority (TSP) treatments at 42 of those intersections and outfitting of 15 transit vehicles that use this corridor during peak periods to communicate with those signals. Total project cost was $4,460,665, with $3,185,497 coming from CMAQ funds and $1,275,168 from local sources (29% local match).

Next, this project (Phases II and III) will optimize, and where appropriate synchronize, the upgraded signals, both for general traffic flows and transit, including implementation of TSP. Each Phase will address different sections of the corridor, and is identified in separate, but related applications for CMAQ funding.

The Smart Corridors Signal Upgrade and Transit Signal Priority Project Phase II and III is a collaborative effort of six different transportation agencies, with support from Thurston Regional Planning Council: Cities of Lacey, Olympia, Tumwater, Thurston County, Intercity Transit, and Washington State Dept. of Transportation – Olympic Region. Each of those entities owns or operates equipment essential to implementation of the Smart Corridors project.

<table>
<thead>
<tr>
<th>PROJECT LOCATION AND DETAILS – applicants may submit a map of the project or program/service area</th>
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<tbody>
<tr>
<td>Construction Projects</td>
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<tr>
<td>Type of Construction Project</td>
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<td>Length/Size of Construction Project</td>
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<td>Programs/Services</td>
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<td>Duration of Program/Service</td>
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<tr>
<th>PROJECT PHASING AND COSTS</th>
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<tbody>
<tr>
<td>Identify project phases and costs</td>
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<tr>
<td>Construction Element</td>
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<td>(mark the appropriate phase and enter cost)</td>
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| TOTAL PROJECT COST (SUM OF ALL PROJECT PHASE COSTS IDENTIFIED ABOVE): | $ |

<table>
<thead>
<tr>
<th>FEDERAL FUNDING REQUEST AND MATCH</th>
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<tbody>
<tr>
<td>From Project Applicant* Local funding or other sources</td>
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<tr>
<td>State funding</td>
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<tr>
<td>STP Grant Request</td>
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<tr>
<td>$250,000 to $450,000 * scalable project – minimum $250,000 total project cost</td>
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<tr>
<td>Total Project/Phase Revenue</td>
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*Applicants must provide a minimum of 13.5% non-federal share to federal share.
Example: Total Project Cost is $100,000
Non-federal share: $13,500
Federal STP Funds: $86,500
**PM10 Air Quality Benefits**

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

This project will reduce particulate matter attributable to tire and brake wear by smoothing traffic flows in Thurston County’s heavily traveled corridor. It will reduce general purpose delay (idling and excess stopping and acceleration) along portions of the corridors where signal coordination is implemented and increase transit operating efficiencies, reducing the need to add additional buses to maintain headways and increasing on-time performance and service reliability. It has the added benefit of reducing tailpipe emissions associated with stop and-go traffic and idling, and relieving congestion by improving overall operating efficiency of the corridor. It supports long-standing regional transportation and land use policies that aim to improve access and mobility on designated strategy corridors without adding general-purpose vehicle capacity.

In 2012, TRPC identified signal coordination and transit signal priority as the **Regional Priority** for CMAQ funding after much analysis. A summary can be found here: [http://www.trpc.org/DocumentCenter/View/901](http://www.trpc.org/DocumentCenter/View/901)

**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.

Tire and brake wear generate about 46% of the PM10 emissions in the Thurston Region according to WA State Department of Ecology inputs for the MOBILE6 air quality emissions model. Studies have shown that signal synchronization typically results in a 5 to 15 percent improvement in traffic flow. Air quality benefits will be assessed by estimating reduced delay time though TRPC’s travel demand models.

**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 an implementation of the Regional Transportation Plan’s Strategy Corridor concept: Strategy corridors are places where road widening is not a preferred option to address congestion problems. This may be because the street or road is already at the maximum number of lanes, or that adjacent land uses are either fully built out or are environmentally sensitive. Different approaches are used to maintain mobility and access along these corridors, including transportation technologies to improve efficiency.

It will also support greater mobility on I-5, as the corridors identified for signal synchronization are parallel and alternative routes to I-5, both for local travel and during incidents on I-5. In addition, this project will result in less delay for Intercity Transit fixed route vehicles though the main urban core. Increased predictability will make transit more desirable, and lead to cost savings for Intercity Transit as they will be able to service existing routes more efficiently.

It is consistent with several policies in the RTP, including:

7.a. Use transportation technologies to more effectively utilize the existing transportation system.
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.

**Background: Why projects relating to signal synchronization and transit signal priority are the Region’s priority for CMAQ funding.**

The Thurston region has been a maintenance area for PM10 since the early 2000s. Federal and state laws stipulate that transportation activities in the region cannot undermine the improvements to air quality realized through the reduction of wood smoke. Transportation generates PM10 through a variety of activities, primarily through diesel exhaust, brake and tire wear, and dirt roads. Since the region has no dirt roads in the designated maintenance area, the primary area of focus in complying with these requirements is on diesel exhaust and brake/tire dust.

TRPC received its first CMAQ funding in 2006. A subcommittee of regional policy makers convened in the spring of 2007 to conduct an analysis of CMAQ funding requirements and opportunities specific to the Thurston Region. They determined that priority projects were those that reduced brake wear and tear, and prioritized projects for CMAQ funding that combined traffic signal upgrades and optimization and Transit Signal Priority on the region’s primary urban corridor / premium transit corridor.

In 2012, regional policy-makers funded the Smart Corridor Project. The Smart Corridors Signal Upgrade and Transit Signal Priority project (“Smart Corridors Project”) upgraded signals at 83 intersections on or interconnected with the region’s premier transit corridor. It includes Transit Signal Priority (TSP) treatments at 42 of those intersections and outfitting of 15 transit vehicles that use this corridor during peak periods to communicate with those signals. Total project cost was $4,460,665, with $3,185,497 coming from CMAQ funds and $1,275,168 from local sources (29% local match).

**Description and scope of work - Smart Corridors Phases II and III:**

The next step in the Smart Corridors project is to implement operating strategies along the designated corridors that optimize travel times for both general purpose and transit modes. This will be accomplished by utilizing the upgraded signal technology, new signal timing plans, and communication between systems, including implementation of TSP along the corridors and locations where transit delay can be reduced by implementing TSP. This will be approached in two phases, with two separate but related applications for CMAQ funding.

**Funding for 2018:** Phase II 2018 will concentrate on the Martin Way corridor from Lowes to Pacific Avenue (Olympia section), and Capitol Way/Capitol Boulevard from south of the Interstate 5 overpass to Tumwater Boulevard (Olympia-Tumwater section).

**Funding for 2020:** Phase III 2020 will concentrate on the remainder of Martin Way from College Street to Marvin Road (Lacey, Thurston County, Olympia section), and will be initiated after the construction of the new Marvin Road – Interstate 5 interchange, which will change signal timing throughout this section of Lacey. An alternate Phase III is west Olympia (signal upgrades funded through a separate CMAQ application), should the construction of the Marvin Road interchange get delayed pushing the timeframe outside of the availability of CMAQ funding.
Partnerships

The Smart Corridors Signal Upgrade and Transit Signal Priority project is a collaborative effort of six different transportation agencies with support from Thurston Regional Planning Council: Cities of Lacey, Olympia, Tumwater, Thurston County, Intercity Transit, and Washington State Dept. of Transportation – Olympic Region. Each of those entities owns or operates equipment that is essential to implementation of the Smart Corridors project.

Thurston Regional Planning Council will facilitate the project.

Project scope

The tasks involved in the project are as follows:

1. Project management, including fiscal reporting and management of the consultant
2. Coordination
   a. Technical Review Team – Monthly meeting of partners and consultant team, convened by TRPC
4. Development of signal timing plans for a coordinated signal approach where appropriate. Timing plans will include a minimum of three phases – AM, midday, and PM, and, as appropriate, incident management (high flows along the corridors due to incidents on I-5).
5. Development of criteria for TSP.
6. Implementation of updated signal timing plans, assessment of improvement and any necessary refinements, and implementation of TSP.

Obligation Commitments

Intercity Transit will serve as the project manager, and therefore the funds will be obligated on time without issue.

Flexible Cost Estimates

This project is designed to be flexible in the number of signals it addresses, and therefore can be scaled to fit available CMAQ funding. Due to the complexities involved with multiple partners and federal funding, the MINIMUM funding level for each project (Phase II and Phase III) is $250,000. It is estimated that the project cost is in the range of $10,000 to $15,000 per intersection, however, this will depend on the approach the consulting team suggests through a competitive request for proposals. Implementation will focus on areas where the highest benefits can be achieved, and where interlocal agreements are in place for coordination. In addition, funding will be used for project management and stakeholder/consultant facilitation.

Match

Matching funds for the 2018 project will be provided by Intercity Transit, up to the amount of $50,000. Matching funds for the 2020 project will be negotiated between partners depending on the geographic area selected.
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, this 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

<table>
<thead>
<tr>
<th>Ann Freeman-Manzanares</th>
<th>General Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Representative Authorized to Submit Application</td>
<td>TRId</td>
</tr>
<tr>
<td>[Signature]</td>
<td>10/25/17</td>
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K:\\GUEST\Transportation\STP-CMAQ_TAP_Funding and Obligations\2018\Process\ApplicationForms\CMAQ Application Form.docx
Regionally selected projects underway:


b. 2016 (TRPC) TAP – “Youth Education – Walk-N-Roll” obligated (TrAMS WA-2017-060-00) $145,000

c. 2015 (TRPC) – STP: “IT UST Replacement/Construction” $1,700,000 Transfer to FTA completed 3/16. Under construction. (WA-95-X093-0) (TrAMS).


e. 2015 (TRPC) – CMAQ: “IT Walk N Roll Program” $80,000 Transfer to FTA completed 3/16. Program current/continuing. (TrAMS).


g. 2015 (TRPC) – CMAQ: Bus Stop Enhancements $63,050 – obligated 7/17.

h. 2011 Regional STP Project: Olympia Transit Center Facility Expansion - Construction Federal Amount: $1,252,490, FTA Project # WA-95-X054 (TrAMS). GCCM - awarded to DES for CM services and support 8/17.


State selected & federally funded projects underway:

a. WSDOT Regional Mobility Grant 2017-2019: Operating Grants. Funds (State -$2,042,866) for regional express bus service between Olympia – Tacoma – Service imitated 7/1/17

b. WSDOT Regional Mobility Grant 2017-2019 – State – Pattison MOA design ($2,000,000)

c. WSDOT Regional Mobility Grant 2019-2021 – Pattison MOA – Vanpool Service Center construction ($3,900,000 – notice of award, pending 2019-2021 budget)

d. WSDOT – FTA Section 5339 Small Urban Apportionment (FY 14 and 15) for UST construction. $1,225,000, awarded August 9, 2016. Obligated (TrAMS and Project under construction as of 10/17.

Projects receiving other Federal funding underway:

a. WA-04-0038-01: Olympia Transit Facility: $2,575,500, GCCM - awarded to DES for CM services and support 8/17.

b. WA-95-X071 – CMAQ: Thurston Smart Corridors Project, $805,820 obligated (WA 95-X071-00 –TrAMS)


Note: Summary does not include grant applications pending review and notification; or, formula funds distributed to Intercity Transit and obligated through the Federal Transportation Award Management System (TrAMS) including 5307 direct and PSRC Earned Share formula distributions, or those State formula distributions (noncompetitive) awards and contracts.