STATEWIDE OVERVIEW

Low Cost Enhancement (LCE) projects are small, low cost — usually less than $100,000 — projects that can be quickly implemented to reduce crashes, reduce the potential for crashes, or improve mobility. LCEs quickly address emerging crash trends and mobility issues. These projects bring near-term relief to operational deficiencies, and are often the first step in implementing incremental, long-term corridor strategies.

Because of their low cost and quick implementation, LCE projects are often very practical solutions to emerging needs. LCE projects may often postpone or lessen the need for larger capital projects.

LCE projects generally come in three sizes:

1. **Small.** Under $5,000. When projects are under $5,000, they are often bundled together under “Low Cost Actions,” but they can also stand alone.

2. **Medium.** $5,000 – $50,000.

3. **Large.** Over $50,000.

LCE projects often originate with concerned citizens, elected officials, local agencies, or region staff. Additionally, priority programming and the Traffic Office’s Field Assessment Program identifies larger-scale opportunities for LCE through a system screening process.

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection</td>
<td>Project addresses crash trends, contributing factors, or mobility issues at an intersection.</td>
</tr>
<tr>
<td>Lane Departure</td>
<td>Project addresses engineering countermeasures associated with a vehicle leaving the lane. These may include high friction surface treatment (HFST), rumble strips, guardrails, and other treatments particular to a location.</td>
</tr>
<tr>
<td>Pedestrian/Bicycle</td>
<td>Project addresses identified crash risks or mobility issues for bicyclists or pedestrians.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Project addresses mobility on the system; includes Intelligent Transportation System (ITS) projects</td>
</tr>
<tr>
<td>Signs</td>
<td>Projects to implement Guide, Warning, Regulatory, or Low Clearance signs</td>
</tr>
<tr>
<td>Pavement Markings</td>
<td>Project involves striping.</td>
</tr>
<tr>
<td>ITS spending</td>
<td>ITS-related projects</td>
</tr>
<tr>
<td>Traffic Studies</td>
<td>Any research or traffic studies.</td>
</tr>
<tr>
<td>Project Design</td>
<td>Labor to design and scope projects.</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Activities that don’t fit in another category. Examples include: WSP aerial markings, Test sites, Tort claim investigations, illumination</td>
</tr>
<tr>
<td>Low Cost Actions</td>
<td>Bundle of many small cost safety and mobility projects — usually $5,000 or less — under one job number.</td>
</tr>
</tbody>
</table>
STATEWIDE OVERVIEW

In 2017-19, The Traffic Office delivered $9.2 million in low-cost enhancement projects. This included over 260 projects, plus numerous low-cost actions and bundled signing projects.

Of the $9.2 million, $8.4 million went directly to implement on-the-ground projects. An additional $291,000 went to traffic studies, and $522,000 went to staff time to design projects.

Statewide Low Cost Enhancement Spending by Type of Project 2017-2019

Note: due to rounding, the percentages will not add up to 100%
SUCCESSES & CHALLENGES IN 2017–2019

Successes

Higher Cost Projects
The LCE program continue to deliver quick-turnaround, lower-cost projects to address safety, mobility, and roadway management. The program also has supported an ongoing expansion to deliver higher-cost projects, 25 projects over $50,000, compared to only 14 in the previous biennium. This highlights the Traffic Office's growing role in providing necessary mid-scale projects to address gaps in WSDOT’s project delivery system.

Field Assessment
The program completed its fifth year, for one full cycle of the state. Traffic Office staff have surveyed 94% (6604 out of 7058 miles) of state roadways, and has completed 612 (66%) or the 931 total projects identified during the cycle. Staff are spending the sixth year of the program completing outstanding projects from the first five years, and preparing for the next five-year cycle of survey and project identification.

Challenges

Rising costs
The Traffic Office is facing increased costs, from the effect of inflation, and reduced spending power in a strong economy. The program is facing increased costs in the form of higher employee pay and higher bids for projects.

ITS preservation is 13.6% of all LCE spending for 2017-19
The ongoing preservation of ITS systems is a challenge for the LCE program. All regional offices performed some ITS preservation work during the 2017-19 biennium, for a total of $1.25 million. Statewide, this is 75.8% of all LCE funds spent on ITS, and 13.6% of the overall LCE budget for the biennium. This compares to $1,044,455 in the 15-17 biennium, which was 13.2% of that biennium's total LCE spending. Lack of preservation funding requires regions to use LCE funds to replace ITS devices.
In the 2017-2019 biennium, NWR oversaw $3.6 million in projects, approximately 40% of the total LCE spending for the state. NWR’s major initiatives for the biennium included intersection improvements, Low Cost Actions, and ITS projects.

Intersection improvements accounted for 31% of the region’s spending. This included partial costs for the I-90 EB from Raging River Bridge to SR 18 - Active Warning Sign & Camera project, which addresses queued traffic backing onto mainline I-90 at the interchange. The Upgrade Maxtime Cards in Local controllers project provided the upgrades necessary to optimize local signal control and central signal control. The SR527 & SR96 – Loop Work For Adaptive Signal Control project reconnected (aka mapped) existing roadway detection loops to the signal controller to facilitate updating the signal operating system to adaptive signal control. The updated mapping also allows collecting volume and turning movement counts from the signal rather than having to collect this traffic data separately.

Finally, the region installed multiple sign and signal enhancement projects at intersections. These included active warning systems for non-signalized intersections, Intersection Safety Improvement Project (ISIP) signs, and several flashing yellow arrow signal heads (see below for more information on flashing yellow arrows).

An additional 27% of the region’s budget went to Low Cost Action projects. LCAs are small (less than $5,000) signing and pavement marking actions implemented by WSDOT Maintenance staff.

The region supported WSDOT’s Practical Solution Initiative, as well. NWR Traffic is improving connections with Program Development, project offices, and local jurisdictions in order to include low cost improvements as part of larger projects. Examples include, implementing pavement marking updates with a state paving project, and filling in a missing sidewalk segment (city funded) with a Connecting Washington project.

One major success for the biennium included the region’s partnership with local jurisdictions on adaptive signal control projects. Adaptive control uses detection collected in real time to adjust signal timing, within parameters, to adapt accordingly. This is particularly beneficial for handling unplanned events, such as crashes. Typical traffic patterns are handled well with time of day plans and frequent monitoring, which the central signal system allows. These projects help with costs to get communication capability and camera coverage to intersections. Running fiber to intersections, whether underground or overhead, is expensive. NWR has partnered with the cities of Mountlake Terrace, Lynnwood, Sammamish, and Federal Way, as well as Snohomish County, on these projects. Once communication is in place, signal operation improves because 1) cameras are available for remote monitoring 2) adaptive signal control is available for adjusting signal timing, and 3) signals can be connected to NW Region Central Signal System and operational adjustments made remotely. Remote adjustments can be much more frequent, since the engineer does not have to travel to and from the signal cabinet.

NWR experienced two key challenges in the 2017-19 biennium:

- Lack of availability of Maintenance staff to complete low cost enhancement work orders. Maintenance staff typically have a full load of Maintenance work, and must fit low cost enhancement work in as best they can. Traffic control costs in the Puget Sound region can be high, as work often must be performed when volumes are low, which is at night on overtime.

- Lack of funding to keep traffic signal, ITS, and maintenance equipment up to date and functioning optimally. This results in LCE funding being used for preservation purposes. Q2 funds are used to update controller equipment, cameras, VMS, emergency preempt, etc.
NORTHWEST REGION

Twenty percent of the region’s funds went to ITS projects. Some of these ITS projects were new or represented necessary adjustments to a changing system, such as adding ramp meters and modifying meter configuration (such as converting an HOV bypass lane to a metered lane). However, of the $743,998 that NWR spent on ITS projects, 17% was spent on ITS preservation: upgrading CCTV cameras, and replacing VMS equipment.

In 2019-21, NRW intends to pursue the following initiatives:

• Active Transportation Enhancements. Now that NWR has an Active Transportation Specialty team, they are better able to support region and local agency project development with regard to active transportation needs, and to develop and deliver active transportation related low cost enhancements. An example is improving signing and pavement marking for crossings at the I-5 at SR531 interchange.

• Flashing Yellow Arrows (FYAs). FYAs can improve roadway capacity and reduce driver frustration, as noted in the Design Manual. FYA is being used more by more jurisdictions to address these issues. In accordance with Design Manual guidelines, signal displays and operation are being converted to FYA where safety and mobility can be improved.

• Loop Mapping. As described above, loop mapping is updated so signal detection can be optimally mapped into the signal controller. This is necessary for collecting turning movement counts and for adaptive signal control operation. An additional benefit is leveraging signal equipment to get traffic count and turning movement data. NWR will focus on those intersections transitioning to adaptive signal control in the 2019-21 biennium, and eventually move focus to the highest volume corridors.
## NORTHWEST REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-90 EB from Raging River Bridge to SR 18 - Active Warning Sign &amp; Camera</td>
<td>415,301</td>
<td>Intersection</td>
<td>ITS spending</td>
</tr>
<tr>
<td>King Area Low Cost Actions</td>
<td>376,357</td>
<td>Low Cost Actions</td>
<td></td>
</tr>
<tr>
<td>Mount Baker Area Low Cost Actions</td>
<td>319,783</td>
<td>Low Cost Actions</td>
<td></td>
</tr>
<tr>
<td>Snohomish Area Low Cost Actions</td>
<td>282,803</td>
<td>Low Cost Actions</td>
<td></td>
</tr>
<tr>
<td>Upgrade Maxtime Cards in Local Controllers</td>
<td>225,115</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-5 SB from NE 45th St to NE 130th St - Ramp Meters</td>
<td>171,704</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>I-5 S from 188th St to NE 80th St - CCTV Installation</td>
<td>161,878</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 527 from I-405 to 164th - Signal Integration</td>
<td>127,928</td>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>SR 509 at Cloverdale St/1st Ave S - Signal Upgrade</td>
<td>120,914</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 527 &amp; SR 96 - Loop Work For Adaptive Signal Control</td>
<td>110,008</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Curve Warning Signs from past biennia</td>
<td>87,482</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 202 at 218th - Active Warning Signs</td>
<td>62,886</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Unstable Slope Signing - Regionwide</td>
<td>60,966</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Intersection Safety Improvement Program - Finish 15-17 Signs</td>
<td>60,813</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-5 SB at Mercer Street Exit - On Ramp Barrier</td>
<td>56,430</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>I-5 at Ship Canal Bridge - VMS Replacement</td>
<td>53,318</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>Environmental Investigation</td>
<td>44,090</td>
<td>Project Design</td>
<td></td>
</tr>
<tr>
<td>SR 169 Safety Study - Enhancements to Signal &amp; Signing</td>
<td>43,642</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Camera Upgrades Phase 7</td>
<td>43,169</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>Tort Claim Investigation</td>
<td>41,560</td>
<td>Project Design</td>
<td></td>
</tr>
<tr>
<td>SR 527 &amp; SR 96 - Update to Signal Preempt Feature</td>
<td>39,126</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>FAST Act Weight Limit Signs - Regionwide</td>
<td>37,780</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Camera Upgrades Phase 8</td>
<td>33,582</td>
<td>ITS spending</td>
<td></td>
</tr>
</tbody>
</table>
## NORTHWEST REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Lab Investigation</td>
<td>31,693</td>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>US 2 &amp; SR 169 - Permanent Traffic Recorders</td>
<td>30,714</td>
<td>Traffic Studies</td>
<td></td>
</tr>
<tr>
<td>I-5 SB from Lynnwood To Mountlake Terrace - Hard Shoulder Running</td>
<td>30,217</td>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>SR 96 from I-5 Interchange to SR 9 - Paving &amp; ADA Compliance</td>
<td>30,070</td>
<td>Mobility</td>
<td>ITS spending</td>
</tr>
<tr>
<td>Northwest Region Advance Warning Signs</td>
<td>27,752</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Lynnwood Sign Replacement</td>
<td>25,785</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 525 at 5th - Improvements to Holding Lane</td>
<td>24,387</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-5 in Bellingham - Tow Zone Signing</td>
<td>24,312</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>I-90 EB at SR 18 - Active Warning Signs &amp; Camera</td>
<td>23,255</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>Low Clearance Bridge Signing</td>
<td>22,472</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Cabinet &amp; Controller for Ramp Meter Firmware - Traffic Management Center</td>
<td>21,028</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 518 WB at Des Moines Memorial Dr. - Remove Bridge Signs</td>
<td>20,326</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 525 Alderwood Pkwy Signing</td>
<td>17,134</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>I-5 NB &amp; SB at Mercer Street Exit - Ramp Meters</td>
<td>15,955</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 526 in Mukilteo - Signing</td>
<td>15,414</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Software Development Tools</td>
<td>14,942</td>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>US 2 from Fern Bluff Rd to 10th St.- Paving &amp; Ada Compliance</td>
<td>14,830</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-405 at Interurban - Barrier Modifications</td>
<td>14,364</td>
<td>Lane Departure</td>
<td></td>
</tr>
<tr>
<td>SR 522 - Signal Phase &amp; Timing (SP&amp;T) - Equipment Installation</td>
<td>14,344</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>US 2 at SR 522 - Bike &amp; Pedestrian Crossing Improvement</td>
<td>13,068</td>
<td>Pedestrian/Bicycle</td>
<td></td>
</tr>
<tr>
<td>Signal Maintenance Investigation</td>
<td>12,136</td>
<td>Lane Departure</td>
<td>Project Design</td>
</tr>
<tr>
<td>SR 9 at 30th and 32nd - Flashing Yellow Arrows</td>
<td>11,863</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 18 at Tiger Mountain - Curve Warning Signs</td>
<td>10,272</td>
<td>Signs</td>
<td></td>
</tr>
</tbody>
</table>
## NORTHWEST REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility Investigation</td>
<td>10,159</td>
<td>Traffic Studies</td>
<td>Project Design</td>
</tr>
<tr>
<td>HOV Vehicle Occupancy Study</td>
<td>10,000</td>
<td>Traffic Studies</td>
<td></td>
</tr>
<tr>
<td>I-5 at 44th Ave W 204th St SW Signal &amp; Ped Heads Update</td>
<td>10,053</td>
<td>Intersection</td>
<td>Pedestrian/Bicycle</td>
</tr>
<tr>
<td>Spokane St/6th Ave S On Ramp to SB I-5 - Curve Warning Signs</td>
<td>9,061</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>I-5 SB from NE 45th St to NE 130th - Pavement Markings For Meters</td>
<td>9,053</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 532 at 102nd - Flashing Yellow Arrow</td>
<td>8,860</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-90 WB at MP 24 - Curve Warning Sign</td>
<td>8,351</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 164 at SR 169 - Replace Signal Heads</td>
<td>8,252</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 203 at 203rd/High Rock Rd - Loops For Active Warning System</td>
<td>7,601</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 539 at Smith Rd - Flashing Yellow Arrow</td>
<td>7,336</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-5 At 44th - NB Ramp Signal &amp; Pedestrian Countdown Timer Update</td>
<td>7,263</td>
<td>Intersection</td>
<td>Pedestrian/Bicycle</td>
</tr>
<tr>
<td>SR 543 at Intl Border - Detection Loops in NEXUS Lane</td>
<td>7,114</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 520 at Leary Way - Right Turn Blank Out Sign</td>
<td>7,029</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 516 at 168th Pl SE - Flashing Yellow Arrow</td>
<td>6,736</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-405 at 124th - Camera Connection</td>
<td>6,475</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR5 20 at NE 40th - Peak Hour Shoulder Running</td>
<td>6,261</td>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>SR 204 at Lundeen Pkwy - Flashing Yellow Arrow</td>
<td>6,139</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 544 at Hannegan - Flashing Yellow Arrow</td>
<td>6,039</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 164 at 244th Ave SE - Flashing Yellow Arrow</td>
<td>6,032</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 539 at Birch Bay Lynden Rd &amp; Kok Rd- Audible Pedestrian Signal</td>
<td>5,746</td>
<td>Intersection</td>
<td>Pedestrian/Bicycle</td>
</tr>
<tr>
<td>Mercer Street to SB I-5 in Seattle - Curve Sign Beacons</td>
<td>5,672</td>
<td>Lane Departure</td>
<td></td>
</tr>
<tr>
<td>SR 516 at 172nd - Flashing Yellow Arrow</td>
<td>5,631</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-5 NB &amp; SB at Kincaid St/SR 536- Signal Improvement</td>
<td>5,558</td>
<td>Intersection</td>
<td></td>
</tr>
</tbody>
</table>
## NORTHWEST REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 530 at Oso - Memorial Signs</td>
<td>5,181</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 532 at 88th Ave NW - Flashing Yellow Arrow</td>
<td>5,084</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 524 at Damson Rd/North Rd - Flashing Yellow Arrow</td>
<td>4,754</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Central Signal System Replacement</td>
<td>4,538</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 169 in Maple Valley - Open House on Community Concerns</td>
<td>4,216</td>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>US 2 at Fryelands - Video Detection</td>
<td>3,892</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-90 at W Lake Sammamish Pkwy - Correct Sign Placement</td>
<td>2,956</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 169 at 264th - Flashing Yellow Arrow</td>
<td>2,025</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>SR 92 at 127th - Active Warning Signs</td>
<td>1,649</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>I-5 NB from SR 531 to Stillaguamish River - Paving &amp; ADA Compliance</td>
<td>1,447</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 18 WB at I-5 - Update Signing</td>
<td>1,160</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 542 from Cornell Creek Rd to Nooksack River - Guardrail Replacement</td>
<td>50</td>
<td>Lane Departure</td>
<td></td>
</tr>
</tbody>
</table>
OR’s LCE program spent $2.1M in the 2017-19 biennium. The region accomplished a diverse set of projects this biennium, with an emphasis on community partnerships and implementing practical solutions to address safety and mobility issues.

The region engaged in three notable partnerships in 2017-19. The first project, with Mason County, addressed speed and pedestrian safety along SR 3 in Belfair by installing radar speed signs, marked crosswalks, and pedestrian RRFBs. In the second project, OR implemented a practical solution by partnering with the I-5/SR 510 Interchange Reconstruction Project team to address recurring congestion exacerbated by a construction stage detour at the I-5 off-ramp to Martin Way E/Nisqually Cut Off Rd SE. This project added capacity at the ramp terminal intersection. OR also partnered with a project construction office to install a right turn lane on SR 305 to relieve congestion and address traffic risks at the location.

OR addressed several roadway departure crash locations through signs, pavement markings, and centerline and edge line rumble strips. OR also invested in restriping highways and intersections, providing more refuge areas for turning traffic, and providing additional vehicle queuing at intersections.

The program identified and tracked projects costing more than $2,000 and grouped all other projects into Low Cost Actions, for a total of $60,000.

OR’s Traffic Office faced a number of LCE project delivery challenges from both design and implementation perspectives. OR Traffic has found it helpful to coordinate some design work with Region Project Office staff, especially on projects that require minor pavement widening. OR Traffic is also working with Region Maintenance staff on flexible implementation schedules, to accommodate the existing heavy workload for the region’s Maintenance staff. Olympic Region Traffic has also seen growth in requests from constituents and community groups for radar speed signs, rectangular rapid flashing beacons (RRFBs) is more conventional, and data collection devices.

Looking forward to the 2019-21 biennium, the region will continue to focus on safety, mobility, implementing practical solutions, collaboration with local and state governments and special interest groups, and reduction in maintenance costs with each future project. OR will also continue to identify projects through the Field Assessment Program. Currently-planned LCE projects include partnerships for pedestrian improvements on SR 109 in Hoquiam, SR 105 along the coast, and US 101 in Hoodsport. OR also plans to fund mobility improvements such as ramp meters, a ferry holding lane, and ITS equipment to provide more efficient signal operations.
## OLYMPIC REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
<th>Third Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCE Project Design &amp; Support</td>
<td>1,105,910</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 3 from Pickering Road to Allyn - Slow Vehicle Turn Outs – Phase 1</td>
<td>72,252</td>
<td>Mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 3 at Belfair - Rectangular Rapid Flashing Beacons</td>
<td>65,992</td>
<td>Pedestrian/Bicycle</td>
<td>Signs</td>
<td>ITS spending</td>
</tr>
<tr>
<td>I-5 SR 512 to 56th St - Vehicle Detection &amp; Comm. Upgrade</td>
<td>55,239</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 at Happy Valley Road - Left Turn Channelization</td>
<td>50,291</td>
<td>Intersection</td>
<td>Mobility</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>SR 305 at SR 3 - Right Turn Lane</td>
<td>45,122</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 307 at Foss-Pugh - Left Turn Channelization</td>
<td>40,540</td>
<td>Intersection</td>
<td>Signs</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>SR 7 at 175th - Left Turn Channelization</td>
<td>38,965</td>
<td>Intersection</td>
<td>Mobility</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>I-5 SB at 54th Ave E - Exit Only Signs &amp; Pavement Markings</td>
<td>38,585</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 3 from Pickering Road to Allyn - Slow Vehicle Turn Outs – Phase 2</td>
<td>35,553</td>
<td>Mobility</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Trafficcast International Renewal</td>
<td>30,600</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 16 at Kitsap County Line - Shoulder Rumble Strips</td>
<td>30,521</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 12 at Chehalis St - Install Left Turn Lane</td>
<td>30,398</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 16 from Jackson to Olympic Dr - Camera Upgrade</td>
<td>27,390</td>
<td>ITS spending</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>End School Zone Signs - Regionwide</td>
<td>22,841</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Stations Communication Upgrade - 2G to 4G</td>
<td>18,445</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 161 in South Hill - Mid-Block Crosswalk &amp; Actuated Flashing Beacon</td>
<td>17,444</td>
<td>Pedestrian/Bicycle</td>
<td>Signs</td>
<td>Project Design</td>
</tr>
<tr>
<td>US 101 at Indian Creek - Structure-Weight Restrict</td>
<td>17,159</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 166 at Harrison Ave - Pedestrian Crossing Rapid Flashing Beacon</td>
<td>16,449</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 12 at SR 8 - Intersection Warning Signs</td>
<td>15,038</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 165 Carbon River to Gale Creek - LDS Panels</td>
<td>13,843</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 SB at SR 8 - Zipper Merge</td>
<td>13,113</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR162 at Military Road - Turning Vehicle Stop Signs</td>
<td>11,918</td>
<td>Pedestrian/Bicycle</td>
<td>Signs</td>
<td></td>
</tr>
</tbody>
</table>
## OLYMPIC REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
<th>Third Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermoplastic and Raised Pavement Marker Purchases</td>
<td>11,680</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectangular Rapid Flashing Beacons and Vis-Z-Shields Purchases</td>
<td>11,040</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 3/SR 305 to SR 104 - Speed Zone Change</td>
<td>10,608</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 SB at Martin Way E/Nisqually Cut Off Rd SE - Off Ramp Restriping</td>
<td>10,337</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 160 to SR 16 - On-Ramp Right Turn Lane</td>
<td>10,235</td>
<td>Mobility</td>
<td>Signs</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>SR 105/SR 101 to Newskan Creek - Linear Delineation System</td>
<td>9,702</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miovision Trafficlink Contract Renewal</td>
<td>9,000</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 105 at W Huntley St - Removed Signal - Updated Signing</td>
<td>8,612</td>
<td>Intersection</td>
<td>Signs</td>
<td>ITS spending</td>
</tr>
<tr>
<td>SR 410 between Bonney Lake and Bukley - Centerline Rumble Strip</td>
<td>8,556</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 305 at Suquamish - Bicycle Detection Beacons</td>
<td>8,345</td>
<td>Pedestrian/Bicycle</td>
<td>Mobility</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 305 Miovision</td>
<td>8,276</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 167 at 24th &amp; 8th - On &amp; Off Ramps - No Parking Signs</td>
<td>7,958</td>
<td>Mobility</td>
<td>Signs</td>
<td>Project Design</td>
</tr>
<tr>
<td>SR 109 Hoquiam to Moclips - Linear Delineation System</td>
<td>7,433</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 160 at Converse Ave SE - Signing and Pavement Markings</td>
<td>6,999</td>
<td>Intersection</td>
<td>Pedestrian/Bicycle</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 3 at SR 104 at Hood Canal Bridge - Yield Signs</td>
<td>6,886</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 105 Twin Harbors State Park to Aberdeen - 8 Inch White Edge Line</td>
<td>6,697</td>
<td>Lane Departure</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>US 101 Sequim to Blyn - Speed Study</td>
<td>6,097</td>
<td>Signs</td>
<td>Traffic Studies</td>
<td></td>
</tr>
<tr>
<td>SR 101 at Humptulips - Speed Zone Change</td>
<td>6,082</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 510 near Pacific Avenue &amp; Martin Way - Speed Reduction Study &amp; Signing</td>
<td>5,881</td>
<td>Signs</td>
<td>Traffic Studies</td>
<td>Project Design</td>
</tr>
<tr>
<td>Loxie Eagans Blvd at SR 3 Interchange - Signing</td>
<td>5,433</td>
<td>Intersection</td>
<td>Mobility</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 507 at Vail Rd SE Mp - Warning Signs</td>
<td>5,379</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5/SR 512 Interchange to 56th St - ITS Devices Network Upgrade</td>
<td>5,315</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## OLYMPIC REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
<th>Third Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 116 MP 2.65 to MP 9.71 - Bike Signs</td>
<td>4,791</td>
<td>Pedestrian/Bicycle</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>T-1 Line Switch Replacement</td>
<td>4,634</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 304 in Bremerton - HOV &amp; Lane Reduction Arrows</td>
<td>4,328</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 NB near Nisqually - Striping &amp; Signing Adjustment</td>
<td>3,935</td>
<td>Signs</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>SR 3 at Belfair Safeway - No Left Turn Sign &amp; Pavement Markings</td>
<td>3,929</td>
<td>Signs</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>US 12 at Linkshire Drive - Pylons</td>
<td>3,816</td>
<td>Intersection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 16 at Sprague Ave - Ramp Meter</td>
<td>3,791</td>
<td>Mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 7 at Garfield Street - Two Way Left Turn Lane</td>
<td>3,767</td>
<td>Mobility</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>I-5 NB at 56th St - All Traffic Must Exit Sign</td>
<td>3,749</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 161 at Edgewood - Centerline Rumble Strip</td>
<td>3,747</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 106 MP 8.10 – 8.50 - Centerline Rumblestrips</td>
<td>3,683</td>
<td>Lane Departure</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>SR 165 at City Of Wilkeson Skate Park - Crosswalk</td>
<td>3,654</td>
<td>Pedestrian/Bicycle</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>SR 12 at Forstrom Rd - Rumble Strips</td>
<td>3,612</td>
<td>Intersection</td>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>US 101 at Port Angeles- Speed Reduction Signs</td>
<td>3,473</td>
<td>Signs</td>
<td>Traffic Studies</td>
<td></td>
</tr>
<tr>
<td>SR 302 from County Line to 10.57 - Updated Street Name Signs</td>
<td>3,454</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 121 at 113th St - Intersection Warning Signs</td>
<td>3,197</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 162 near Alderton - Tractor Signs</td>
<td>3,192</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 167 near Tacoma - Edge Line Rumble Strips</td>
<td>3,089</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 3 near Hood Canal Bridge - School Bus Stop Ahead Signs</td>
<td>3,075</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 at Boulder Creek - Install Chevrons</td>
<td>3,065</td>
<td>Lane Departure</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 410 turn to Veterans Memorial Dr. - Added Yellow Dotted Extension Line</td>
<td>2,984</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 507 at Yelm Walmart - Private Entrance Striping/Signing</td>
<td>2,819</td>
<td>Intersection</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>Communication Upgrade To Wireless Modem</td>
<td>2,789</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## OLYMPIC REGION
### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
<th>Third Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>US-12 at Elma - WSP Aerial Markings</td>
<td>2,772</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 in Olympia at Evergreen Off-Ramp - Pedestrian Signing &amp; Crosswalk</td>
<td>2,624</td>
<td>Pedestrian/Bicycle Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 160 at Wilson Creek Road - Passing Zone Signs</td>
<td>2,619</td>
<td>Signs</td>
<td>Traffic Studies</td>
<td></td>
</tr>
<tr>
<td>SR 302 at Gateway Park - Turning Traffic Signs</td>
<td>2,577</td>
<td>Signs</td>
<td></td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>SR 305 at High School Rd - Recessed Double Yellow Center Line</td>
<td>2,434</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 305 at Totten Rd - Install Dotted Extension Line</td>
<td>2,415</td>
<td>Lane Departure</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>SR 166 at Rockwell Avenue - Remove Overhead Sign Poles &amp; Relocate Pedestrian Sign</td>
<td>2,257</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Equipment Fund Commercial Driver License Training for Signing Maintenance Staff</td>
<td>2,172</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 165 Carbon River Bridge - Signing</td>
<td>2,137</td>
<td>Lane Departure</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Fiber Splice Boxes &amp; Patch Cords</td>
<td>2,102</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 Olympia Area - Microwave Technology Upgrade</td>
<td>1,973</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 121 at Beaver Creek Bridge - Emergency Vehicle Weight Sign</td>
<td>1,926</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 3 near Belfair - School Bus Stop Ahead Signs</td>
<td>1,907</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 507 at City of Rainier - Justin D Norton Memorial Sings</td>
<td>1,821</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 16 at Burnham Dr - Sign &amp; Pavement Markings</td>
<td>1,644</td>
<td>Signs</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>SR 20 at US 101 - Guide Sign</td>
<td>1,474</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 at Dupont Steilacoom Rd - Do Not Stop on Tracks Signing</td>
<td>1,443</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 at Maytown &amp; Scatter Cr Rest - Commercial Vehicle 11hr Sign</td>
<td>1,419</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 115 in Ocean Shores - Replace Stop &amp; Stop Ahead Signs</td>
<td>1,398</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 3 in Shelton - Driveways &amp; Speed Zone Signing</td>
<td>1,291</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 12 at Elderberry St - Pavement Markings Right Turn Lane</td>
<td>1,215</td>
<td>Mobility</td>
<td>Pavement Markings</td>
<td></td>
</tr>
</tbody>
</table>
## OLYMPIC REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
<th>Third Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 20 at Fredricks St - Signing</td>
<td>1,213</td>
<td>Intersection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 at SB I-5 - Pavement Markings</td>
<td>1,119</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 12 at Monte Brady Rd - Fire Truck Warning Signs</td>
<td>1,093</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 at Harper Church/Park &amp; Ride Lot - Intersection Crosshatching</td>
<td>932</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 SB Exit 105A - Vehicle Weight Restriction Signing</td>
<td>899</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 108 near Kamilche - Railroad Crossing Advisory Signing</td>
<td>871</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 at Lynch Rd - Reinstall Raised Pavement Markers</td>
<td>864</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 at Donkey Creek Rd - Warning Sign</td>
<td>732</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 101 at Sappho &amp; Boyce-Deer Park - WSP Aerial Markings</td>
<td>579</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 104 at Teal Lake/Shine Rd - Left Turn Channelization Study</td>
<td>422</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 104 near Kingston - Kingston Transit Signing</td>
<td>339</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the 2017-19 biennium, NCR again used LCE funding to accomplish a wide variety of improvements and enhancements to the regional transportation system. The region leveraged LCE funding in collaboration with other programs within WSDOT, and with local agencies. These partnerships resulted in sizable projects that enhance mobility and safety for freight, passenger vehicles, bicycles, and pedestrians. LCE funding is also a vital resource for many smaller projects in the region. System users frequently call with requests for a speed limit change, new signing, updated striping, or some other minor operational adjustment. LCE funding allows a quick, focused response to customer needs.

Near the end of the 2015-17 biennium, the region used LCE funds to purchase a new VMS for installation at the junction of US 2, US 97, and SR 28 north of East Wenatchee. The VMS was installed using LCE funds during the 2017-19 biennium. The VMS is an important addition that supplies accurate traveler information to drivers about road and weather conditions to the north or west. Other ITS investments in NCR are less visible, but highly important additions to the communications network that helps gather and transmit traveler information. For instance, LCE funding helped further enhance and expand communication infrastructure in the Columbia Basin. Along with other ITS benefits, this enabled the installation of traffic cameras in the Moses Lake area and made their connection to the network possible.

The North Central Region began upgrading traffic signal controllers during the 15-17 biennium to Advanced Transportation Controller (ATC) specifications. ATC hardware and software enables flexibility in traffic signal timing to react to changing conditions and provide the most efficient operation. During the 2017-19 biennium NCR used LCE funds to purchase and deploy 25 new ATC-capable CPUs and ATC “Omni” software in existing traffic signal controllers.

NCR has continued its commitment to practical solutions through partnerships with cities, counties, and other agencies and organizations. NCR partnered with the City of Ephrata and Grant County to construct a roundabout on SR 282 at its intersection with Dodson Rd.

The enhancements enabled by LCE funding are low cost, but they provide big benefits. Because of the flexibility and quick response time possible with Low Cost Enhancements, NCR has been able to apply effective, innovative solutions and to economize by teaming up with other agencies and with WSDOT projects funded by other programs. One challenge that NCR faces is that anything added to the existing transportation system must be maintained; this provides long-term benefits to users of the system, and protects the investment of State dollars. North Central Region is committed to finding new ways to address the gap between additions to the system and the personnel and funding to maintain it.
# NORTH CENTRAL REGION

## All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1 Signs</td>
<td>112,376</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Scheduled Reviews of Traffic Signal Timing - Regionwide</td>
<td>74,495</td>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>SR 282 at Dodson Rd - Restriping for Roundabout</td>
<td>65,811</td>
<td>Mobility</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>US 97 in Brewster - Two-Way Left Turn Lane</td>
<td>65,502</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>SR 155 in Nespelem - &quot;Your Speed Is&quot; Sign, Rectangular Rapid Flashing Beacons, &amp; Warning Signs</td>
<td>55,789</td>
<td>Pedestrian/Bicycle</td>
<td></td>
</tr>
<tr>
<td>I-90 - Four Gates For Ramp Closures</td>
<td>39,357</td>
<td>Miscellaneous</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 28 north of East Wenatchee - Variable Message Signs</td>
<td>37,629</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>US 2 from Leavenworth to Orondo - Field Assessment Projects</td>
<td>35,213</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>Regionwide Bike Detection at Signals - Radar Upgrades</td>
<td>34,400</td>
<td>Pedestrian/Bicycle</td>
<td></td>
</tr>
<tr>
<td>SR 26 full route - Field Assessment Projects</td>
<td>33,338</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 28 near Ephrata at Road E NW - Left Turn Lanes</td>
<td>32,202</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>SR 24 from SR 243 to Othello - Field Assessment Projects</td>
<td>29,005</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>Regionwide Signal Controller Upgrades</td>
<td>27,859</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>US 97 from SR 970 to Canadian Border - Field Assessment Projects</td>
<td>27,380</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 28 in Ephrata - Two-Way Turn Lane</td>
<td>26,136</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>US 2 from Nason Creek to Leavenworth - Field Assessment Projects</td>
<td>26,111</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 243/SR 24 to SR 26 - Field Assessment Projects</td>
<td>25,046</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 171 at Alder St - Access Control Curb</td>
<td>24,144</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Area 2 Signs</td>
<td>22,864</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 17 at Dry Falls Rest Area - Restriping</td>
<td>18,608</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>Area 4 Signs</td>
<td>16,033</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>US 2 at Cascade Ave - Right Turn Extension</td>
<td>15,172</td>
<td>Mobility</td>
<td></td>
</tr>
</tbody>
</table>
### NORTH CENTRAL REGION

**All 2017–2019 Low Cost Enhancement Projects**

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 17 at Moses Lake - Cameras, Radios, &amp; Connectivity</td>
<td>14,877</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>Area 3 Signs</td>
<td>10,496</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>US 97 Chelan County to Omak - Field Assessment Projects</td>
<td>10,008</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>ITS Communication Radios</td>
<td>9,603</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 20 Early Winters to Ferry County Line - Field Assessment Projects</td>
<td>9,400</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>US 2 in Leavenworth - Flashing Yellow Arrow</td>
<td>9,259</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>State Force Work</td>
<td>9,026</td>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Regionwide Minor Striping Changes</td>
<td>7,880</td>
<td>Pavement Markings</td>
<td></td>
</tr>
<tr>
<td>Signal Interconnect - US 2 in Leavenworth &amp; SR 28 in Ephrata</td>
<td>7,186</td>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>SR 155 at Coulee Dam - School Zone Signing</td>
<td>6,841</td>
<td>Pedestrian/Bicycle</td>
<td></td>
</tr>
<tr>
<td>US 97 at Blewett Pass - Camera</td>
<td>6,391</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>US 97 in Oroville - Crosswalk Installation</td>
<td>6,204</td>
<td>Pedestrian/Bicycle</td>
<td></td>
</tr>
<tr>
<td>SR 97A from Entiat to Hugo Road - Field Assessment Projects</td>
<td>5,941</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>Regionwide Reduced Speed Sign Updates</td>
<td>5,873</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 28 from SR 2 to Ephrata - Field Assessment Projects</td>
<td>5,080</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 20 Winthrop to Aeneas Valley Rd - Field Assessment Projects</td>
<td>5,032</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>Regionwide Minor WSP - Requested Enhancements</td>
<td>4,124</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 20 Flagg Mountain Radio Tower - Solar Panels</td>
<td>3,953</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 285 full route - Field Assessment Projects</td>
<td>3,591</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>US 2 at Easy St. - Signal Bike Detection</td>
<td>3,567</td>
<td>Pedestrian/Bicycle</td>
<td></td>
</tr>
<tr>
<td>SR 171 at Ash St - Radar Detection</td>
<td>3,348</td>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>US 97 in Okanogan - Rectangular Rapid Flashing Beacons</td>
<td>1,713</td>
<td>Pedestrian/Bicycle</td>
<td></td>
</tr>
<tr>
<td>SR 150 Manson to Howser Rd - Field Assessment Projects</td>
<td>1,448</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
</tbody>
</table>
### NORTH CENTRAL REGION

**All 2017–2019 Low Cost Enhancement Projects**

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 281 full route - Field Assessment Projects</td>
<td>1,344</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 282 full route - Field Assessment Projects</td>
<td>1,306</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 171 in Moses Lake - Striping Upgrades &amp; Tubular Marker Installation at Pedestrian Crossing</td>
<td>743</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Regionwide Motorcycle Safety Awareness Campaign</td>
<td>382</td>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>SR 173 Bridgeport to Okanogan County Line - Field Assessment Projects</td>
<td>270</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
<tr>
<td>SR 20 from Skagit County to Early Winters - Field Assessment Projects</td>
<td>34</td>
<td>Bundled Field Assessment</td>
<td></td>
</tr>
</tbody>
</table>
SWR implemented a wide variety of LCE projects in the 2017-19 biennium. 20% of the LCE funding allocation went to delivering seven larger-scale projects. The region placed an emphasis on taking a practical solutions approach to developing and prioritizing these projects.

Target Zero categories such as intersection, lane departure, and pedestrian/bicycle spending accounted for about 25% of the region's LCE spending. In support of WSDOT’s growing emphasis on multi-modal transportation and increased community engagement, SWR continues to emphasize pedestrian and bicycle projects. The region completed 20 LCE-funded pedestrian and bicycle safety projects, accounting for about 7% of the region's LCE spending.

About 24% of SWR's LCE spending for the biennium went towards Intelligent Transportation System (ITS) equipment for signal and camera systems to assist in implementing low cost operational practical solutions. This work included Wavetrionix and flashing yellow arrows tied to signals.

SWR spent 18% of its LCE funding on approximately 120 low-cost actions, small-scale projects under $5,000 each. These projects can consist of improvements as simple as restriping eight inch edge lines to promote slower speeds, to adding tubular markers, signing, and pavement markings to enhance pedestrian access.

16% of SWR’s LCE funds went to cover funding gaps for other underfunded commitments. The region purchased update software/equipment for camera or signal systems, providing more effective communication and improving traffic flow. These are vital hubs for communicating to emergency, incident response, and Maintenance staff on a day-to-day basis, as well as enhancing coordination with WSP. The region used partnerships with the Maintenance Office to bring these regional assets up to present-day standards.

12% of SWR’s LCE funds went towards implementing Field Assessment projects identified between 2014 and 2019. The Field Assessment program encourages partnerships with local agencies. Through this program, SWR staff and their partners successfully identified several very low cost safety improvements for construction projects that benefit the travelling public.

In the 2019–21 biennium, SWR is continuing efforts to actively manage its transportation system to address both recurring and non-recurring congestion. The region’s goal is to limit the duration of congestion, reduce the number of incidents, clear incidents quickly, and prevent secondary crashes. One major step towards these goals is the addition of nine proposed new ramp meters and an I-5 Active Traffic Management (ATM) system in early 2020.
## SOUTHWEST REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
<th>Third Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Cost Actions</td>
<td>$171,786</td>
<td><strong>Low Cost Actions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-205 SB at Exit 30 - Striping Revision</td>
<td>$77,906</td>
<td><strong>Mobility</strong></td>
<td><strong>Pavement Markings</strong></td>
<td></td>
</tr>
<tr>
<td>SR 4 at Cathlamet Road - Speed Reduction/Traffic Calming/Intersection Improvements</td>
<td>$74,235</td>
<td><strong>Multiple</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wavetronix Data Station Replacements</td>
<td>$55,872</td>
<td><strong>Intersection</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 12 at Mary’s Corner - Truck Dilemma Zone Detection</td>
<td>$43,520</td>
<td><strong>Intersection</strong></td>
<td><strong>ITS spending</strong></td>
<td></td>
</tr>
<tr>
<td>4G Modems &amp; Switches - Upgrade from 3G</td>
<td>$41,453</td>
<td><strong>ITS spending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCE Project Design &amp; Support</td>
<td>$38,753</td>
<td><strong>Traffic Studies</strong></td>
<td><strong>Project Design</strong></td>
<td></td>
</tr>
<tr>
<td>SR 500 from 45th Ave to 54th Ave - Data Stations</td>
<td>$35,633</td>
<td><strong>ITS spending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile Cameras for Four Incident Response Trucks</td>
<td>$32,247</td>
<td><strong>ITS spending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMC/EOC Expenditures</td>
<td>$31,235</td>
<td><strong>ITS spending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 503 at Goerig Rd - Intersection Improvements</td>
<td>$25,761</td>
<td><strong>Multiple</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 14 Slow Vehicle Turnout Signing</td>
<td>$25,307</td>
<td><strong>Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A To D Camera Conversion - Digital Capability for 5 Cameras</td>
<td>$24,708</td>
<td><strong>ITS spending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic Studies</td>
<td>$21,157</td>
<td><strong>Traffic Studies</strong></td>
<td><strong>Miscellaneous</strong></td>
<td></td>
</tr>
<tr>
<td>US 101 at Duryea Street - Pedestrian Refuge Island</td>
<td>$19,906</td>
<td><strong>Pedestrian/Bicycle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic Cameras - Eleven New Cameras</td>
<td>$18,585</td>
<td><strong>ITS spending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 105 Tokeland - Crosswalk, Signing, &amp; Flashing Beacon</td>
<td>$17,795</td>
<td><strong>Pedestrian/Bicycle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 101 at SR 6 - Rapid Flashing Beacons for Pedestrians</td>
<td>$17,143</td>
<td><strong>Pedestrian/Bicycle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019 Advanced Traffic Management System Software</td>
<td>$16,504</td>
<td><strong>ITS spending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flashing Yellow Arrow Signal Upgrades</td>
<td>$15,480</td>
<td><strong>Intersection</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 141 at Trout Lake - Channelization, Signing, Speed Limit Revision</td>
<td>$15,202</td>
<td><strong>Intersection</strong></td>
<td></td>
<td><strong>Signs</strong></td>
</tr>
</tbody>
</table>
## SOUTHWEST REGION

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
<th>Third Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-5 NB at Exit 11/SR 502 - Curbing and Channelization</td>
<td>13,361</td>
<td>Intersection</td>
<td>Signs</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>SR 14 Tow Away Zone Signing</td>
<td>13,180</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 12 Pass Closures Signing</td>
<td>12,955</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 14 Underwood Electronic Radar Speed Limit Sign</td>
<td>12,012</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAL/CAC/IAL Development</td>
<td>11,749</td>
<td>Intersection</td>
<td>Project Design</td>
<td></td>
</tr>
<tr>
<td>SR 503 at Gabriel Rd - Solar Powered LED Blinking Signs</td>
<td>11,562</td>
<td>Intersection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 &amp; SR 14 - Vancouver Waterfront Signing</td>
<td>11,221</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-205 Tow Away Zone Signing</td>
<td>9,468</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 4 Wahkiakum County Fairground Signing</td>
<td>9,273</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 505 at Toledo - Pedestrian Bulb Outs, Signing, &amp; Striping</td>
<td>9,195</td>
<td>Pedestrian/Bicycle</td>
<td>Signs</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>Traffic Counting Equipment &amp; Supplies</td>
<td>8,178</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portable Camera Trailer</td>
<td>5,962</td>
<td>ITS spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-5 at Exit 59 - Ramp Channelization</td>
<td>4,291</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWR Ramp Updates for SRView</td>
<td>4,281</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 4 - Linear Delineation Panels on Curves</td>
<td>3,649</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 500 at 99th Street - Right Turn Yield on U-Turn Signs</td>
<td>2,902</td>
<td>Intersection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 503 at McBride Rd - Left Hand Turn Lane Design</td>
<td>2,901</td>
<td>Project Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 14 at Cape Horn - Signing/Delineation Improvements</td>
<td>2,812</td>
<td>Lane Departure</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 14 Tunnels 1-7 - Traffic Control for LIDAR</td>
<td>2,100</td>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWR Curve Data Collection &amp; Analysis</td>
<td>1,562</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-205 NB to SR 14 EB - Zipper Merge Signing</td>
<td>1,366</td>
<td>Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-205 NB On-ramp at Mill Plain - Restripe &amp; Add Sign</td>
<td>1,339</td>
<td>Pavement Markings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Additional LCE funds allowed Eastern Region to accomplish more work in the 2017-19 biennium. However, even with the additional funding, the two largest projects could not have been accomplished without leveraging partnership opportunities:

- ER combined LCE funds with $97,000 in Spokane Tribe mitigation funds to construct the SR 902 at Craig Rd - Compact Roundabout, discussed in the 15-17 LCE report. (Page 52 of that report.)
- ER also combined LCE funds with $200,000 of Regional Administrator Discretionary Funds to install raised channelization on US 2 Hayford Rd To Deer Heights Rd Channelization a location the region has been trying to address for several years.

ER Traffic staff has a long history of using the Practical Solutions process to identify and implement Transportation Systems Management & Operations (TSMO) projects. Many ER projects start from safety investigations or from contact with a constituent. Larger projects involve collaborating with one or more local agency partners. The US 2 Hayford Rd To Deer Heights Rd Channelization project is an excellent example of a successful practical solutions process.

Despite the region’s commitment to the Practical Solutions process, challenges continue in the effort to improve approaches to identifying and delivering transportation projects.

Looking forward to the 2019-21 biennium, ER is pursuing the following initiatives:

- Around 20% of the 2019-21 allocation is set aside to pay for additional raised channelization work on the US 2 Hayford Road to Deer Heights Road Channelization project, to connect with a developer-constructed roundabout.
- Completing work on several routes with curve warning sign upgrades to meet MUTCD implementation dates.
- Q funds will likely be used to cover occasional shortfalls in maintenance funding when ITS equipment fails.

ER is considering using LCE funds to contribute to several regional rumble strip projects.
# EASTERN REGION

## All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
<th>Second Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>US 2 Hayford Rd to Deer Heights Rd Channelization</td>
<td>369,061</td>
<td>Intersection</td>
<td>Project Design</td>
</tr>
<tr>
<td>SR 902 at Craig Rd - Compact Roundabout</td>
<td>194,074</td>
<td>Intersection</td>
<td></td>
</tr>
<tr>
<td>Field Assessment Signing Projects</td>
<td>63,752</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Maintenance Area 1 - Signing</td>
<td>38,654</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Maintenance Area 2 - Signing</td>
<td>37,705</td>
<td>Signs</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>SR 26 &amp; SR 195 - Weather Station &amp; Cameras</td>
<td>37,367</td>
<td>Project Design</td>
<td></td>
</tr>
<tr>
<td>Low Clearance Bridge Signing - Regionwide</td>
<td>29,075</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Eastern Region I-90 Operations Study - Ramp Volumes</td>
<td>23,651</td>
<td>Traffic Studies</td>
<td></td>
</tr>
<tr>
<td>National Operations Center of Excellence (NOCOE) Signal Phase &amp; Timing (SP&amp;T) Challenge</td>
<td>20,277</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>Maintenance Area 3 - Signing</td>
<td>8,462</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 290 at Progress Road - Turn Restriction</td>
<td>8,437</td>
<td>Project Design</td>
<td></td>
</tr>
<tr>
<td>SR 20 at Republic - Crosswalk Revisions</td>
<td>8,203</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>RWIS/VMW Communications Upgrade</td>
<td>6,977</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>Maintenance Area 4 - Signing</td>
<td>6,061</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>SR 20 at Sherman Pass - Curve Warning Signs</td>
<td>5,763</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>US 395 at Colville - CCTV Replacement</td>
<td>5,763</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>SR 272 at MP 1.1 - Curve Signing Updates &amp; Guidepost Installation</td>
<td>3,835</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>US 2 at Garfield Road - Grant Application Preparation</td>
<td>3,003</td>
<td>Project Design</td>
<td></td>
</tr>
<tr>
<td>SR 20 &amp; US 395 - Highway Advisory Radio Flasher</td>
<td>2,954</td>
<td>ITS spending</td>
<td></td>
</tr>
<tr>
<td>CCTV Systems Design</td>
<td>2,219</td>
<td>Project Design</td>
<td></td>
</tr>
</tbody>
</table>
South Central Region (SCR) spent $581,000 on Low Cost Enhancement (LCE) projects in the 2017-19 biennium. The region’s main focus remains traffic safety for those who travel on the highway system. Over the last few years, SCR has also initiated more LCE projects to benefit pedestrian and bicycle users.

To maximize the benefits of the LCE funding, the region works hard to build partnerships and collaborate on projects. SCR’s most important partner from biennium to biennium has been WSDOT’s local Maintenance Offices. The region has also increasingly been working with smaller, local communities to address issues of local concern. LCE funding helps the region leverage local funding contributions to develop and implement projects.

In addition to partnerships and bike/pedestrian projects, SCR continues to focus on signing and ITS projects, which account for just over one third of the region’s 2019-21 LCE funds. The signing efforts typically are single installations to meet an emergent need to address safety or guidance.

ITS deployments continue to help the Transportation System Management and Operations (TSMO) efforts of the region. Unlike most of the regions in Washington, where ITS efforts are urban-centered, SCR’s greatest ITS effort is based in a rural area, the popular I-90 Snoqualmie Pass corridor which allows travelers from Central Washington to access Seattle, and vice-versa.

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 240 in Steptoe - Peak Hour Roundabout Meter</td>
<td>95,103</td>
<td>ITS spending</td>
</tr>
<tr>
<td>SR 240 at Hagen Rd - Truck Signal Priority</td>
<td>41,561</td>
<td>Intersection</td>
</tr>
<tr>
<td>Minor Field Assessment Work - Signs</td>
<td>37,206</td>
<td>Low Cost Actions</td>
</tr>
<tr>
<td>Minor Signing Modifications - Regionwide</td>
<td>33,941</td>
<td>Signs</td>
</tr>
<tr>
<td>US 12 at 16th Ave - Pedestrian Railing Height Increase</td>
<td>30,701</td>
<td>Pedestrian/Bicycle</td>
</tr>
<tr>
<td>Low Cost Actions</td>
<td>30,375</td>
<td>Low Cost Actions</td>
</tr>
<tr>
<td>I-90 at Snoqualmie Pass - Realtime Travel Time Notification Signs</td>
<td>30,000</td>
<td>ITS spending</td>
</tr>
<tr>
<td>I-90 from MP 33 to E Easton Rd - Signing Enhancements</td>
<td>24,814</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 125 in College Place - Rumble Strips</td>
<td>24,063</td>
<td>Intersection</td>
</tr>
<tr>
<td>Clarkston Vicinity - Wireless Communications Tower</td>
<td>22,002</td>
<td>ITS spending</td>
</tr>
<tr>
<td>US 12 at Naches River - Barrier to Protect from River Bank Erosion</td>
<td>21,042</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>I-90 at Vantage Bridge - Lane Delineation</td>
<td>20,355</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>Tricities ITS Communication Upgrade - Radwin Radios</td>
<td>15,035</td>
<td>ITS spending</td>
</tr>
<tr>
<td>Low Cost Enhancement Design</td>
<td>14,365</td>
<td>Project Design</td>
</tr>
<tr>
<td>SR 397 in Ainsworth - Oregon Ave Island Removal</td>
<td>13,904</td>
<td>Intersection</td>
</tr>
</tbody>
</table>
## SOUTH CENTRAL REGION
### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR128 and SR 193 Intersection - Illumination</td>
<td>13,425</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>SR 225 in Benton City - School Warning Sign</td>
<td>13,185</td>
<td>Signs</td>
</tr>
<tr>
<td>I-90 - Portable Workzone System Modifications</td>
<td>10,537</td>
<td>ITS spending</td>
</tr>
<tr>
<td>I-82 in Manastash - Slow Vehicle Warning Sign</td>
<td>10,036</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 125 at College Place - College Place City Center Signs</td>
<td>9,793</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 903 in Ronald - &quot;Your Speed Is&quot; Sign</td>
<td>9,198</td>
<td>ITS spending</td>
</tr>
<tr>
<td>US 395 in Hildebrandt - &quot;Be Prepared To Stop When Flashing&quot; Sign</td>
<td>8,835</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>US 12 at 16th Ave Overpass - Green Pedestrian Path</td>
<td>7,934</td>
<td>Pedestrian/Bicycle</td>
</tr>
<tr>
<td>Project Design</td>
<td>6,518</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>TMC Software Upgrades</td>
<td>6,324</td>
<td>ITS spending</td>
</tr>
<tr>
<td>US 12 near Cortwright Creek - Passing Lane Conversion</td>
<td>5,966</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>US 12 in Pomeroy - &quot;Your Speed Is&quot; Sign</td>
<td>5,818</td>
<td>ITS spending</td>
</tr>
<tr>
<td>SR 22 in Toppenish - Rectangular Rapid Flashing Beacons</td>
<td>5,608</td>
<td>ITS spending</td>
</tr>
<tr>
<td>I-82 from Military Rd to Valley Mall Blvd - Signing Enhancements</td>
<td>4,969</td>
<td>Signs</td>
</tr>
<tr>
<td>I-90 in Cle Elum - &quot;Your Speed Is&quot; Sign</td>
<td>3,304</td>
<td>ITS spending</td>
</tr>
<tr>
<td>Union Gap Main St to US 97/I-82 Interchange - Route Shields</td>
<td>3,245</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>SR 240 from Twin Bridges To Jadwin - Speed Study</td>
<td>1,825</td>
<td>Traffic Studies</td>
</tr>
<tr>
<td>SR 240 at Van Giesen Rd. - Converted Add Lane Illumination to LED</td>
<td>1,550</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>US 97 from I-90 to Burke Rd - Signing Enhancements</td>
<td>1,544</td>
<td>Signs</td>
</tr>
<tr>
<td>SR 10 from SR 970 to SR 97 - Signing Enhancements</td>
<td>1,245</td>
<td>Signs</td>
</tr>
<tr>
<td>US 395 in Eltopia - Rumble Strips Modification</td>
<td>1,128</td>
<td>Intersection</td>
</tr>
<tr>
<td>Portable &quot;Your Speed Is&quot; Sign</td>
<td>415</td>
<td>ITS spending</td>
</tr>
<tr>
<td>I-90 at Easton Hill - Signing Enhancements</td>
<td>232</td>
<td>Signs</td>
</tr>
<tr>
<td>TMC/ITS Communications &amp; Signal Ops</td>
<td>95</td>
<td>Miscellaneous</td>
</tr>
</tbody>
</table>
## HEADQUARTERS

### All 2017–2019 Low Cost Enhancement Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>First Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victim Memorial Signs</td>
<td>13,100</td>
<td>Signs</td>
</tr>
<tr>
<td>Memorial Sign Overage Charges</td>
<td>5,949</td>
<td>Signs</td>
</tr>
<tr>
<td>State Work Force</td>
<td>1,644</td>
<td>Project Design</td>
</tr>
</tbody>
</table>