

**TABLE 1
PROJECT DESCRIPTIONS**

Ref. #	Project Title	Project Description	Priority	Project Participants	Estimated Cost/Annual O&M Budget	Expected Benefits	Integration with Other Projects
PM-1	Program Management and System Evaluation	Management and system evaluation of the VAST program. This work will be performed by local agency staff and project consultants. ^A	H/M/L	All public agencies in Vancouver Urbanized area	\$2,000,000	<ul style="list-style-type: none"> Efficient management of program Improved schedule adherence for project deployment and tracking of funding 	This project will be a part of every project in the program.
Traveler Information							
TI-1	Portland-Vancouver Metropolitan Area ATIS Business Plan	Develop joint ATIS plan for the region in conjunction with plan being initiated by ODOT. ^A	H	All public agencies within Clark County, WA & Portland Metro. Area	\$100,000/ \$15,000	<ul style="list-style-type: none"> Uniform deployment of traveler information for the region Reduction in cost vs. developing a separate plan for Clark County Promotes interjurisdictional cooperation 	<ul style="list-style-type: none"> ATIS Initial Investment
TI-2	ATIS Initial Investment	This project will provide the funding required to start the initial deployment of a Traveler Information System. It is anticipated that funding will be needed throughout the first two phases of this project.	H/M	All public agencies within Clark County, WA and the Portland Metro. Area	\$2,000,000/ \$10,000	<ul style="list-style-type: none"> Overall reduction in cost for traveler information by developing private agency partnerships. Deployment of traveler information to region 	<ul style="list-style-type: none"> Portland-Vancouver Metro Area ATIS Business Plan Regional Web Site
TI-3	Develop Regional Web Site	Expand VAST web site to support real-time video and data.	H	Cities of Camas & Vancouver, C-TRAN, Clark County, RTC, WSDOT	\$300,000/ \$30,000	<ul style="list-style-type: none"> Will provide roadway information to travelers in the region 	<ul style="list-style-type: none"> CCTV Deployment for Freeways, CCTV Deployment for Local Arterials Freeway & Arterial Detector Station Project, Probe Vehicle System Interagency Traffic Signal Communication Project, Bus Locating System
TI-4	Traveler Information for Fire, Police, and 911	Design cost effective means of providing video and congestion data to Fire, Police and 911.	H	WSDOT, Fire Dept., 911, WSP, Police Dept.	\$114,000/ \$10,000	<ul style="list-style-type: none"> Improved response time to incidents Reduced congestion because incidents can be cleared more quickly 	<ul style="list-style-type: none"> Regional Web Site

Deleted:

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Transit Priority							
TP-1	Deployment of Priority Equipment on Buses	Deployment of priority emitters on all C-TRAN buses.	H	C-TRAN	\$100,000/ \$10,000	<ul style="list-style-type: none"> Improved schedule adherence for buses Reduction in bus travel time Promotes interjurisdictional cooperation between C-TRAN and the local agencies 	<ul style="list-style-type: none"> Priority Detector Upgrade Project Controller upgrade Project
TP-2	Priority Detector Upgrade	Install controller software and install/upgrade Opticom emitters along select bus priority routes. <ul style="list-style-type: none"> Mill Plain, Fourth Plain Highway 99, NE 78th Street, 164th Avenue and Andresen NE 134th Street, St., 112th Avenue, St. Johns, SR-503, Padden Expressway 	H M L	C-TRAN, Cities of Camas & Vancouver, WSDOT, Clark County	\$350,000/ \$30,000	<ul style="list-style-type: none"> Improved schedule adherence for buses Reduction in travel time Promotes interjurisdictional cooperation between C-TRAN and the local agencies 	<ul style="list-style-type: none"> Deployment of Priority Equipment on Buses Controller Upgrade Project
Transit Operation and Management							
TO-1	Bus Locating System	Install AVL equipment on buses and software at the transit control center.	H	C-TRAN	\$750,000/ \$50,000	<ul style="list-style-type: none"> Improved efficiency of bus routes Increased ridership 	<ul style="list-style-type: none"> Automatic Passenger Counter Real Time Arrival and Departure Information Paratransit and Dispatch Data Exchange System Fleet Maintenance Management System
TO-2	Automatic Passenger Counter	Deploy automated passenger counters on all buses in the C-TRAN fleet.	L	C-TRAN	\$90,000/ \$10,000	<ul style="list-style-type: none"> Improved efficiency of bus routes 	<ul style="list-style-type: none"> Bus Locating System Fleet Maintenance Management System
TO-3	Real-Time Arrival and Departure Information	Provide real-time arrival and departure times for each bus route on message boards at major bus transfer points, at Park-and-Rides, on Freeway CMS displays and on-line.	M	C-TRAN	\$600,000/ \$100,000	<ul style="list-style-type: none"> Increased ridership 	<ul style="list-style-type: none"> Bus Locating System Regional Web Site Fleet Maintenance Management System
TO-4	Paratransit and Dispatch Data Exchange System	Install CAD system for C-Van paratransit system.	M	C-TRAN	\$105,000/ \$15,000	<ul style="list-style-type: none"> Efficient use of vans Increased use of demand response service 	<ul style="list-style-type: none"> Bus Locating System Fleet Maintenance Management System

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TO-5	Fleet Maintenance Management System	Install computer network and vehicle sensors in order to track vehicle status and maintenance. ^B	H	C-TRAN	\$900,000/ \$25,000	<ul style="list-style-type: none"> Improved efficiency of maintenance operations Reduction in vehicle breakdowns Provides the interface and data capability for deploying future transit management systems including AVL, Signal Prioritization and Traffic Probes. 	<ul style="list-style-type: none"> Bus Locating System Automatic Passenger Counter Real Time Arrival and Departure Information Paratransit and Dispatch Data Exchange System Automated Fare Collection System
TO-6	Automated Fare Collection System	Install smart card validators on high-demand vehicles and pass management system. In second phase, install validators on remaining vehicles and deploy smart fare boxes.	L	C-TRAN	\$1,620,000/ \$60,000	<ul style="list-style-type: none"> Reduced delays Reduced cash handling expenses Improved revenue management 	<ul style="list-style-type: none"> Bus Locating System Fleet Maintenance Management System
Freeway and Arterial Incident Management							
IM-1	CCTV Camera Deployment for Freeways	Provide complete coverage of the freeways in the region. <ul style="list-style-type: none"> I-5 - I-205 to bridge, I-205 - SR-500 to bridge and SR-500 at Andresen^A SR-14 and SR-500 – I-5 to I-205 and I-205 – SR-500 to I-5 SR-14: I-205 to Camas 	H M L	Cities of Camas & Vancouver, WSDOT, Clark County	\$2,300,000/ \$100,000	<ul style="list-style-type: none"> Improved management of incidents, therefore reducing delay on freeways Increase in information available to travelers through web site 	<ul style="list-style-type: none"> Regional TMC Construction
IM-2	CCTV Camera Deployment for Local Arterials	Provide coverage of highly congested local arterials and key intersections. <ul style="list-style-type: none"> Mill Plain, Fourth Plain, 164th and Burton Road NE 134th Street, Andresen, SR-503, 164th, Padden Expressway, Burton Road, 192nd Avenue NE, Highway 99 and Downtown Vancouver 112th Avenue NE, NE 78th Street, SR-503, SR-502 and other misc. locations 	H M L	Cities of Camas & Vancouver, WSDOT, Clark County	\$1,600,000/ \$80,000	<ul style="list-style-type: none"> Improved Management of incidents, therefore reducing delay on arterials Increase in information available to travelers through web site Improved signal timing, therefore reducing delay 	<ul style="list-style-type: none"> Regional TMC Construction

^B This project has been funded through the VAST CMAQ funded project.

^A This phase is partially funded through the VAST CMAQ funded project and through other projects outside of the VAST program.

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Ref. #	Project Title	Project Description	Priority	Project Participants	Estimated Cost/Annual O&M Budget	Expected Benefits	Integration with Other Projects
IM-3	Freeway and Arterial Detector Station Deployment	Install detector stations every 0.5 miles along the freeways to collect volume, speed and occupancy data. <ul style="list-style-type: none"> I-5 and I-205 from their interchange to Columbia River, Mill Plain, 164th Ave. and Burton Road ^A SR-500 and SR-14 from I-5 to I-205, 192nd, Andresen and Fourth Plain SR-503, SR-502, Andresen, SR-14 east of I-205, 78th Street, Main Street and other misc. locations 	H M L	WSDOT, Cities of Camas and Vancouver, Clark County	\$1,700,000/ \$80,000	<ul style="list-style-type: none"> Ability to detect incidents Increase in information available to travelers through web site Availability of additional freeway volume, speed and occupancy 	<ul style="list-style-type: none"> Regional TMC Construction Data Warehouse Freeway Operation System
IM-4	Incident Response Vehicles	Deploy two additional incident response vehicles for the Vancouver area.	H	WSDOT	\$80,000/ \$120,000	<ul style="list-style-type: none"> Reduction in congestion due to incidents Improved safety 	
IM-5	Variable Message Sign Deployment	Deploy VMSs on local freeways in region. <ul style="list-style-type: none"> 7 VMSs primarily located on I-5 SB and NB and I-205 ^A 7 VMSs covering remaining locations on I-205 and certain locations on SR-500 and SR-14 5 VMSs covering remaining locations throughout region 	H M L	City of Vancouver, WSDOT, Clark County	\$3,800,000/ \$60,000	<ul style="list-style-type: none"> Provide incident and event information to motorists Reduce congestion near incidents by allowing drivers to choose alternate routes 	<ul style="list-style-type: none"> Freeway Operation System
IM-6	Highway Advisory Radio Deployment Project	Deploy HAR transmitters at major interchanges/decision points throughout the region <ul style="list-style-type: none"> I-5/I-205 and I-5/SR-14 I-205/SR-14 	H M	WSDOT	\$230,000/ \$5,000	<ul style="list-style-type: none"> Provide incident and event information to motorists Reduce congestion near incidents by allowing drivers to choose alternate routes Low cost means of disseminating information 	<ul style="list-style-type: none"> Freeway Operation System

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Freeway and Arterial Operations and Management							
OM-1	Freeway Operation System	This project would deploy a Freeway Operation System for managing the various ITS technologies deployed throughout WSDOT's freeway system in SW Washington. ^A	H	WSDOT	\$500,000/ \$60,000	<ul style="list-style-type: none"> Improved management of freeway devices Decrease in congestion due to more efficient management of freeways 	<ul style="list-style-type: none"> Regional TMC Construction CCTV Camera Deployment for Freeways Variable Message Sign Deployment Project Ramp Meter Deployment Project Freeway & Arterial Detector Station Deployment Highway Advisory Radio Deployment Project
OM-2	Regional TMC Construction	This project would build a traffic management center in WSDOT's new facility. It will include multiple workstations and video monitors for managing the area's traffic. ^A	H	Cities of Vancouver & Camas, WSDOT, Clark County, WSP	\$500,000/ \$400,000	<ul style="list-style-type: none"> Improved management of freeway devices 	<ul style="list-style-type: none"> Supports multiple projects in the VAST program
OM-3	Operations and Maintenance Plan	An operation and maintenance plan will be developed to dictate what procedures must be followed by each agency for operating and maintaining the system.	H	C-TRAN, Cities of Vancouver & Camas, Clark County, WSDOT and RTC	\$60,000/ \$4,000	<ul style="list-style-type: none"> Promotes interagency cooperation Assures proper operation and maintenance of field equipment 	
OM-4	Ramp Meter Deployment Project	Deploy ramp meters on designated ramps in the region. <ul style="list-style-type: none"> I-5 SB from I-205 to Mill Plain and NB from Mill Plain to SR-500. I-205 SB at SR-500 and Mill Plain Remaining ramps on I-5 and I-205 between bridges and their interchange. SR-15 WB between I-5 and I-205 SR-500 – I-5 to 112th Ave and remaining ramps on SR-14 between I-5 and Camas 	H M L	WSDOT	\$1,800,000/ \$90,000	<ul style="list-style-type: none"> Decreased freeway congestion Reduce accidents near freeway on-ramps 	<ul style="list-style-type: none"> Regional TMC Construction Freeway & Arterial Detector Station Deployment Freeway Operation System

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OM-5	Ramp Meter Coordination Project	This project would develop software to coordinate ramp meters with local traffic signals at select high volume ramp locations.	L	Cities of Camas & Vancouver, Clark County, WSDOT	\$400,000/ \$10,000	<ul style="list-style-type: none"> • Reduced congestion on local arterials near freeway on-ramps • Improve safety of traffic signals near freeway on-ramps 	<ul style="list-style-type: none"> • Freeway Operation System • Clark County Traffic Signal System • WSDOT Traffic Signal System • Vancouver Traffic Signal System (existing) • Ramp Metering Deployment Project
OM-6	Probe Vehicle System	Deploy probe vehicle detectors on select freeway and arterial corridors in the region. <ul style="list-style-type: none"> • Fourth Plain and Mill Plain • I-5, I-205, SR-14 and SR-500 	M L	Cities of Camas & Vancouver, C-TRAN, WSDOT, Clark County	\$700,000/ \$50,000	<ul style="list-style-type: none"> • Provide congestion information for local arterials • Reduce congestion on high use arterials or freeways 	<ul style="list-style-type: none"> • Regional Web Site • Freeway Operation System
OM-7	Data Warehouse	Deploy data collection system at RTC for storing all traffic-related data for the region.	H	Cities of Camas & Vancouver, WSDOT, C-TRAN, Clark County, RTC	\$350,000/ \$40,000	<ul style="list-style-type: none"> • Reduce cost of collecting data • Improve resources for performing traffic studies that require roadway data 	<ul style="list-style-type: none"> • Clark County Traffic Signal System • Freeway Operation System • Vancouver Traffic Signal System (Existing) • WSDOT Traffic Signal System
OM-8	Advanced Parking Management System	Deploy system for monitoring the availability of parking at various locations: <ul style="list-style-type: none"> • Salmon Creek and Fishers Landing Park and Rides and Vancouver Center • Camas/Washougal, 99th and Evergreen Park and Rides, and Clark County Fairgrounds. 	M L	Cities of Camas & Vancouver, WSDOT, C-TRAN, Clark County	\$1,150,000/ \$60,000	<ul style="list-style-type: none"> • Reduce congestion near parking lots • Reduce driver frustration when looking for parking 	
OM-9	Advanced Vehicle Control Initiative	This project will help support private agencies in the deployment of advanced vehicle control equipment in the region.	L	All public agencies in Vancouver Urban area	\$2,000,000/ \$60,000	<ul style="list-style-type: none"> • Reduce congestion • Improve driver safety • Increase traffic and travel information available to motorists 	

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Traffic Signal Integration							
TS-1	Controller Upgrade Project	Upgrade/replace traffic signal controllers as needed to interconnect them with the local signal system <ul style="list-style-type: none"> Main Street, Mill Plain, Fourth Plain, 164th, and City of Camas major intersections^A Andresen Road^C Downtown Vancouver, 192nd, 112th and SR-500 Highway 99, 78th, 99th, 134th, Hazel Dell and misc. other locations 	H M L	Cities of Camas & Vancouver, WSDOT, Clark County	\$1,600,000/No Change	<ul style="list-style-type: none"> More advanced operation and flexibility 	<ul style="list-style-type: none"> Clark County Traffic Signal System Adaptive Signal Timing Project Vancouver Traffic Signal System (Existing) WSDOT Traffic Signal System Priority Detector Upgrade
TS-2	Integration of Traffic Signals	<ul style="list-style-type: none"> Integrate Vancouver, Clark County, and WSDOT traffic signals.^A Integrate Camas traffic signals with WSDOT signal system. A remote workstation for the WSDOT signal system will be provided to Camas. 	H M	Cities of Camas & Vancouver, WSDOT, Clark County	\$350,000/ No Change	<ul style="list-style-type: none"> Provides a cost efficient means for making changes to local controllers Improves operation of traffic signals 	<ul style="list-style-type: none"> Interagency Traffic Signal Communication Project Controller Upgrade Project WSDOT Traffic Signal System
TS-3	Clark County Traffic Signal System	Replacement or upgrade of existing traffic signal system. New system should work with all types of controllers installed on County roadways.	M	Clark County	\$200,000/ No Change	<ul style="list-style-type: none"> Provides a cost efficient means for making changes to local controllers Improves operation of traffic signals 	<ul style="list-style-type: none"> Interagency Traffic Signal Communication Project Controller Upgrade Project
TS-4	WSDOT Traffic Signal System	Replace current Trafview software with program that will work with latest version of Wapiti controller software and will provide them with more advanced features.	H	WSDOT	\$200,000/ No Change	<ul style="list-style-type: none"> Provides a cost efficient means for making changes to local controllers Improves operation of traffic signals 	<ul style="list-style-type: none"> Interagency Traffic Signal Communication Project Controller Upgrade Project
TS-5	Interagency Traffic Signal Communications Project and Software Integration	Create center-to-center communication system for sharing regional traffic data. The project also covers other miscellaneous software integration that will be needed in the region.	H/M/L	Cities of Camas & Vancouver, WSDOT, Clark County	\$2,500,000/ \$200,000	<ul style="list-style-type: none"> Improves operation of traffic signals near agency boundaries Increase efficiency of traffic management 	<ul style="list-style-type: none"> Clark County Traffic Signal System WSDOT Traffic Signal System Freeway Operation System Regional Web Site

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TS-6	Adaptive Signal Timing Project	<p>Deploy adaptive signal timing on select signalized corridors in the region with the highest levels of congestion and the most fluctuation in volumes.</p> <ul style="list-style-type: none"> Mill Plain from SE 104th to Hearthwood^C, Mill Plain and Fourth Plain west of I-5, 164th, Andresen, Fourth Plain east of I-5^A. 192nd Avenue NE and Burton Rd 	H M	WSDOT, City of Vancouver	\$700,000/ \$25,000	<ul style="list-style-type: none"> Improves efficiency of signalized corridor 	<ul style="list-style-type: none"> WSDOT Traffic Signal System Interagency Traffic Signal Communication Project
Communications							
CO-1	Communication Deployment	<p>This project will provide communications (fiber optics, twisted wire pair, microwave or other) to each TMC and ITS field device in the region.</p> <ul style="list-style-type: none"> Communications to Phase 1 equipment and the following agencies: Clark County, City of Vancouver, WSDOT and 911^A Communications to all Phase 2 field equipment and City of Camas Communications to all field equipment in Phase 3 	H M L	Cities of Vancouver & Camas, Clark County, WSDOT, C-TRAN, RTC	\$14,000,000/ \$250,000	<ul style="list-style-type: none"> The devices that require the communications will show the benefits. 	<ul style="list-style-type: none"> Communications is a part of almost every project in the VAST program

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