

ATMS Program Status Report

Oregon Department of Transportation — Region 1

(January 1- March 31, 2000)

Trans>Port — Regional

The TransPort 2000 projects were submitted and have received earmark Federal ITS funding for FY 2000. The RFP for these projects is currently being developed with this federal ITS funding along with local agency matching funds. We are also submitting an application for FY2001 federal ITS funding for the balance of the TransPort 2000 projects.

An agreement between Tri-Met, The City of Portland, and ODOT to share fiber in the metropolitan area is in the process of gathering the final signatures. Planning and implementation of this shared use is continuing and has resulted in a shared cost project between the City of Portland and Tri-Met to install fiber from the Portland Building to Tri-Met bus dispatch center and to the 911 center on Powell Boulevard. This will be completed next quarter and will link ODOT, Tri-Met, PDOT and 911 together. ODOT is already using this fiber to transmit CCTV from the Ross Island Bridge for use during construction. ODOT has installed a firewall to allow these agencies to connect to our network and use the ATMS software from their Traffic Management Centers. This will allow them to view the status of the freeways and incidents real time and is the first step in integrating their systems into ours.

ODOT Infrastructure

Fiber - The fiber and camera installations along I-84 have started construction and will be completed in May. This project will extend from I-5 to just past I-205. We have completed the macro level design for the rest of the metro area fiber and CCTV network. The design work for the next project has begun with the project being bid in May. This project will install fiber and cameras on I-5 from Carmen Drive south to the Willamette River. We will also be adding cameras on I-205 north of I-84 using fiber previously installed.

Ramp Meters - The two most recent ramp meter projects have completed construction of 26 meters. All but one has been turned on. This will be completed next month. The next ramp meter project is being designed with a bid date in August.

Variable Message Signs — The two new signs on I-205 have completed construction and are being tested. The next two variable message signs will be separated into two projects due to concerns about cantilever sign supports.

One will be constructed in FY2000 (I-5 SB @ Iowa) with a different sign support and one with a new cantilever design in FY2001 (I-84 EB @ 43rd). We are also contracting the construction of two variable message signs for the City of Portland to be used on ODOT's off-ramps top the Rose Quarter. These will be used to direct event goers to shuttle parking lots.

TMOC Operations

Staffing/operating hours - The TMOC currently operates 24 hours a day seven days a week. We have staffing of eight operators with one additional part time.

Equipment - Dispatching is conducted using an 800 MHz radio net as the primary incident response communications system. Each console is also equipped with a high-band and low-band radio system for interagency and state police communication, with back up radios for each console, which are additionally used to monitor local counties. Operators use a uniquely designed computer aided dispatching (CAD) program to log and process incoming calls and to track incidents, personnel, and equipment. From these workstations operators also control the variable message signs and the CCTV cameras.

Operators transmit information on a mass scale from their computer workstations using radios, phones, and paging software. The paging system sends selected messages to preprogrammed groups of alphanumeric pagers. We have changed to a new paging company to speed up the page notification.

Ramp meters - There are currently approximately 90 ramp meters in operation in the Metro area. They are programmed individually to turn on during peak periods with preplanned rates. We have connected the ramp meters directly to the TMOC. The TMOC system software will incorporate manual and automatic ramp meter control.

Variable Message Signs - There are 11 VMS signs in operation with two additional currently being tested. They are operated from the TMOC and are used for incidents, construction and maintenance activities, and for special events with heavy traffic impact. For incidents, operators are trained to create and edit individual messages to fit the fluid situation. For planned construction, maintenance, and special event activities, there is a set procedure for developing prearranged messages and coordinating with field personnel. We have also coordinated the use of portable VMS for major events in the Rose Quarter area to reduce impacts to the freeway system.

Closed Circuit TV Cameras - ODOT now has 40 cameras using fiber optic cable on the I-5/I-405 loop, I5 South, ORE 217, I-84 at I-205, and I-5 north including the Interstate Bridge. We also have access and control of the City of Portland's seven cameras. We have agreements with four Portland area TV stations (2,6,8 and 12) to exchange video signal for their cameras, many of which are located and focused on our freeway system (adds 14 cameras).

System Hardware & Software - The Georgia Department of Transportation (GDOT) has provided the Advanced Traffic Management System (ATMS) source code to ODOT. ODOT has contracted with NET (National Engineering Technologies) to port and integrate the GDOT ATMS software to run as the Trans>Port ATMS system in Portland. ODOT has acceptance testing has been completed and ODOT has accepted the system. We will be making minor user interface enhancements next quarter and have begun 6 months of post acceptance phone support.

We have developed the Phase 2 enhancement tasks and are finalizing the RFP to be advertised in April. Major tasks will include: Integrating SWARM (System Wide Area Ramp Metering); Integrating COMET AVL onto the same ATMS base map; Integrating the paging capability into the ATMS software; User interface improvements as well as others.

Incident Response (COMET)

Staffing/operating hours - The COMET patrols currently operate 24 hours a day five days a week and 8 hours a day the other two days. We have staffing of 10 Responders.

Equipment/Vehicles - COMET has seven specially equipped incident response vehicles. Each truck has a mounted Variable Message Sign, emergency lights and siren, padded bumper, motorist assistance gear, in-cab flare dispenser, and an extensive communications package. A Jeep Cherokee is used for on-scene incident command.

We have equipped all the vehicles with AVL (Automatic Vehicle Location) technology that will allow the TMOC to track the vehicles and log data on exact location of activities in the field. This will lead to quicker identification of incident locations and provide data that will help improve efficient use of limited COMET resources throughout our urban freeway system.

Summary of Activities
(The statistics are monthly averages for the quarter)

Activities By Type	October - December	
Motorist Assistance	880	52%
Accidents and Traffic Control	221	13%
Debris Removal	212	13%
Abandoned Vehicle Tag & Tow	240	14%
Construction & Maintenance Activities	1	0%
Other	124	7%
Total	1678	

Activities By Freeway	Total Activities	Activities/mile	Accidents	Accidents/mile
I-5 (25.5 miles)	477 28%	18.7	54	2.12
I-205 (26.6 miles)	320 19%	12.0	28	1.05
I-84 (17.8 miles)	315 19%	17.7	33	1.85
US26 (10.3 miles)	132 8%	12.8	41	3.98
I-405 (4.2 miles)	90 5%	21.4	15	3.57
ORE217 (7.4 miles)	66 4%	8.9	8	1.08
Non Freeway (N/A)	280 17%	N/A	41	N/A

Duration of Activities (Total time from detection to completion as a percentage of all activities)

0 to 5 minutes	30%
0 to 15 minutes	53%
0 to 30 minutes	72%
0 to 1 hour	88%
0 to 2 hours	96%
Percentage of all activities involving tractor/trailer	4.0%
Percentage of accidents involving tractor/trailer	7.7%