Washington State Department of Transportation

Memorandum

DATE: June 4, 2015

TO: Pasco Bakotich III, P.E.
State Design Engineer
MS-47330

FROM: Ted Bailey, P.E. TJB
Traffic Operations Business Manager
(360)705-7286
MS-47344

SUBJECT: **Amendment #2: WSDOT Certification – Equipment and Associated Software for Traffic Control; Monitoring and Information Systems; and Intelligent Transportation Systems**

- **Extent of Certification:** Statewide
- **Approval Period:** May 28, 2013 – June 30, 2016

CERTIFICATION STATEMENT: ***"I Pasco Bakotich, State Design Engineer, of the Washington State Department of Transportation, do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), that the patented or proprietary items listed in Appendices A, B & C are either essential for synchronization with existing highway facilities based on product function and logistics or no equally suitable alternative exists."***

Pasco Bakotich 6/5/15

Signature **Date**

The purpose of this memorandum is to extend the approval period expiration date from June 30, 2015 to June 30, 2016. This extension will provide additional time for subject matter experts to review and verify the categories of equipment and corresponding manufacturers listed in Appendices A, B & C that are part of the current approval prior to processing a new WSDOT certification with similar purpose, scope and supporting justification.

For additional information please contact Ted Bailey, Traffic Operations Business Manager, 360-705-7286 or baileyte@wsdot.wa.gov.

TJB/tjb
cc w/attach:

Don Petersen, FHWA
Terry Berends, NCR Maintenance Engineer-Traffic
Mark Leth, NWR ARA-Operations
Steve Kim, OR Traffic Engineer
Chad Hancock, Asst. Maint. & Operations Engineer
Brian Walsh, State Traffic Design & Operations Mgr.
Harold White, ER Maintenance Engineer-Traffic
Jim Mahugh, SCR Traffic Project Engineer
Ed Barry, Professional Design Services Engineer
Greg Lippincott, ASDE
Scott Zeller, ASDE
Region Project Development Engineers

Washington State Department of Transportation

Memorandum

DATE: December 15, 2012

TO: Pasco Bakotich
State Design Engineer
MS-47330

FROM: Ted Bailey
Signal, Illumination and ITS Engineer
(360)705-7286
MS-47344

SUBJECT: **WSDOT Certification – Equipment and Associated Software for Traffic Control; Monitoring and Information Systems; and Intelligent Transportation Systems**

- **Extent of Certification:** Statewide
- **Approval Period:** January 1, 2013 – June 30, 2015

CERTIFICATION STATEMENT: ***"I Pasco Bakotich, State Design Engineer, of the Washington State Department of Transportation, do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), that the patented or proprietary items listed in Appendices A, B & C are either essential for synchronization with existing highway facilities based on product function and logistics or no equally suitable alternative exists."***

Signature 12/19/12 **Date**

SUPPORTING DOCUMENTATION:

The purpose of this certification is to continue a process that was established in February of 2008 when WSDOT and FHWA jointly approved a statewide pre-approved list of proprietary equipment and associated software for traffic control; monitoring and information systems; or other intelligent transportation system (ITS) components. Consistent with the previous approvals, this list of items is primarily comprised of specialized electrical and electronic equipment or structural components that are an integral part of this equipment. If, during the approval period, the need to revise or append the list outlined in Appendices A, B and C, becomes apparent, a new certification shall be processed. ***(Note: Appendices B and C contain the same information as Appendix A and are included for cross referencing purposes only.)***

This Statewide Blanket Proprietary Approval grants each Region approval for one (1) manufacturer for each category of equipment. Appendix A contains a complete list of all categories of equipment with a list of manufactures that produce equipment for each category. If the Region has an "X" associated

with a specific manufacturer, then approval is granted to specify any product from that specific manufacturer for the given category of equipment.

Designers are required to place project specific justification in the Design Documentation Package indicating the need to use the selected proprietary item(s). The project file justification will require the specific manufacturer(s), model number(s) if available, and timely justifications that are most relevant at the time the proprietary item is selected during the design process. A brief statement describing the thought process leading up to the selection of the proprietary material shall be provided to document the decision making process. A copy of this justification shall be sent to Ted Bailey, Traffic Operations Division, 310 Maple Park Avenue SE, PO Box 47344, Olympia, WA 98501 (MS#47344), baileyte@wsdot.wa.gov, (360)705-7286.

The long range vision of this Statewide Blanket Approval is that all included equipment and software would be evaluated to determine if a comparable and acceptable alternative could be successfully procured through performance specifications. Currently, national standards, such as NTCIP, are still not complete enough to ensure successful system operation for all types of ITS systems. In addition, the regions have made significant investment in their respective ITS, electrical and electronic systems where procurement through performance specifications would be impractical due to system integration issues. WSDOTs experience has shown for critical electronic components and software it is best to test the operation of a specific manufactures product and then, if successful, specify that product for similar applications in the future until a comparable alternative becomes available that is capable of integrating with legacy equipment and software.

Ultimately, competitive bidding for software and equipment based on performance specifications provides the maximum benefit to the public. However, near term, due to the significant cost, effort, and expertise required to develop and maintain cost effective and timely performance specifications that would encompass the items listed in Appendix A, it is infeasible to pursue the performance specification approach without sacrificing function and/or logistics. WSDOT has discovered that even identifying a specific manufacturer and model number for each piece of software or equipment is challenging due to the synchronization and operational needs of WSDOT systems. There are adjoining jurisdictional differences, geographical differences, differences in the availability of the technology in each region, issues with the compatibility of equipment and software between similarly functioning systems from different manufacturers, mergers and acquisitions of existing manufacturers, and so on.

All of the items listed in **Appendix A** are essential for **one or more** of the following justifications:

1) **Synchronization based on function**
2) **Synchronization based on logistics**
3) **No equally suitable alternative exists**

In the near term, WSDOT intends to standardize on the minimum number of software packages and equipment manufactures possible to accomplish its mission. Through research and experience, WSDOT has made a **significant investment in selecting software and equipment that synchronizes with existing equipment in a way that is necessary for the satisfactory operation existing facilities.** Logistically, the continued streamlining of an already **significant investment in equipment parts in inventory, training, maintenance, operational familiarity and software licensing**

Washington State Department of Transportation

Memorandum

DATE: May 28, 2013

TO: Pasco Bakotich
State Design Engineer
MS-47330

FROM: Ted Bailey TJB
Signal, Illumination and ITS Engineer
(360)705-7286
MS-47344

SUBJECT: **Amendment #1: WSDOT Certification – Equipment and Associated Software for Traffic Control; Monitoring and Information Systems; and Intelligent Transportation Systems**

- **Extent of Certification:** Statewide
- **Approval Period:** May 28, 2013 – June 30, 2015

CERTIFICATION STATEMENT: ***"I Pasco Bakotich, State Design Engineer, of the Washington State Department of Transportation, do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), that the patented or proprietary items listed in Appendices A, B & C are either essential for synchronization with existing highway facilities based on product function and logistics or no equally suitable alternative exists."***

Pasco Bakotich 5/28/13
Signature **Date**

SUPPORTING DOCUMENTATION:

The purpose of this memorandum is to amend portions of the proprietary items listed in Appendices A, B & C from the original **"WSDOT Certification – Equipment and Associated Software for Traffic Control; Monitoring and Information Systems; and Intelligent Transportation Systems"** approved on December 19, 2012. The justification for this amendment is included in the systems engineering documentation for the I-5, SR 510 to SR 513 - Congestion Management project, XL4242.

The attached Appendices (A, B and C) show which categories and equipment manufacturers have been impacted by this amendment. ***(Note: Appendices B and C contain the same information as Appendix A and are included for cross referencing purposes only.)*** All other conditions and requirements that are established in the supporting documentation section of the **December 15, 2012, "WSDOT Certification – Equipment and Associated Software for Traffic Control; Monitoring and Information Systems; and Intelligent Transportation Systems"** remain unchanged.

expenditures represents an effective use of state and federal resources. In other cases, no equally suitable alternative exists.

The statewide blanket approval for the items listed in Appendix A will allow each region to select the most appropriate piece of software or equipment necessary to fulfill the WSDOT mission. As described previously, designers will be required to place justification in the project design file for the use of the selected proprietary item(s).

WSDOT plans on continually evaluating the needs of our systems and selecting equipment that best meets those needs. As new products become available that would impact the statements and conclusions outlined above for a justifiable reason, WSDOT will revise or append Appendices A, B and C and process subsequent approvals as appropriate.

It should be noted that "Buy America" requirements are not covered or accounted for in this approval due to the broad scope nature of the proprietary equipment and categories. It is the responsibility of the Project Engineer or Project Manager to ensure that DOT Form 350-109 EF, Certificate of Materials Origin, is completed for all equipment being specified in the contract. Since WSDOT, as an agency, receives Federal Aid, this form is a requirement for all projects regardless of whether Federal Aid is being used specifically for the subject project.

For additional information please contact Ted Bailey, Signal, Illumination and ITS Engineer, Traffic Operations Division, 360-705-7286 or baileyte@wsdot.wa.gov.

TJB/tjb

cc w/attach: Don Petersen, FHWA
Jennene Ring, North Central Region Traffic Engineer
Mark Leth, Northwest Region Traffic Engineer – NB82-120
Steve Kim, Olympic Region Traffic Engineer – 47440
Chad Hancock, Southwest Region Traffic Engineer – S-15
Harold White, Eastern Region Traffic Engineer
Rick Gifford, South Central Region Traffic Engineer
Ed Barry, ASDE
Greg Lippincott, ASDE
Scott Zeller, ASDE
Region Project Development Engineers

For additional information please contact Ted Bailey, Signal, Illumination and ITS Engineer, Traffic Operations Division, 360-705-7286 or baileyte@wsdot.wa.gov.

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Ed Barry, ASDE
Greg Lippincott, ASDE
Scott Zeller, ASDE
Region Project Development Engineers

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item: NWR	OR	SWR	NCR	SCR	ER	Comments
	Audible Pedestrian Displays and Indications							
1	Polara Engineering, Inc. Equipment	X	X	X	X	X	X	
	Battery Backup Systems (General)							
2	Alpha Technologies Equipment	X	X	X	X	X	X	
	Battery Backup Systems (Large Microwave Sites)							
4	Argus Technologies Inc., Equipment	X	X	X	X	X	X	
	Battery Backup Systems (Small Microwave Sites)							
5	Newmar Equipment	X	X	X	X	X	X	
	Closed Circuit Television Camera (CCTV) Equipment - Pan, Tilt, Zoom (PTZ) Installations							
6	Cohu Camera Equipment	X	X	X		X		
7	Pelco Camera Equipment				X		X	
	Closed Circuit Television Camera (CCTV) Equipment - Fixed Installations							
8	Cohu Camera Equipment	X	X			X		
9	Panasonic Camera (Pelco Housing)			X				
10	Pelco Camera Equipment						X	
11	Everfocus Electronic Corporation Equipment				X			
	Closed Circuit Television Camera (CCTV) Equipment (Attachment Hardware and Power Supply Only - No Camera)							
12	Pelco Equipment	X	X	X	X	X	X	
	Closed Circuit Television Camera (CCTV) Equipment - INFRARED							
13	Bosch Equipment	X	X	X	X	X	X	Camera's used for low light conditions
	Combiners, RS-422 (General)	**Basic Definition:** Combines data from Multiple sources into one stream.						
14	Vicon Equipment	X	X	X	X	X	X	
	Combiners, RS-422 (Camera Control Only)							
15	Pelco Equipment	X			X	X	X	
16	Vicon Equipment		X	X				
	Concrete Universal Enclosures (CUE) and Concrete Walk-in Buildings							
17	Emerson Network Power Pre-cast Concrete Walk-in Building	X	X	X	X	X	X	Note: Marconi Communications, Inc was bought out by Emerson
	Conflict Monitors (General)							
18	Eberle Design Incorporated (EDI) Equipment	X	X	X	X	X	X	
	Conflict Monitors (For Signals with Flashing Yellow Arrow Operation)							
19	Eberle Design Incorporated (EDI) Equipment	X	X	X	X	X	X	
	Converters (CVISN Applications Only (RS232 to IP, Serial to Ethernet, IP to Fiber))	**Basic Definition:** A device that converts data from analog to digital; digital to analog; or from one form to another such as IP to Fiber.						
20	MOXA Equipment	X	X	X	X	X	X	

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item: NWR	OR	SWR	NCR	SCR	ER	Comments
	Converters (HUB or Cabinet) - IP to Fiber	**Basic Definition:** A device that converts data from analog to digital; digital to analog						
21	Black Box Equipment						X	
22	Optelecom Equipment			X				
23	B&B Electronics Equipment	X	X		X	X		
	Converters (HUB or Cabinet) - RS422 to RS232	**Basic Definition:** A device that converts data from analog to digital; digital to analog						
24	Black Box Equipment						X	
25	B&B Electronics Equipment	X	X	X	X	X		
	Converters (HUB or Cabinet) - Serial to IP	**Basic Definition:** A device that converts data from analog to digital; digital to analog						
26	Black Box Equipment						X	
27	Ruggedcom Equipment		X	X				Approved Manufacturer for Olympic Region switched from B&B Electronics to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
28	MOXA Equipment					X		
29	B&B Electronics Equipment	X			X			
	Countdown Pedestrian Displays							
30	Dialight Equipment	X	X	X	X	X	X	
	Cross-connect Panel							
31	ADC Equipment	X	X	X	X	X	X	
	Digital Video Recorder (DVR)							
32	Mirasys (Dina/Polaris) Equipment	X	X	X		X	X	
33	Indigovision Equipment				X			
	Emergency Vehicle Preemption (EVP)							
34	Global Traffic Technologies Equipment *(Note: Previously 3M Opticom Equipment)*	X	X	X	X	X	X	
	Fiber Optic Patch Panels							
35	Telect LCX Equipment					X		
36	Corning Equipment						X	
37	ADC Equipment	X	X		X			
38	Bejed Equipment			X				
	Fuse / Alarm Panel							
39	Communications Network Systems, Inc. Equipment	X	X	X		X	X	
40	Telect Equipment				X			
	Highway Advisory Radio (HAR)							
41	Vaisala Equipment	X	X	X	X	X	X	Vaisala acquired HIS

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
	Highway Advisory Radio (HAR) Antenna Equipment Only							
42	Morad Antenna Equipment	X	X	X	X	X	X	
	Horizontal Warning Gates							
44	B&B Roadway Equipment	X	X	X	X	X	X	
	Illumination (High Mast Lowering Device Systems)							
45	Holophane High-Mast Illumination Lowering Device Systems (LD5 or Current Model)	X	X	X	X	X	X	
	Internally Illuminated Signs (Below Grade or Ground Level for Delineation)							
46	Traffic Sign Solutions	X	X	X	X	X	X	www.trafficsignsolutions.com
	Illumination (Tunnel Lighting Control Systems)							
47	PLC-Multipoint Inc. Equipment	X	X	X	X	X	X	www.plcmultipoint.com/
	Illumination (Navigation Systems)							
48	B&B Roadway Equipment	X	X	X	X	X	X	
	Junction Box, Cable Vault and Pull Box non slip material for lid and frame							
49	W.S. Molnar Company	X	X	X	X	X	X	
	License Plate Reader (LPR)							
50	Pips Technology License Plate Reader (LPR) Equipment	X	X	X	X	X	X	
	Media Access Control (MAC) Tracking Equipment							
51	TrafficCast	X	X	X	X	X	X	
	Modems - (For use with *State Owned* Twisted Pair Conductors)							
52	General Device Incorporated(GDI) Equipment	X	X	X	X	X	X	
	Modems - Cellular (General Use) - Regular Phone line… (To your equipment it looks like a POT)							
53	DIGI Equipment (Connectport VPN)	X	X	X	X	X		
54	Telular Equipment (Data Remote)						X	
	Modems - Dial Up (General Use)							
55	MDS iNET Equipment	X	X	X			X	Used to be US Robotics Equipment
56	Telenetics Equipment				X	X		
	Modems - Dial Up (For Transportation Data Office (TDO) Applications)							
57	Infotec Equipment	X	X	X	X	X	X	TDO Systems are managed and operated separately from the remainder of the WSDOT ITS.

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item: NWR	OR	SWR	NCR	SCR	ER	Comments
	Modems - IP Wireless (For Transportation Data Office (TDO) Applications)							
58	Sierra Wireless Equipment	X	X	X	X	X	X	TDO Systems are managed and operated separately from the remainder of the WSDOT ITS.
	Modems - IP Wireless (General Use)							
59	Sierra Wireless Equipment	X	X	X	X			Raven and Airlink are products Manufactured by Sierra Wireless; Modems have to be aligned with the Carrier
60	DIGI Equipment (Connectport VPN)					X		
61	MDS iNET Equipment						X	Used to be General Electric Equipment
	Motion Sensor Equipment							
62	MRX Platinum-300 Motion Sensor Equipment	X	X	X	X	X	X	
	Portable Surveillance Trailers							
63	Wanco Inc. Equipment	X	X	X	X	X	X	www.wanco.com
	Power Supply Systems							
64	Outback Power Systems Equipment	X	X	X	X	X	X	www.outbackpower.com/
	Permanent Traffic Recorders							
65	Jamar Technologies Inc. Equipment	X	X	X	X		X	
66	Diamond Traffic Products Equipment					X		
	Permanent Traffic Recorders - For STCDO Applications							
67	Diamond Traffic Products Equipment	X	X	X	X	X	X	
	Rectangular Rapid Flashing Beacon Systems							
68	Spot Devices Equipment	X	X	X	X	X	X	
	Roadway Weather Information Systems (RWIS) - Tower Structure							
69	Glen Martin Engineering Equipment	X	X	X	X	X	X	This tower is used by both SSI and VAISALA for RWIS systems.
	Roadway Weather Information Systems (RWIS)							
71	VAISALA Equipment	X	X	X	X	X	X	Vaisala acquired SSI
	Router (Ethernet)							
73	Cisco Systems Inc. Equipment	X	X	X	X	X	X	
	Sign Lighting Systems							
74	LUMI TRAK Inc. Equipment	X	X	X	X	X	X	www.lumitrak.com
	Signs (Mechanical)							
75	Skyline Drum Sign Equipment	X	X	X	X	X	X	

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item: NWR	OR	SWR	NCR	SCR	ER	Comments
	Signs (Mounting Brackets)							
76	Pelco Astro Sign-Brac	X	X	X	X	X	X	
	Signs (with Embedded Flashing Lights)							
77	TAPCO Products and Equipment	X	X	X	X	X	X	
	Switch (Voice-over-IP)							
78	Quintim Technologies Equipment	X	X	X	X	X	X	
	Switch, Video or Data - (Ethernet)	**Basic Definition:** Connects two segments of a network together that are using ethernet type connections.						
79	Ruggedcom Equipment	X	X	X				Approved Manufacturer for Olympic Region switched from EtherWAN Systems Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
80	EtherWAN Systems Inc. Equipment				X	X	X	
	Switches, Video or Data - (Analog, Ethernet and Fiber) - For Department of Information Services (DIS) & IT Network Interface Applications - NOT for Closed Loop ITS Systems	**Basic Definition:** Connects two segments of a network together that are using ethernet type connections.						
81	Cisco	X	X	X	X	X	X	
	Switches, Video or Data - (Analog, Ethernet and Fiber)	**Basic Definition:** Connects two segments of a network together that are using ethernet type connections.						
82	Philips Equipment			X				
83	International Fiber Systems (IFS) Inc. Equipment				X	X		
84	Vicon Equipment						X	
85	American Dynamics	X	X					
	Synchronous Optical NETwork (SONET) System							
86	Cisco Systems Inc. Equipment	X	X	X	X	X	X	
	Terminal Server (Field/Cabinet)	**Basic Definition:** A device that aggregates multiple communication channels into one device.						
87	Ruggedcom Equipment	X	X	X	X	X	X	
	Terminal Server (HUB)	**Basic Definition:** A device that aggregates multiple communication channels into one device.						
88	MOXA Equipment			X		X		
89	Lantronix Equipment				X		X	
90	DIGI Equipment	X	X					
	Traffic Signal Controller Equipment and Software (170, 2070, 2070L(Light) and 2070N(Nema))							
91	Eagle Equipment	X				X	X	
92	Naztec Equipment			X				
93	McCain Equipment				X			
94	Econolite Equipment		X					
	Traffic Signal Controller Equipment and Software (TMP 390)							
95	Quixote (NEMA) TMP 390 Equipment		X					Note: Company sold, parts are now under the U.S. Traffic, or Peek Traffic Corporation brand names
	Traffic Signal Transfer Switch							
96	Gen/Tran Equipment	X	X	X	X	X	X	

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item: NWR	OR	SWR	NCR	SCR	ER	Comments
	Transceiver (Fiber Optic/Ethernet)	**Basic Definition:** A device used to transmit and receive data over a fiber or ethernet/fiber network.						
97	Radiant Communications Corporation Equipment	X						
98	Ruggedcom Equipment		X	X				Approved Manufacturer for Olympic Region switched from International Fiber Systems (IFS) Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
99	EtherWAN Systems Inc. Equipment				X	X	X	
100	International Fiber Systems (IFS) Inc. Equipment							Equipment Manufacturer no longer used for this category as of 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
	Transceiver (Fiber Optic/Ethernet) - For Department of Information Services (DIS) & IT Network Interface Applications - NOT for Closed Loop ITS Systems	**Basic Definition:** A device used to transmit and receive data over a fiber or ethernet/fiber network.						
101	Cisco Equipment	X	X	X	X	X	X	
	Transient Voltage / Surge Suppression Systems (Communication Applications)							
102	Edco Equipment	X	X	X	X	X	X	
	Transient Voltage / Surge Suppression Systems (Line Applications)							
103	Transtector Equipment	X	X	X	X	X	X	
	Transmission (Video or Data)	**Basic Definition:** Transmits data from a field HUB or Cabinet back to the TMC.						
104	Communication Specialties Incorporated (CSI) Equipment – (Deci-Mux)	X						
105	IndigoVision Equipment			X	X	X		
106	Ruggedcom Equipment		X					Approved Manufacturer for Olympic Region switched from IndigoVision to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
107	Optelecom Equipment						X	
	Transmitters and Receivers (Video and Data) - For Department of Information Services (DIS) & IT Network Interface Applications - NOT for Closed Loop ITS Systems	**Basic Definition:** Transmits data from a field cabinet near the device back to the field HUB or Cabinet.						
108	Cisco Equipment	X	X	X	X	X	X	
	Transmitters and Receivers (Video and Data)	**Basic Definition:** Transmits data from a field cabinet near the device back to the field HUB or Cabinet.						
109	Optelecom Equipment	X		X	X		X	
109a	Ruggedcom Equipment		X					Approved Manufacturer for Olympic Region switched from International Fiber Systems (IFS) Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
110	International Fiber Systems (IFS) Inc. Equipment					X		
	Variable Message Signs (VMS) - Blank out / CMS Applications							
111	Wells Sign Equipment	X	X	X	X	X	X	
	Variable Message Signs (VMS) - Front Access Type							
112	Daktronics, Inc Equipment	X	X	X	X	X	X	
	Variable Message Signs (VMS) - Walk-In Type							
114	Daktronics, Inc Equipment	X	X	X	X	X	X	
	Variable Message Signs (VMS) - Variable Speed Limit or Lane Utilization Type							
116	Daktronics, Inc Equipment	X	X	X	X	X	X	

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
	Vehicle Activated Traffic Control Signs (VACTS) - Automated Curve and Speed Warning Signs							
118	Dorman Veritext	X	X	X	X	X	X	
	Vehicle Detection (Infra-red Light)							
119	Control Specialists Equipment (TIRTL)	X	X	X	X	X	X	
	Vehicle Detection (Microwave (Speeds Only))							
120	Speed Info Equipment	X	X	X	X	X	X	
	Vehicle Detection (Microwave (Speeds, Counts and Classification))							
122	Wavetronix Equipment	X	X	X	X	X	X	HD 125 is the recommended model based on field testing and evaluations
	Vehicle Detection (Video)							
124	Traficon Equipment	X	X	X	X	X	X	
	Vehicle Detection (Weigh-in-Motion (Transportation Data Office (TDO) Applications))							
125	International Road Dynamics (IRD) Equipment	X	X	X	X	X	X	TDO Systems are managed and operated separately from the remainder of the WSDOT ITS.
	Vehicle Detectors (Loops)							
126	Reno A&E Equipment	X	X	X	X	X	X	
	Vehicle Detectors (Magnetometer with Wireless Communications)							
127	SENSYS Networks	X	X	X	X	X	X	www.sensysnetworks.com
	Weigh-in-Motion(WIM) System - (SubSystem Component Description)							
128	Cohu Equipment - (Security Camera Systems)	X	X	X	X	X	X	
129	Hoffman Equipment - (Commercial Vehicle (CV) Reader Controller Cabinet)	X	X	X	X	X	X	
130	International Road Dynamics (IRD) Equipment - (Weigh-In-Motion(WIM) Controller System)	X	X	X	X	X	X	
131	International Road Dynamics (IRD) Equipment - (Manual Override Console)	X	X	X	X	X	X	
132	International Road Dynamics (IRD) Equipment - (Load Cell Scale)	X	X	X	X	X	X	
133	Piezoelectric Sensors - (Measurement Specialties, Inc.(MSI))	X	X	X	X	X	X	
134	Trigg Industries Equipment - (Overheight Detectors)	X	X	X	X	X	X	
135	Iqinvision - (Enforcement Camera System)	X	X	X	X	X	X	
136	International Road Dynamics (IRD) Equipment - (Enforcement Camera System Assembly)	X	X	X	X	X	X	
137	Extreme CCTV Inc. - (Illuminator)	X	X	X	X	X	X	
138	Telematics Wireless USA Corp Equipment - (Automatic Vehicle Identification (AVI) System)	X	X	X	X	X	X	
139	Sinclair Technologies Inc. - (Antennas)	X	X	X	X	X	X	
140	International Road Dynamics (IRD) Equipment - (Outdoor Enclosure and Other Weigh-In-Motion System Components)	X	X	X	X	X	X	
141	International Road Dynamics (IRD) Equipment -Bending Plate – IRD - International Road Dynamics Corp.	X	X	X	X	X	X	
142	Lane Control System – Tassimco Technologies Canada Inc.	X	X	X	X	X	X	
143	PIPS Technology Equipment - (License Plate Reader (LPR) Cameras)	X	X	X	X	X	X	
144	Kistler Instrument AG Equipment - (Lineas Quartz Sensors)	X	X	X	X	X	X	
145	International Road Dynamics (IRD) Equipment - (CVReader and Confirmation Reader Systems)	X	X	X	X	X	X	
146	International Road Dynamics (IRD) Equipment - (CVOCS)	X	X	X	X	X	X	

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
	Video Distribution Amplifier							
147	GE Security Equipment	X				X	X	
148	Kramer Electronics Equipment		X		X			
149	Pelco Equipment			X				
	Video and Data Servers; Video Encoder/Decoder Equipment (Fixed Snap Shot Cameras)	**Basic Definition:** Compresses or Decompress the video signal to reduce bandwidth usage during the Transmission.						
150	Axis Communications Equipment	X	X	X	X	X	X	
	Video and Data Servers; Video Encoder/Decoder Equipment (Live Streaming Video Cameras)	**Basic Definition:** Compresses or decompress the video signal to reduce bandwidth usage during the Transmission.						
151	Radiant Communications Corporation Equipment	X						
152	IndigoVision Equipment		X	X	X	X		
153	Optelecom Equipment						X	
	Wireless Communication (170 Traffic Signal Controller Interconnect)							
154	Encom Equipment	X	X	X	X	X	X	
	Wireless Communication Antennas (Traffic Signal Controller Interconnect Applications)							
155	Astron Wireless Technologies, Inc. Equipment	X	X	X	X	X	X	Note: LOPRO Antennas
	Wireless Communication (900 Mhz non-line of Sight Ethernet or Non-Video Data)							
156	MDS INET Equipment	X	X	X	X	X	X	
	Wireless Communication (Antennas)							
157	Andrew Antenna Equipment				X			
158	MaxRad Antenna Equipment	X	X	X		X	X	
	Wireless Communication (Backbone, Point-to-Point Long Range)							
159	Alcatel-Lucent Equipment (Microwave Radio)	X	X	X	X	X	X	
	Wireless Communication (IP Wireless and 2070 Traffic Signal Controller Interconnect)							
160	Encom Equipment				X	X		
161	MDS INET Equipment	X	X	X			X	
	Wireless Communication (Short, Mid and Long Range)							
163	Solectek Skyway short, mid and long range wireless microwave equipment	X	X	X	X	X	X	
	Wireless Communication (Towers and non-radio Equipment)							
164	Valmont Equipment	X	X	X	X	X	X	
	Wireless Communications Wide Area Data (Non line of sight, Omni)							
165	IP MobileNet	X	X	X	X	X	X	

Appendix A - Proprietary Item Categories with Manufactures by Region Approved to Use Proprietary Item

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment *(with approved manufacturers per category)*	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
	Wireless Digital Communication (Video and Non-Video Data)							
166	Encom Equipment	X	X	X		X		
167	Harris Equipment				X			
168	Varint Equipment						X	
	Wireless Mesh Communication Systems							
169	Firetide Equipment	X	X	X	X	X	X	
	Switches, Video and Data - (Analog, Ethernet and Fiber) - For Transmitting Video externally through a web service.							Category added on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
170	Blonder Tongue Equipment	X	X	X	X	X	X	Equipment Manufacturer added on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management

Appendix B - Proprietary Item Manufactures A to Z

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Approved Equipment Manufacturers by Region	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
31	ADC Equipment	X	X	X	X	X	X	
37	ADC Equipment	X	X		X			
159	Alcatel-Lucent Equipment (Microwave Radio)	X	X	X	X	X	X	
2	Alpha Technologies Equipment	X	X	X	X	X	X	
85	American Dynamics	X	X					
157	Andrew Antenna Equipment				X			
4	Argus Technologies Inc., Equipment	X	X	X	X	X	X	
155	Astron Wireless Technologies, Inc. Equipment	X	X	X	X	X	X	Note: LOPRO Antennas
150	Axis Communications Equipment	X	X	X	X	X	X	
23	B&B Electronics Equipment	X	X		X	X		
25	B&B Electronics Equipment	X	X	X	X	X		
29	B&B Electronics Equipment	X			X	X		Approved Manufacturer for Olympic Region switched from B&B Electronics to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
44	B&B Roadway Equipment	X	X	X	X	X	X	
48	B&B Roadway Equipment	X	X	X	X	X	X	
38	Bejed Equipment			X				
21	Black Box Equipment						X	
24	Black Box Equipment						X	
26	Black Box Equipment						X	
170	Blonder Tongue Equipment		X					Equipment Manufacturer added on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
13	Bosch Equipment	X	X	X	X	X	X	Camera's used for low light conditions
81	Cisco	X	X	X	X	X	X	
101	Cisco Equipment	X	X	X	X	X	X	
108	Cisco Equipment	X	X	X	X	X	X	
73	Cisco Systems Inc. Equipment	X	X	X	X	X	X	
86	Cisco Systems Inc. Equipment	X	X	X	X	X	X	
6	Cohu Camera Equipment	X	X	X		X		
8	Cohu Camera Equipment	X	X			X		
128	Cohu Equipment - (Security Camera Systems)	X	X	X	X	X	X	
104	Communication Specialties Incorporated (CSI) Equipment – (Deci-Mux)	X						
39	Communications Network Systems, Inc. Equipment	X	X	X		X	X	
119	Control Specialists Equipment (TIRTL)	X	X	X	X	X	X	
36	Corning Equipment						X	
112	Daktronics, Inc Equipment	X		X	X	X	X	
114	Daktronics, Inc Equipment	X		X	X	X	X	
116	Daktronics, Inc Equipment	X		X	X	X	X	
30	Dialight Equipment	X	X	X	X	X	X	
66	Diamond Traffic Products Equipment					X		
67	Diamond Traffic Products Equipment	X	X	X	X	X	X	
90	DIGI Equipment	X	X					
53	DIGI Equipment (Connectport VPN)	X	X	X	X	X		
60	DIGI Equipment (Connectport VPN)					X		
118	Dorman Veritext	X	X	X	X	X	X	
91	Eagle Equipment	X				X	X	
19	Eberle Design Incorporated (EDI) Equipment	X	X	X	X	X	X	

Appendix B - Proprietary Item Manufactures A to Z

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Approved Equipment Manufacturers by Region	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
18	Eberle Design Incorporated (EDI) Equipment	X	X	X	X	X	X	
94	Econolite Equipment		X					
102	Edco Equipment	X	X	X	X	X	X	
17	Emerson Network Power Pre-cast Concrete Walk-in Building	X	X	X	X	X	X	Note: Marconi Communications, Inc was bought out by Emerson
154	Encom Equipment	X	X	X	X	X	X	
160	Encom Equipment				X	X		
166	Encom Equipment	X	X	X		X		
80	EtherWAN Systems Inc. Equipment				X	X	X	Approved Manufacturer for Olympic Region switched from EtherWAN Systems Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
99	EtherWAN Systems Inc. Equipment				X	X	X	
11	Everfocus Electronic Corporation Equipment				X			
137	Extreme CCTV Inc. - (Illuminator)	X	X	X	X	X	X	
169	Firetide Equipment	X	X	X	X	X	X	
147	GE Security Equipment	X				X	X	
96	Gen/Tran Equipment	X	X	X	X	X	X	
52	General Device Incorporated(GDI) Equipment	X	X	X	X	X	X	
69	Glen Martin Engineering Equipment	X	X	X	X	X	X	This tower is used by both SSI and VAISALA for RWIS systems.
34	Global Traffic Technologies Equipment *(Note: Previously 3M Opticom Equipment)*	X	X	X	X	X	X	
167	Harris Equipment				X			
129	Hoffman Equipment - (Commercial Vehicle (CV) Reader Controller Cabinet)	X	X	X	X	X	X	
45	Holophane High-Mast Illumination Lowering Device Systems (LD5 or Current Model)	X	X	X	X	X	X	
33	Indigovision Equipment				X			
105	IndigoVision Equipment			X	X	X		Approved Manufacturer for Olympic Region switched from IndigoVision to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
152	IndigoVision Equipment		X	X	X	X		
57	Infotec Equipment	X	X	X	X	X	X	TDO Systems are managed and operated separately from the remainder of the WSDOT ITS.
83	International Fiber Systems (IFS) Inc. Equipment				X	X		
100	International Fiber Systems (IFS) Inc. Equipment							Equipment Manufacturer no longer used for this category as of 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
110	International Fiber Systems (IFS) Inc. Equipment					X		Approved Manufacturer for Olympic Region switched from International Fiber Systems (IFS) Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
125	International Road Dynamics (IRD) Equipment	X	X	X	X	X	X	TDO Systems are managed and operated separately from the remainder of the WSDOT ITS.
146	International Road Dynamics (IRD) Equipment - (CVOCS)	X	X	X	X	X	X	
145	International Road Dynamics (IRD) Equipment - (CVReader and Confirmation Reader Systems)	X	X	X	X	X	X	
136	International Road Dynamics (IRD) Equipment - (Enforcement Camera System Assembly)	X	X	X	X	X	X	
132	International Road Dynamics (IRD) Equipment - (Load Cell Scale)	X	X	X	X	X	X	
131	International Road Dynamics (IRD) Equipment - (Manual Override Console)	X	X	X	X	X	X	
140	International Road Dynamics (IRD) Equipment - (Outdoor Enclosure and Other Weigh-In-Motion System Components)	X	X	X	X	X	X	
130	International Road Dynamics (IRD) Equipment - (Weigh-In-Motion(WIM) Controller System)	X	X	X	X	X	X	
141	International Road Dynamics (IRD) Equipment -Bending Plate – IRD - International Road Dynamics Corp.	X	X	X	X	X	X	

Appendix B - Proprietary Item Manufactures A to Z

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Approved Equipment Manufacturers by Region	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
165	IP MobileNet	X	X	X	X	X	X	
135	Iqinvision - (Enforcement Camera System)	X	X	X	X	X	X	
65	Jamar Technologies Inc. Equipment	X	X	X	X		X	
144	Kistler Instrument AG Equipment - (Lineas Quartz Sensors)	X	X	X	X	X	X	
148	Kramer Electronics Equipment		X		X			
142	Lane Control System – Tassimco Technologies Canada Inc.	X	X	X	X	X	X	
89	Lantronix Equipment				X		X	
74	LUMI TRAK Inc. Equipment	X	X	X	X	X	X	www.lumitrak.com
158	MaxRad Antenna Equipment	X	X	X		X	X	
93	McCain Equipment				X			
55	MDS iNET Equipment	X	X	X			X	Used to be US Robotics Equipment
61	MDS iNET Equipment						X	Used to be General Electric Equipment
156	MDS INET Equipment	X	X	X	X	X	X	
161	MDS INET Equipment	X	X	X			X	
32	Mirasys (Dina/Polaris) Equipment	X	X	X		X	X	
42	Morad Antenna Equipment	X	X	X	X	X	X	
20	MOXA Equipment	X	X	X	X	X	X	
28	MOXA Equipment					X		
88	MOXA Equipment			X		X		
62	MRX Platinum-300 Motion Sensor Equipment	X	X	X	X	X	X	
92	Naztec Equipment			X				
5	Newmar Equipment	X	X	X	X	X	X	
22	Optelecom Equipment			X				
107	Optelecom Equipment						X	
109	Optelecom Equipment	X		X	X		X	
153	Optelecom Equipment						X	
64	Outback Power Systems Equipment	X	X	X	X	X	X	www.outbackpower.com/
9	Panasonic Camera (Pelco Housing)			X				
76	Pelco Astro Sign-Brac	X	X	X	X	X	X	
7	Pelco Camera Equipment				X		X	
10	Pelco Camera Equipment			X			X	Note: SWR uses Panasonic Cameras in a Pelco Housing
15	Pelco Equipment	X			X	X	X	
149	Pelco Equipment			X				
12	Pelco Equipment	X	X	X	X	X	X	
82	Philips Equipment			X				
133	Piezoelectric Sensors - (Measurement Specialties, Inc.(MSI))	X	X	X	X	X	X	
143	PIPS Technology Equipment - (License Plate Reader (LPR) Cameras)	X	X	X	X	X	X	
50	Pips Technology License Plate Reader (LPR) Equipment	X	X	X	X	X	X	
47	PLC-Multipoint Inc. Equipment	X	X	X	X	X	X	www.plcmultipoint.com/
1	Polara Engineering, Inc. Equipment	X	X	X	X	X	X	
78	Quintim Technologies Equipment	X	X	X	X	X	X	
95	Quixote (NEMA) TMP 390 Equipment		X					
151	Radiant Communications Corporation Equipment	X						
97	Radiant Communications Corporation Equipment	X						
126	Reno A&E Equipment	X	X	X	X	X	X	

Appendix B - Proprietary Item Manufactures A to Z

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Approved Equipment Manufacturers by Region	Region Approved to Use Proprietary Item						Comments
		NWR	OR	SWR	NCR	SCR	ER	
27	Ruggedcom Equipment		X	X				Approved Manufacturer for Olympic Region switched from B&B Electronics to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
79	Ruggedcom Equipment	X	X	X				Approved Manufacturer for Olympic Region switched from EtherWAN Systems Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
87	Ruggedcom Equipment	X	X	X	X	X	X	
98	Ruggedcom Equipment		X	X				Approved Manufacturer for Olympic Region switched from International Fiber Systems (IFS) Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
106	Ruggedcom Equipment		X					Approved Manufacturer for Olympic Region switched from IndigoVision to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
109a	Ruggedcom Equipment		X					Approved Manufacturer for Olympic Region switched from International Fiber Systems (IFS) Inc. to Ruggedcom on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
127	SENSYS Networks	X	X	X	X	X	X	www.sensysnetworks.com
58	Sierra Wireless Equipment	X	X	X	X	X	X	TDO Systems are managed and operated separately from the remainder of the WSDOT ITS.
59	Sierra Wireless Equipment	X	X	X	X			Raven and Airlink are products Manufactured by Sierra Wireless; Modems have to be aligned with the Carrier
139	Sinclair Technologies Inc. - (Antennas)	X	X	X	X	X	X	
75	Skyline Drum Sign Equipment	X	X	X	X	X	X	
163	Solectek Skyway short, mid and long range wireless microwave equipment	X	X	X	X	X	X	
120	Speed Info Equipment	X	X	X	X	X	X	
68	Spot Devices Equipment	X	X	X	X	X	X	
77	TAPCO Products and Equipment	X	X	X	X	X	X	
40	Telect Equipment				X			
35	Telect LCX Equipment					X		
138	Telematics Wireless USA Corp Equipment - (Automatic Vehicle Identification (AVI) System)	X	X	X	X	X	X	
56	Telenetics Equipment				X	X		
54	Telular Equipment (Data Remote)						X	
46	Traffic Sign Solutions	X	X	X	X	X	X	www.trafficsignsolutions.com
51	TrafficCast	X	X	X	X	X	X	
124	Traficon Equipment	X	X	X	X	X	X	
103	Transtector Equipment	X	X	X	X	X	X	
134	Trigg Industries Equipment - (Overheight Detectors)	X	X	X	X	X	X	
41	Vaisala Equipment	X	X	X	X	X	X	Vaisala Acquired HIS
71	VAISALA Equipment	X	X	X	X	X	X	Vaisala acquired SSI
164	Valmont Equipment	X	X	X	X	X	X	
168	Varint Equipment						X	
14	Vicon Equipment	X	X	X	X	X	X	
16	Vicon Equipment		X	X				
84	Vicon Equipment						X	
49	W.S. Molnar Company	X	X	X	X	X	X	
63	Wanco Inc. Equipment	X	X	X	X	X	X	www.wanco.com
122	Wavetronix Equipment	X	X	X	X	X	X	HD 125 is the recommended Model
111	Wells Sign Equipment	X	X	X	X	X	X	

Appendix C - Proprietary Item Categories A to Z

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment (A-Z)	Comments
1	Audible Pedestrian Displays and Indications	
2	Battery Backup Systems (General)	
3	Battery Backup Systems (Large Microwave Sites)	
4	Battery Backup Systems (Small Microwave Sites)	
6	Closed Circuit Television Camera (CCTV) Equipment - Fixed Installations	
8	Closed Circuit Television Camera (CCTV) Equipment - INFRARED	
5	Closed Circuit Television Camera (CCTV) Equipment - Pan, Tilt, Zoom (PTZ) Installations	
7	Closed Circuit Television Camera (CCTV) Equipment (Attachment Hardware and Power Supply Only - No Camera)	
10	Combiners, RS-422 (Camera Control Only)	
9	Combiners, RS-422 (General)	**Basic Definition:** Combines data from Multiple sources into one stream.
11	Concrete Universal Enclosures (CUE) and Concrete Walk-in Buildings	
13	Conflict Monitors (For Signals with Flashing Yellow Arrow Operation)	
12	Conflict Monitors (General)	
14	Converters (CVISN Applications Only (RS232 to IP, Serial to Ethernet, IP to Fiber))	**Basic Definition:** A device that converts data from analog to digital; digital to analog; or from one form to another such as IP to Fiber.
15	Converters (HUB or Cabinet) - IP to Fiber	**Basic Definition:** A device that converts data from analog to digital; digital to analog
16	Converters (HUB or Cabinet) - RS422 to RS232	**Basic Definition:** A device that converts data from analog to digital; digital to analog
17	Converters (HUB or Cabinet) - Serial to IP	**Basic Definition:** A device that converts data from analog to digital; digital to analog
18	Countdown Pedestrian Displays	
19	Cross-connect Panel	
20	Digital Video Recorder (DVR)	
21	Emergency Vehicle Preemption (EVP)	
22	Fiber Optic Patch Panels	
23	Fuse / Alarm Panel	
24	Highway Advisory Radio (HAR)	
25	Highway Advisory Radio (HAR) Antenna Equipment Only	
27	Horizontal Warning Gates	
28	Illumination (High Mast Lowering Device Systems)	
31	Illumination (Navigation Systems)	
30	Illumination (Tunnel Lighting Control Systems)	
29	Internally Illuminated Signs (Below Grade or Ground Level for Delineation)	
32	Junction Box, Cable Vault and Pull Box non slip material for lid and frame	
33	License Plate Reader (LPR)	
34	Media Access Control (MAC) Tracking Equipment	
35	Modems - (For use with *State Owned* Twisted Pair Conductors)	

Appendix C - Proprietary Item Categories A to Z

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment (A-Z)	Comments
36	Modems - Cellular (General Use) - Regular Phone line… (To your equipment it looks like a POT)	
38	Modems - Dial Up (For Transportation Data Office (TDO) Applications)	
37	Modems - Dial Up (General Use)	
39	Modems - IP Wireless (For Transportation Data Office (TDO) Applications)	
40	Modems - IP Wireless (General Use)	
41	Motion Sensor Equipment	
44	Permanent Traffic Recorders	
45	Permanent Traffic Recorders - For STCDO Applications	
42	Portable Surveillance Trailers	
43	Power Supply Systems	
46	Rectangular Rapid Flashing Beacon Systems	
48	Roadway Weather Information Systems (RWIS)	
47	Roadway Weather Information Systems (RWIS) - Tower Structure	
50	Router (Ethernet)	
51	Sign Lighting Systems	
52	Signs (Mechanical)	
53	Signs (Mounting Brackets)	
54	Signs (with Embedded Flashing Lights)	
55	Switch (Voice-over-IP)	
56	Switch, Video or Data - (Ethernet)	**Basic Definition:** Connects two segments of a network together that are using ethernet type connections.
101	Switches, Video and Data - (Analog, Ethernet and Fiber) - For Transmitting Video externally through a web service.	Category added on 5-15-13, See Systems Engineering Documentation for XL 4242, I-5, SR 510 to SR 513 - Congestion Management
58	Switches, Video or Data - (Analog, Ethernet and Fiber)	**Basic Definition:** Connects two segments of a network together that are using ethernet type connections.
57	Switches, Video or Data - (Analog, Ethernet and Fiber) - For Department of Information Services (DIS) & IT Network Interface Applications - NOT for Closed Loop ITS Systems	**Basic Definition:** Connects two segments of a network together that are using ethernet type connections.
59	Synchronous Optical NETwork (SONET) System	
60	Terminal Server (Field/Cabinet)	**Basic Definition:** A device that aggregates multiple communication channels into one device.
61	Terminal Server (HUB)	**Basic Definition:** A device that aggregates multiple communication channels into one device.
62	Traffic Signal Controller Equipment and Software (170, 2070, 2070L(Light) and 2070N(Nema))	
63	Traffic Signal Controller Equipment and Software (TMP 390)	
64	Traffic Signal Transfer Switch	
65	Transceiver (Fiber Optic/Ethernet)	**Basic Definition:** A device used to transmit and receive data over a fiber or ethernet/fiber network.
66	Transceiver (Fiber Optic/Ethernet) - For Department of Information Services (DIS) & IT Network Interface Applications - NOT for Closed Loop ITS Systems	**Basic Definition:** A device used to transmit and receive data over a fiber or ethernet/fiber network.
67	Transient Voltage / Surge Suppression Systems (Communication Applications)	
68	Transient Voltage / Surge Suppression Systems (Line Applications)	
69	Transmission (Video or Data)	**Basic Definition:** Transmits data from a field HUB or Cabinet back to the TMC.

Appendix C - Proprietary Item Categories A to Z

Person Responsible For This Document: Ted Bailey, 360-705-7286, baileyte@wsdot.wa.gov

Updated 5-28-13

Item Number	Categories of Equipment (A-Z)	Comments
71	Transmitters and Receivers (Video and Data)	**Basic Definition:** Transmits data from a field cabinet near the device back to the field HUB or Cabinet.
70	Transmitters and Receivers (Video and Data) - For Department of Information Services (DIS) & IT Network Interface Applications - NOT for Closed Loop ITS Systems	**Basic Definition:** Transmits data from a field cabinet near the device back to the field HUB or Cabinet.
72	Variable Message Signs (VMS) - Blank out / CMS Applications	
73	Variable Message Signs (VMS) - Front Access Type	
75	Variable Message Signs (VMS) - Variable Speed Limit or Lane Utilization Type	
74	Variable Message Signs (VMS) - Walk-In Type	
76	Vehicle Activated Traffic Control Signs (VACTS) - Automated Curve and Speed Warning Signs	
77	Vehicle Detection (Infra-red Light)	
78	Vehicle Detection (Microwave (Speeds Only))	
79	Vehicle Detection (Microwave (Speeds, Counts and Classification))	
81	Vehicle Detection (Video)	
82	Vehicle Detection (Weigh-in-Motion (Transportation Data Office (TDO) Applications))	
83	Vehicle Detectors (Loops)	
84	Vehicle Detectors (Magnetometer with Wireless Communications)	
87	Video and Data Servers; Video Encoder/Decoder Equipment (Fixed Snap Shot Cameras)	**Basic Definition:** Compresses or Decompress the video signal to reduce bandwidth usage during the Transmission.
88	Video and Data Servers; Video Encoder/Decoder Equipment (Live Streaming Video Cameras)	**Basic Definition:** Compresses or Decompress the video signal to reduce bandwidth usage during the Transmission.
86	Video Distribution Amplifier	
85	Weigh-in-Motion(WIM) System - (SubSystem Component Description)	
89	Wireless Communication (170 Traffic Signal Controller Interconnect)	
91	Wireless Communication (900 Mhz non-line of Sight Ethernet or Non-Video Data)	
92	Wireless Communication (Antennas)	
93	Wireless Communication (Backbone, Point-to-Point Long Range)	
94	Wireless Communication (IP Wireless and 2070 Traffic Signal Controller Interconnect)	
96	Wireless Communication (Short, Mid and Long Range)	
97	Wireless Communication (Towers and non-radio Equipment)	
90	Wireless Communication Antennas (Traffic Signal Controller Interconnect Applications)	
98	Wireless Communications Wide Area Data (Non line of sight, Omni)	
99	Wireless Digital Communication (Video and Non-Video Data)	
100	Wireless Mesh Communication Systems	