
The Free and Secure Trade (FAST)
Commercial Border Crossing
Hwy 15, BC to Blaine, WA

Project Stakeholders

- Urban Systems
- DMD & Associates
- BC Ministry of Transportation and Infrastructure
- US Customs & Border Protection (USCBP)
- Cobra Electric

Project Primary Objectives

- Provide priority system for “FAST” commercial vehicles
- Improve efficiency for all vehicles in the staging area
- Improve storage capacity in truck staging area

Project Objectives

- Design a control system to provide maximum flexibility
- Provided method for USCBP officials to control & monitoring the system
- Integration with ATIS (Advanced Traveler Information System)

Project Challenges

- Critical project timeline
- Meet current and future requirements
- Accurately detect vehicles of all sizes
- Driver behavior & enforcement

System Overview

N

www.dmdeng.com

DMD


COMMERCIAL
VEHICLE
PARKING
PROCEED TO
LANE
ON GREEN


LANE 4
LANE 5
LANE 6
LANE 7
LANE 8
EDGE

www.dmdeng.com

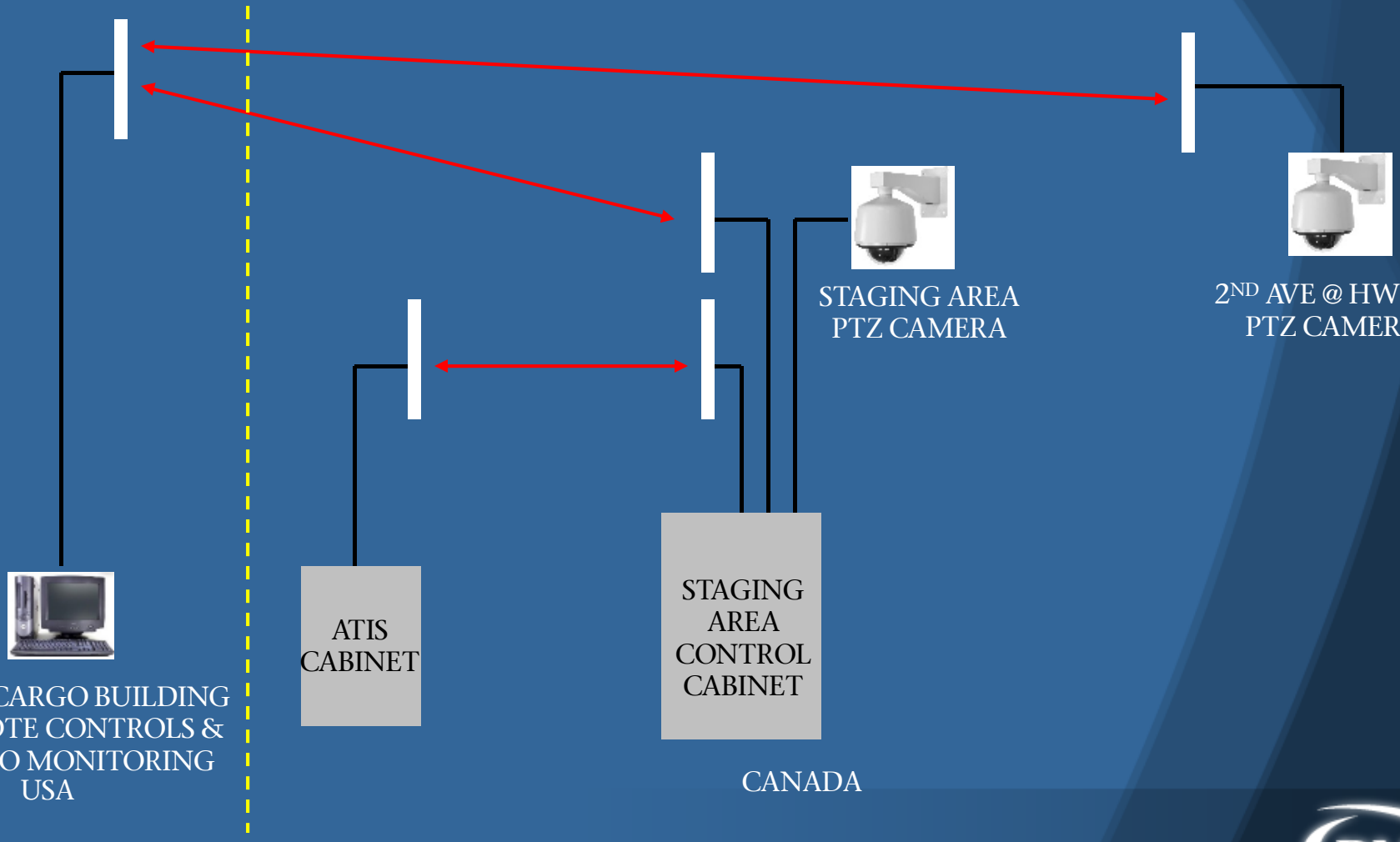
DMD


Fast Lane Selector:
Comm Lane Selector:
Stag. Lane Selector:
Aprx. Comm Trucks:
Fast In-A-Row:
Park Queue:
All FAST Lanes Empty
Fast Timer
Comm Timer
Lane Type
Entry Timer
Delay Timer
Front-NE
Front-F
Back-NE
Back-F
Enabled
L1
L2
L3
Border Entry
7 Seg: Blanked
I/Os
Memory
FAST
COMM
Parking
L1 Open
L2 Open
L3 Open
Booths
Ext. Timer
Real Loops
Lane 1
Lane 2
Lane 3
Back
Main Menu
RUN

Remote Lane Control System for US Customs & Border Protection (USBP)

- Remote Control at US Customs & Border Protection Entry Lanes
- Remote Control at US Customer & Border Protection “FAST” Lanes
- Future control for other lanes or functions

Video Communications and ATIS Integration

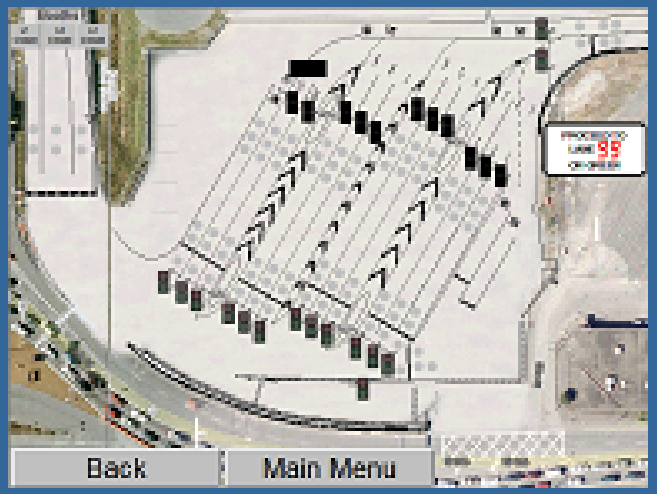


Video Monitoring System

- Pan, Tilt, Zoom (PTZ) Video Monitoring Cameras System
- Violations monitoring
- Incident Management monitoring

PLC Control Logic

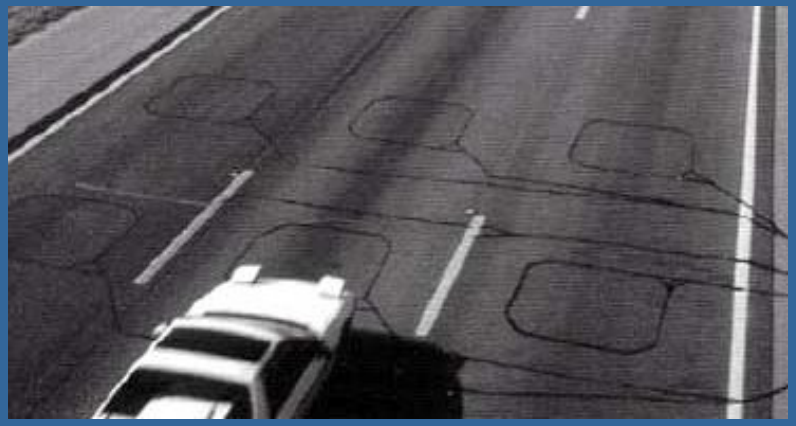
- Dynamic vs. Static
- Comprehensive testing and debugging performed prior to installation



Vehicle Detection System

Video Detection

Microwave Detection



Inductive Loop Detection


COMMERCIAL
VEHICLE
PARKING
PROCEED TO
LANE
ON GREEN
PROCEED TO
LANE
ON GREEN

Lessons Learned

- Critical that equipment be thoroughly evaluated and tested in advance

Lessons Learned

- Critical that equipment be thoroughly evaluated and tested in advance
- Stakeholder input critical to project success
- Allow ample time to undertake project

Lessons Learned

- Critical that equipment be thoroughly evaluated and tested in advance
- Stakeholder input critical to project success
- Allow ample time to undertake project
- Enforcement key to changing driver behavior


HINGTON
Roads West
CEMENT
DISTRIBUTORS
INC.


KNIGHT
KNIGHT


LANE 10
LANE 11
FAST
McKinney

Independent System Evaluation

- Western Washington University – Study (www.wwu.edu/bpri/vehicles)
- Overall reduction in wait times for all commercial trucks
- Further reduction in wait times for new "FAST" lane access

Questions?

www.dmdeng.com