ITS / TSM&O Activities in Seminole County

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Traffic Signal Systems

• 384 signalized intersections
  – 373 connected via fiber, 10 on radio, 1 not connected (FS #41)
• Adaptive Signals at 69 locations:
  – SynchroGreen (49 locations)
    • 4 corridors (SR 436, Rinehart, Lake Mary Blvd and SR 414), 5 isolated locations
  – Insync (20 locations)
    • 2 corridors (SR 46 and Mitchell Hammock)
• UPS locations – 167, 67 locations w/ remote battery monitoring
• Central Software (ATMS.Now)
  – Daily detection reports, on-call text/email alarms, remote monitoring
• Detection Technologies used – loops, video (w and w/out thermal), radar, pod
Signal Performance Metrics (SPM)

- Uses high-resolution controller event data to determine how well signals are operating
- Implemented the first system in the State in February 2015
- Several metrics:
  - Arrival on Red, Pedestrian Delay, Volumes and TMCs, Split Failures, Yellow/Red Actuations
  - Working on corridor-wide metrics
- We have since migrated site over to FDOT for their management and expansion (atspm.cflsmartroads.com/ATSPM)
ITS / Advanced Systems

• Over 400 miles of fiber
• TMC manned M-F 7am-5pm, FDOT building new TMC near SR 417 @ International
• FDOT’s Active Arterial Management (AAM) and Integrated Corridor Mgmt (ICM) programs
• Emergency Vehicle Pre-emption (Opticom)
  – High priority pre-emption at 312 locations (243 Infrared, 69 GPS)
  – Potential project to upgrade all to GPS
• Transit Signal Priority (TSP)
  – Low priority pre-emption for buses at 69 locations
• 29 Variable Message Signs – AADCO, slow migration to Daktronics
• Cameras – 195, mostly on State Roads (not fully allowed on County roadways)
Bluetooth Reader System (BlueTOAD)

- Installed the first readers in 2011, now have near 100 devices deployed
- Used for real-time speed and travel time data
- Automatically populate overhead VMSs with travel time info
- Will be upgrading readers to new technology (Spectra) in the next few months
Connected Vehicle (CV)

- Working on demo project for Signal Phasing and Timing (SPaT) info to motorists
- Vendor (Connected Signals) operational by mid-November:

  - Phone App
  - In Car (BMW):
  - Heads Up
  - Dash
Connected Vehicle (CV)

• Connected Signals desktop application:

• Looking to work with Traffic Technology Services (TTS) as well.
• Sending both agreements to County Attorney for review.
• One issue to be resolved – data from InSync
ATCMTD Grant

- Central FL Region recently received $12M grant from FHWA’s Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) program
- Partnership between:
  - 5-year project with work near UCF campus
  - Anticipate Seminole County involvement with testing and deployment
  - 4 major components
  - Possible tie-in with FDOT’s SR 434 CV Project (Faller Davis)
Funding / Staff

• Operational budget (salaries, OT, materials, some outsourcing) – Signals - $1.2M, Fiber/ITS - $500k
• Maintain signals for FDOT and all 7 Cities – annual revenue $1M
• 1 Cent County Sales Tax for Capital Improvements
  – $1M annually for mast arm rebuilds, painting, extra striping, LED conversions
  – $1M annually new signals and mast arm conversions (FY 17/18 - $1.8M)
  – $1.1M annually for fiber/ITS projects (FY 17/18 - $3.4M)
• MetroPlan/FDOT funded ATMS projects ($3M - $4M) every few years
• Annual Retiming Funds – MetroPlan $200k-$300k, County $200k
• Staff - 2 PEs in Division, 11 technicians devoted to signals, 7 technicians for fiber/ITS/locates
Questions ?

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