

# Metropolitan Area Transportation Operations Coordination (MATOC) Program

Status Report / Benefit-Cost Analysis

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# Staffing and Funding

- Staffing Situation
  - New staff (facilitator and operators) will be on board soon
- Moving Forward to FY 2011
  - Transition activities from earmark to ongoing funding
    - Earmark 3-month extension in process
    - Development of FY 2011 Work Plan; Updated Memorandum of Understanding; Funding Agreements between University of Maryland and Agencies
  - Funding availability to sustain MATOC for FY 2011
    - MD SHA \$400K
    - DDOT \$400K
    - Federal Earmark \$200K
    - VDOT CMAQ \$100K
    - TPB UPWP \$ 90K

# MATOC Continues Coordination Activities for Regional Incidents and Events

- Average of 36 Per Month Since September 2009
  - 41 incidents in May 2010 with MATOC coordination/notifications
- Special Coverage Provided:
  - Weekend of May 21/22 (Beltway Bridge over Cameron Run)
  - Memorial Day Weekend
  - July 4 planning in progress

# Benefit-Cost Analysis Now Complete

- Better Traveler Information = More Modified Trips During Incidents
  - Trips made at a later time
  - Trips made on another route
  - Trips made by another mode
  - Trips not made
- How Were Benefits Estimated?
  - Savings from reduced time in stopped traffic during incident response and removal
  - Savings from reduced emissions and fuel including greenhouse gases
  - Savings from the reduction of secondary incidents

# Benefit-Cost Analysis

- Based on 3 Case Studies
  - I-66 Westbound just West of I-495, bus crash (5/22/09)
  - I-495 Inner Loop at Old Georgetown Road, vehicle fire (9/17/09)
  - New York Avenue N.E. Near Brentwood Parkway, storm sewer failure and partial roadway collapse (5/9/08 – 5/11/08)

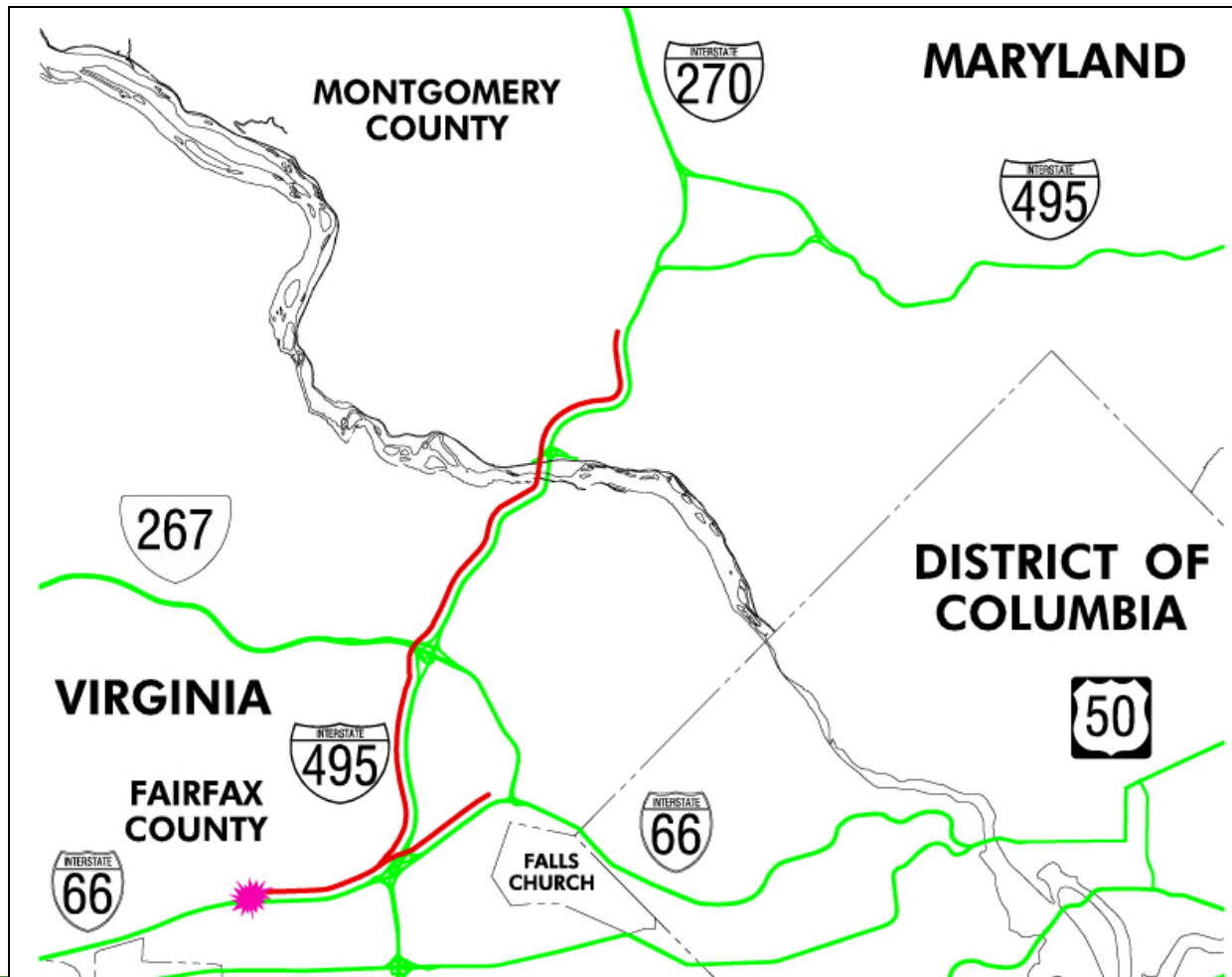
# Case Study No. 1: I-66 WB Bus Crash

- Incident timeline, location and actions
  - 4:45 PM, Friday before Memorial Day 2009, just west of I-495
  - Multi-Vehicle rear-end collisions including two charter buses with school children



- VDOT, Fairfax County, MATOC and SHA take actions
- 3+ hour incident duration, 12+ mile queues

# Case Study No. 1: Illustration of Queues



# Case Study No. 1: I-66 WB Bus Crash



Coordinated Incident Management savings assuming 20% additional modified trips:

- Traffic backups
  - Backup lengths reduced by 7.9 miles (36%)
  - Backup duration reduced by 1.2 hours (25%)
- Vehicle delay reduced by 10,000 hours (50%)
- Total mobility costs reduced by \$380,000 (52%) – including:
  - Greenhouse gas emissions and other pollutants
  - Wasted fuel
  - Lost time



# Case Study No. 2: I-495 Inner Loop Vehicle Fire



- Thursday September 17, 2009, 3:40 PM, approximately 5 miles north of VA State Line in Maryland at MD 187
- SHA CHART, State Police, Montgomery County Fire , VDOT respond or take action
- One hour incident duration, maximum 9-mile queue lasted 2.5 hours, significantly compounding typical evening rush hours

# Case Study No. 3: NY Avenue Shoulder Collapse



- Friday May 9 to Sunday May 11, 2008
- 1100 and 1200 blocks of NY Avenue NE, major arterial link between DC 295 and I-395
- Storm sewer failure and partial roadway collapse
- Inbound lane/lanes closed for entire weekend for emergency construction
- DDOT and SHA CHART respond or take action

# Summary and Conclusions

- Calculations based on 20 average and one major freeway, arterial or transit incidents of regional significance per month
  - Conservative, averaged 36 per month between 12/1/09 and 4/30/10
- Estimated annual benefits of direct MATOC action is \$12.9 million in mobility savings, including >\$500,000 GHG
  - Excludes cost of secondary incident reduction
- At an estimate full operating cost of \$1.2 million (which includes RITIS), MATOC provides a benefit-to-cost ratio of 10:1

# Questions



# MATOC Involvement in Selected Recent Incidents

- May 13
  - Suitland Parkway inbound near I-295
  - Accident with multiple injuries, all lanes blocked
  - Notifications made to MD SHA, MD Transit, WMATA, PG County
- May 27
  - Mid-span 14<sup>th</sup> Street Bridge, inbound
  - Vehicle accident leading to significant delays
  - Notifications made to MD SHA, MD Transit, WMATA, PG County, VDOT and VA Transit
- June 3
  - I-295 near D.C. Exit 1 (Laboratory Rd.), north of Beltway / W.W. Bridge
  - Overturned dump truck, damaged pavement, emergency pavement repair
  - Notifications made to MD SHA, VDOT, PG County