Traffic Signal Management

State Agency Perspective of Regional Traffic Signal Management

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Indiana Toll Road Lease
- Successful P3 relationship
- Created stable 10-year plan
- Building new corridors around the state earlier than anticipated

INDOT Capital Program

Major Moves

- $0
- $200
- $400
- $600
- $800
- $1,000
- $1,200
- $1,400
- $1,600
- $1,800

Interstate 69

Construction: 2008-2014

Sections 1-3: 67 miles
- Evansville to Crane
- CN Cost: $700 million
- Open to traffic: Dec. 2012

Section 4: 27 miles
- Crane to Bloomington
- Est. CN Cost: $400 million
- Open to traffic: Dec. 2014

Longest contiguous construction project in the US!
INDOT Staffing

- Employees:
  - 2007: 4,592
  - 2008: 4,367
  - 2009: 4,122
  - 2010: 3,877
  - Today: 3,727

- Pie chart showing:
  - District: 725 employees
  - CO: 3,000 employees

Graph showing a decline in staffing from 2007 to 2010.
Gas Tax Revenue

Revenue Since FY 2005

<table>
<thead>
<tr>
<th>Fiscal Years</th>
<th>Million $</th>
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<tbody>
<tr>
<td>2005</td>
<td>$560</td>
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<td>2006</td>
<td>$560</td>
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<td>2007</td>
<td>$540</td>
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<td>2011 Est.</td>
<td>$540</td>
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Moving forward

- We must live within our means
- Use performance measures that support operational decisions
- Cheaper, faster, better
Innovative thinking

Case: INDOT Signal Operations

How do we improve operations without spending more?

Analyze challenges

- Geographical
- Organizational
- Performance
Regional/ Statewide Management

Geographical/ Organizational Challenges

Are 3 districts the most effective way of prioritizing and managing signals in the Indianapolis region?

2,600 signals
Indianapolis Motor Speedway

- Two largest single day sporting events in the world
- Extensive series of special events during months of May and June

Up to 500,000 fans in area on race day
INDOT Signal Operations Restructuring
Resource Allocation and Regional/Statewide Management

Changed boundaries to align with field infrastructure, operational needs, and external customers needs.
NDOT ITS Division had long been managed regionally.
INDOT Commissioner
(Mike Cline)

Deputy Commissioner of District Operations
(Troy Woodruff)

Traffic Management
(Ryan Gallagher)

Traffic Control Systems Management
(Jim Sturdevant)

District Operations; Construction Mgmt; Maintenance Mgmt

Freeway ITS; Freeway Service Patrols; Work Zone Mgmt; Public Safety

Signal Logistical Support; Bench Tech Repair Services

Traffic Signal Personnel
(Engineers & Field Data Collectors)
Benefits of reorganization

- Signal operations becomes “arterial ITS” and is co-located with our freeway ITS staff
- Freeway/arterial integration
  - Existing integrated freeway/arterial
  - In Design/Potential future integrated freeway/arterial
Benefits of reorganization

- Prioritize and reallocate resources
  - No longer part time signal operations engineers in some districts with not enough engineers in another district
  - Resource decisions based on statewide needs, not per district.
- No additional costs
  - Focused our staff...didn’t add staff
Regional Transportation System

Benefits of reorganization

- Focuses highly trained and specialized staff
- Improved results
- Developing performance measures
- Technical details: Jim Sturdevant presentation

![Graph showing flow and percentage green over time](image)
Looking Ahead

- Struggling economy slowly recovering
- State revenues not anticipated to return to 2006 levels any time soon
- Federal reauthorization bill
- Continue to find innovative ways to solve our transportation challenges.
Wrap Up

- What’s next for arterial signal operations?
  - Continue to develop performance measures
  - Work with equipment manufactures to integrate these performance measures into their products
  - Develop requirements for a central system compatible with regional management
    - Pooled Fund Study- TPF Solicitation # 1296
    - 7 Agencies on Board to Date
Thank You