



# **Corridor Studies – Big & Small**

PA Planning Association Annual Conference

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## **US 30 Roadway Safety Audit**

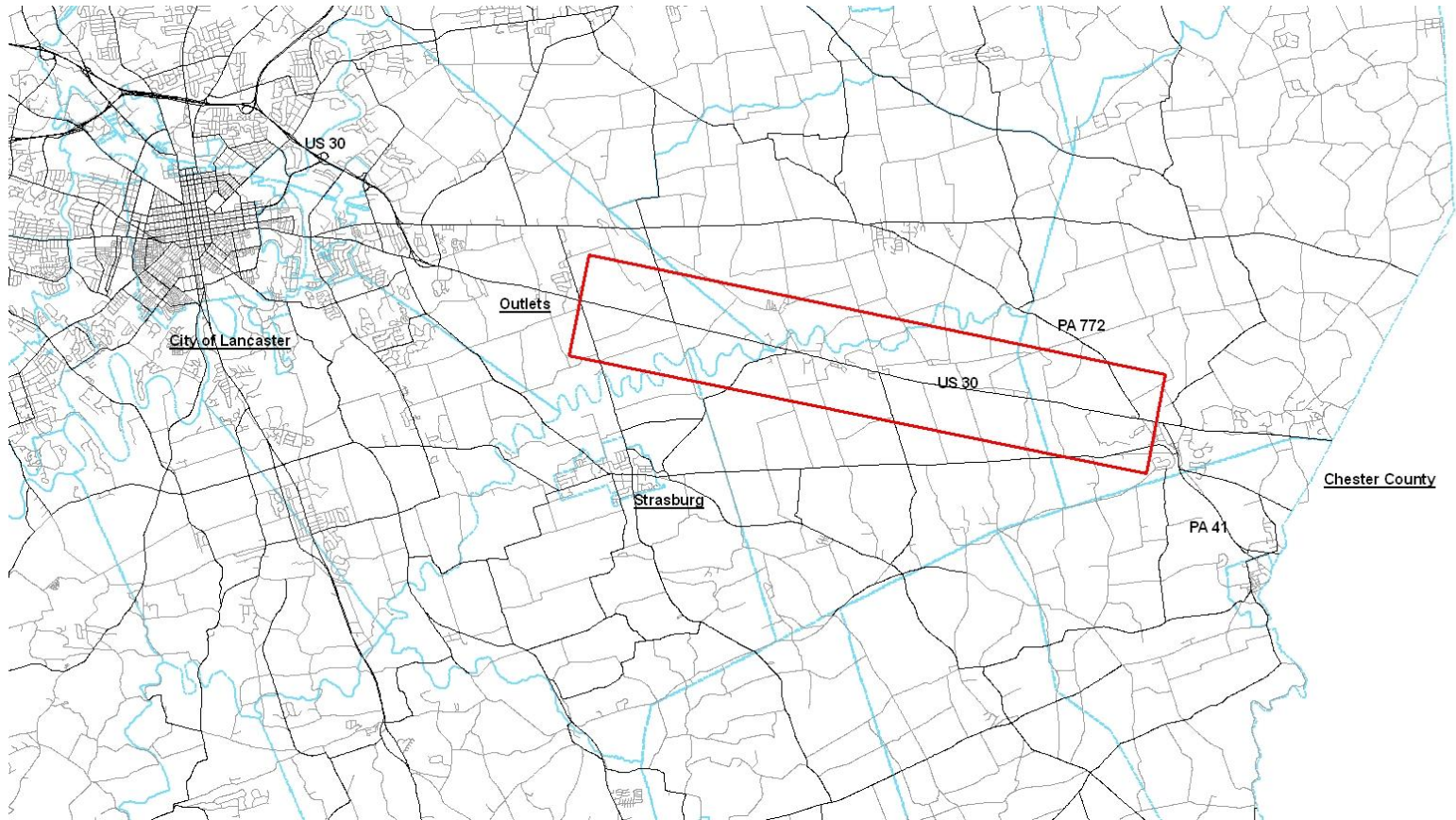
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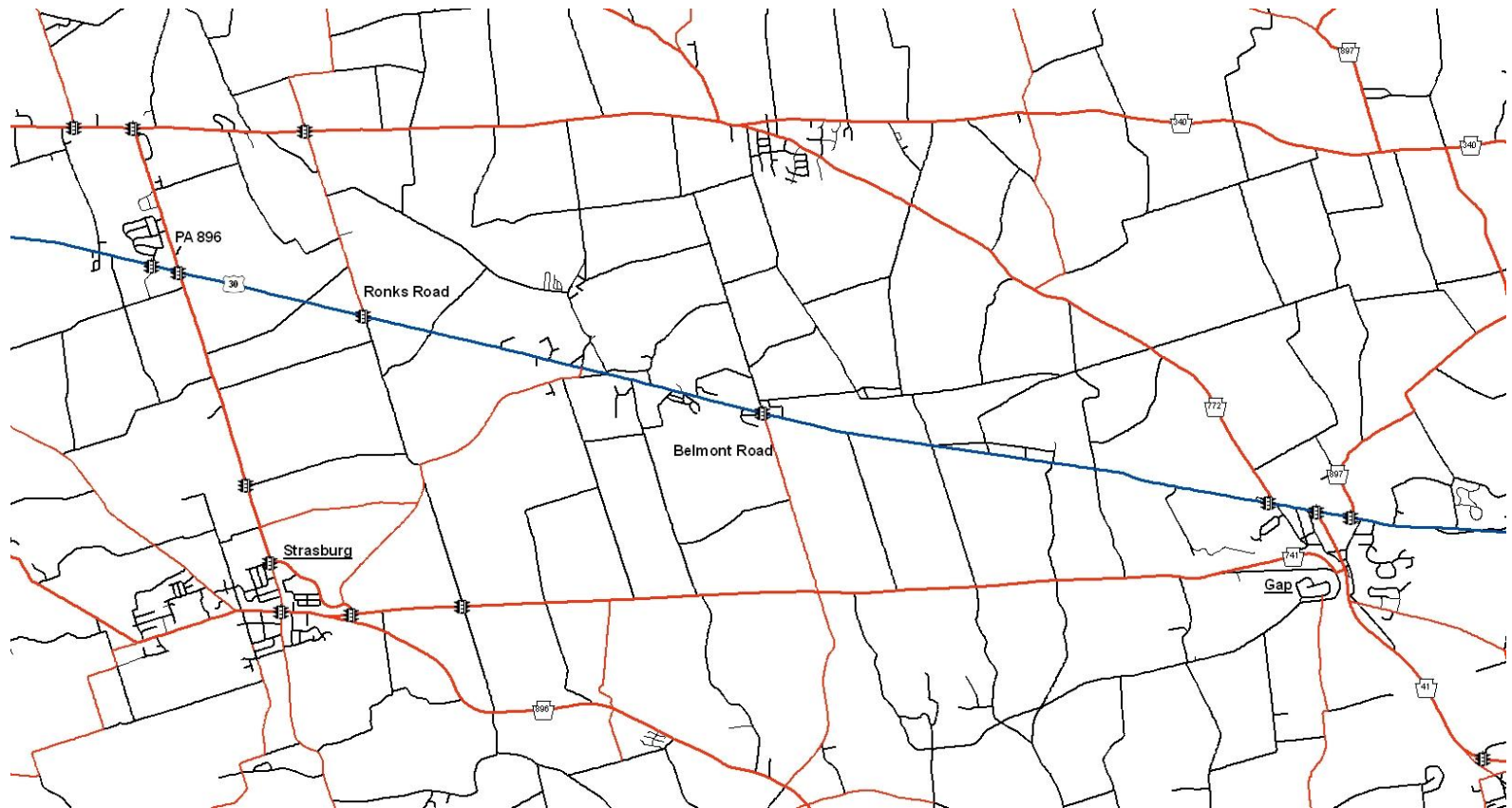
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717-299-8333

# US 30 Roadway Safety Audit



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# US 30 Roadway Safety Audit

- US 30 is a principal arterial extending from Philadelphia to Pittsburgh
  - In places it's a four lane expressway
  - In other places it's a two lane arterial with at-grade and signalized intersections
  - Current volumes on the section between PA 896 and PA 41 are around 18,000 AADT in this two lane section
  - As high as 20% trucks (Port of Wilmington to Harrisburg corridor)
  - Posted speeds: 35-45 mph
  - Signalized intersections each end and at Ronks, Belmont and PA 772

# US 30 Roadway Safety Audit

- US 30 EIS (PA 896 to PA 41)
  - Resumed in 2000
  - Alternatives right sized and narrowed to:
    - Relocation (new alignment)
    - 5 lane widening of existing highway
    - TSM alternative
  - Because of funding constraints PennDOT ceased work in 2009
  - Federal dollars were paid back



# US 30 Roadway Safety Audit

- US 30 Current Focus – Gap, safety improvements (HSIP), resurfacing, RSA
  - Gap Project (PA 772 to PA 41) – significant intersection improvements
    - \$4.8 ML in SXF funding (\$3.4 ML construction estimate)
    - 2012 let
  - Intersection Safety Improvements (HSIP funded)
    - PA 896 and Ronks Road intersections
    - On 2011 TIP for PE; construction in 2013
  - Stimulus resurfacing project just completed
  - US 30 bridge over Pequea Creek replacement – starts next year
  - RSA
  - Access Management?

# US 30 Roadway Safety Audit

- FHWA Perspective on RSA's
  - [safety.fhwa.dot.gov/rsa](http://safety.fhwa.dot.gov/rsa)
  - [www.roadwaysafetyaudits.org/](http://www.roadwaysafetyaudits.org/)

# US 30 Roadway Safety Audit

- Difference between RSA and a Traditional Safety Review – an RSA:
  - Is performed by a team independent of the project
  - Is performed by a multi-disciplinary team
  - Considers all potential road users
  - Accounts for road user capabilities and limitations
  - A formal often written response report is an essential element



# US 30 Roadway Safety Audit

- PennDOT District 8-0's approach to RSA's
  - One or so per year in MPO's
  - Worst 25 locations – MPO helps select corridor/s
  - Open end contract with consultant
  - Day 1 (full day)
    - Watch introductory FHWA video
    - Review of crash data
    - Review of night time video of corridor
    - Field view (driving and walking)
    - Discuss safety issues in field
  - Day 2 (1-2 hours) – review findings
  - Audit team: 2 PennDOT traffic unit personnel, municipal road masters or engineers, local police, transportation planners, others (bias free)

# US 30 Roadway Safety Audit

- Team members: PennDOT District, LCPC staff, township officials (East Lampeter/Paradise Twps.), consultants
- Crashes summarized and analyzed
- Field view held with above members to look at problems/possible solutions
- 310 reportable crashes over past 5 years
  - 244 injury crashes (160 minor)
  - 1 fatality
  - 44% rear-end; 25% angle; 18% fixed object
  - No specific correlation with environmental conditions (snow/rain/fog, etc.)

# US 30 Roadway Safety Audit

- Findings/recommendations categorized by level of effort (LMH) & potential safety benefit (LMH)
  - Level of Effort (LMH)
    - Low – local maintenance forces can make correction
      - Restriping; sign replacement; vegetation trimming/removal
    - Medium/High – design package & possibly outside contractor
      - Shoulder widening; signal warrant analysis; intersection reconfiguration
  - Potential Safety Benefit (LMH)
    - Roadway Safety Management Process section of AASHTO's Highway Safety Manual

# US 30 Roadway Safety Audit

- Safety Successes (existing safety features)
  - Pavement and markings will be in excellent condition when resurfacing is complete
  - Breakaway sign posts are utilized throughout the corridor
  - Advance warning signs are provided for signalized and most unsignalized intersections throughout corridor.
  - Adequate lighting at the following intersections with PA 896, Ronks Road, Belmont Road, and PA 772

# US 30 Roadway Safety Audit

- Safety Successes (existing safety features)
  - Center turn lane and adjacent left turn lanes are utilized throughout the corridor to facilitate turning movements



# US 30 Roadway Safety Audit

- Short-Range Recommendations – examples
  - Install solar powered wig-wags on all advance intersection warning signs for signalized intersections **(LH)**
  - Retime signals on US 30 and install volume density loops to increase throughput and minimize queuing along corridor **(LH)**
  - Replace signal back plates at SR 772 intersection **(LL)**



# US 30 Roadway Safety Audit

- Short-Range Recommendations – examples
  - Install guiderail and impact attenuators on parapet walls of Brackbill Road intersection (**LH**)



# US 30 Roadway Safety Audit

- Mid-Range Recommendations – examples
  - Reevaluate PA 772 intersection to determine if additional capacity is necessary once the Houston Run development is constructed **(MH)**
  - Remove channelized right and widen the throat of the northbound approach of Vintage Road intersection **(MM)**
  - Replace loop detectors with video detection at Belmont Road intersection **(MM)**

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- Mid-Range Recommendations – examples
  - Improve turn radii on all quadrants of US 30/Belmont Road intersection (**HH**)



# US 30 Roadway Safety Audit

- Long-Range Recommendations – examples
  - Install a new inlet at the Kinzer Road and US 30 Intersection **(MM)**
  - Paradise Township is exploring the option of providing an alley behind the homes on the north side of US 30 **(HH)**
  - Consider conducting a signal warrant analysis at Singer Ave. Intersection **(HH)**



# US 30 Roadway Safety Audit

- Long-Range Recommendations – examples
  - Realign Kinzer Road to intersect US 30 at 90 degrees and cul-de-sac existing skew to provide access to residents (HH)



# Corridor Study Common Themes

- Funding – MPO Unified Planning Work Program special studies is good source – 20% local share
- Think big (vision)/think small (operations – signals/ITS/implementable projects)
- Integrate smart transportation principles like - money counts, safety always, plan for all modes, etc.
- Include land use component
- Public/stakeholder involvement – esp. PennDOT/municipalities/private sector/transit agency
- Scale the corridor study appropriately – each corridor/study is different
- Access management is probably an appropriate recommendation/consideration in all studies





Thank You

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