Presentation Overview

- Need for Signing
- Industry’s Approach
- PennDOT’s Approach
- Signing Subcommittee
- Policy Developed
- Conclusion and Questions
Need for Signing
Need for Signing

- Trucks Hauling on Rural Roads
- Some need Guidance
Need for Signing

So many trucks
Development of a Well

- Shale Industry
- Well Development
  - Well Pad Construction
  - Drilling Operations
  - Hydraulic Fracturing
## Truck Volumes Generated

<table>
<thead>
<tr>
<th>Phase</th>
<th>Average Time Frame</th>
<th>Average Trucks per Day</th>
<th>Total Generated Trucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Pad Development</td>
<td>35</td>
<td>20</td>
<td>700</td>
</tr>
<tr>
<td>Drilling Operations</td>
<td>25</td>
<td>20</td>
<td>500</td>
</tr>
<tr>
<td>Fracing</td>
<td>7</td>
<td>300</td>
<td>2,100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>3,300</strong></td>
</tr>
</tbody>
</table>
Need for Signing

So many trucks

Hauling on rural roads
Marcellus Shale Formation
Wells Drilled
PennDOT Overview

• PennDOT Responsible for:
  – > 40,000 miles of roads (5th for state-maintained miles)
  – > 25,000 bridges
  – Significant portion rural roadways

• Gifford Pinchot’s 1930 Political Campaign
  – Get the farmer out of the mud
  – PennDOT adopted 20,156 miles of roadway
  – Pinchot Roads paved using light construction
Need for Signing

- So many trucks hauling on rural roads
- Why?
- Lost
Why are need guidance?

• Ignoring directions
• Inaccurate GPS
• Unclear Turns
• Unsafe Short-cuts
• Route Confusion
• Multiple haulers/destinations
Industry’s Approach
Industry’s Approach

• Sign it Themselves

• The Problem
  – Sign clutter
  – None standard designs
  – Driver confusion
  – Illegal!!!
Industry’s Approach
Industry’s Approach
Industry’s Approach
Industry’s Approach
Industry’s Approach
Industry’s Approach
Industry’s Approach
Industry’s Approach
PennDOT’s Approach
PennDOT’s Approach

REMOVE THEM
PennDOT’s Approach

• Signs have Value
  – Industry just re-installed
  – Keep trucks on proper roads
    • Pavement preservation
    • Reduced frustration
    • Enhanced safety

• Partnership – Signing Subcommittee
  – Central Office
  – District 3 and 12
  – Industry
Signing Subcommittee
PennDOT’s Approach

• Signing Subcommittee Goals:
  – Identify how to “fit” into policy
  – Develop an application
  – Determine sign color schemes
  – Design sign details
  – Allow use of a symbol
PennDOT’s Approach

- Research
  - Other States
  - Office of Chief Counsel
    - “Fit” signs into Posted & Bonded Program
  - Coordinated with FHWA
    - Color
    - Symbol
• PennDOT’s Stance
  – Installed in select locations
  – Color
    • Proposed green/white – guidance
  – No separate plaques or panels
  – No logos
    • Signs are to direct not to advertise
• Industry’s Stance
  – Installed in select locations
    ✔ Agreed – want signs to have meaning
    – Color: Proposed green/white – guidance
    ✗ Disagreed – wanted white/green
  – No separate plaques or panels
    ✔ Agreed – keep it simple
  – No logos
    ✔ Ok – but want company name and symbol
PennDOT’s Concept
Industry’s Concepts

Not a Regency Truck Route

No Seneca Traffic Past This Point

All Chief Traffic

All Chesapeake Traffic

All Chief Traffic
Industry’s Concepts

- Not a Chesapeake Truck Route
- No Seneca Over 10 Ton
- No Seneca Traffic Beyond This Point
- All Williams Traffic
- Not a Talisman Traffic Route
- Not an Approved Williams Route
- No Regency Traffic
Policy Developed

• Iterative Process
  – Application
    • Identifies triggers where signage may be appropriate
  – Well Derrick Symbol
    • No flame
    • Optional use
    • Tested Retroreflectivity
  – White background
    • Supports the weight restriction regulation 4902
    • Green or red text (consistent with MUTCD (Table 2A-5)
  – Sign Design
    • Small in size (around 24”-30”)
    • Series C or Series D font (smaller font size and/or spacing adjustments used to accommodate longer company names and messages)
Policy Developed
Policy Developed

• Adopted into Policy
  – June 15, 2016
  – Publication 23, Chapter 15
    • Subsection – Roadway Signing Plan (Option for Bonded Rout Heavy Users)
  – Publication 46, Chapter 2
    • Subsection – Heavy User Posted & Bonded Roadway Signs
Policy Developed

- No XXXXXXXXXX trucks beyond this point
- No Anadarko trucks beyond this point
- Not an approved XXXXXXXX route
- Chesapeake trucks
- Not a Seneca truck route
- No XXXXXXXXXX trucks over 10 tons
- XXXXXXX end truck route
- No EQT trucks over 10 tons
Partnership is Key
Questions?

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