2021 DelDOT Lessons Learned Workshop
Temporary Traffic Control / Maintenance of Traffic

March 8, 2021
• Work Zone Crashes in Delaware
• Safety Programs Section Staff & Responsibilities
• Design Considerations
• Inspection Considerations
• MASH Update
• Approved Products List
• Smart Work Zones
Delaware Statewide Crash Statistics

Less than 1% of all crashes statewide occur in work zones
Delaware Work Zone Crash Statistics

- Source: DelDOT’s CARS Program
- All crash severities
  - Property Damage Only
  - Injury
  - Fatal
- Overall crash statistics
  - 1,227 work zone crashes
  - 8 fatalities
  - 22 serious injuries
  - 229 minor injuries
  - 155 possible injuries
  - 953 crashes with property damage only
Delaware Work Zone Crashes by Time of Day

<table>
<thead>
<tr>
<th>Number of Work Zone Crashes</th>
<th>12A</th>
<th>1A</th>
<th>2A</th>
<th>3A</th>
<th>4A</th>
<th>5A</th>
<th>6A</th>
<th>7A</th>
<th>8A</th>
<th>9A</th>
<th>10A</th>
<th>11A</th>
<th>12P</th>
<th>1P</th>
<th>2P</th>
<th>3P</th>
<th>4P</th>
<th>5P</th>
<th>6P</th>
<th>7P</th>
<th>8P</th>
<th>9P</th>
<th>10P</th>
<th>11P</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>16</td>
<td>13</td>
<td>13</td>
<td>11</td>
<td>13</td>
<td>9</td>
<td>7</td>
<td>10</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>151</td>
<td></td>
</tr>
<tr>
<td>Monday</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>22</td>
<td>23</td>
<td>15</td>
<td>12</td>
<td>17</td>
<td>17</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>221</td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>17</td>
<td>16</td>
<td>14</td>
<td>20</td>
<td>12</td>
<td>11</td>
<td>17</td>
<td>18</td>
<td>14</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>3</td>
<td>12</td>
<td>8</td>
<td>9</td>
<td>3</td>
<td>216</td>
</tr>
<tr>
<td>Thursday</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>9</td>
<td>15</td>
<td>18</td>
<td>16</td>
<td>18</td>
<td>13</td>
<td>10</td>
<td>10</td>
<td>16</td>
<td>12</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>5</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>15</td>
<td>9</td>
<td>3</td>
<td>14</td>
<td>18</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>9</td>
<td>17</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>192</td>
<td></td>
</tr>
<tr>
<td>Saturday</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>11</td>
<td>15</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>27</td>
<td>23</td>
<td>7</td>
<td>12</td>
<td>14</td>
<td>11</td>
<td>22</td>
<td>76</td>
<td>61</td>
<td>66</td>
<td>97</td>
<td>113</td>
<td>97</td>
<td>94</td>
<td>91</td>
<td>76</td>
<td>70</td>
<td>57</td>
<td>44</td>
<td>26</td>
<td>40</td>
<td>38</td>
<td>21</td>
<td>1227</td>
<td></td>
</tr>
</tbody>
</table>

Lower Frequency

Higher Frequency

XX Number of Work Zone Crashes

Lower Frequency

Higher Frequency

XX Number of Work Zone Crashes

<table>
<thead>
<tr>
<th>Number of Work Zone Crashes</th>
<th>12A</th>
<th>1A</th>
<th>2A</th>
<th>3A</th>
<th>4A</th>
<th>5A</th>
<th>6A</th>
<th>7A</th>
<th>8A</th>
<th>9A</th>
<th>10A</th>
<th>11A</th>
<th>12P</th>
<th>1P</th>
<th>2P</th>
<th>3P</th>
<th>4P</th>
<th>5P</th>
<th>6P</th>
<th>7P</th>
<th>8P</th>
<th>9P</th>
<th>10P</th>
<th>11P</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>16</td>
<td>13</td>
<td>13</td>
<td>11</td>
<td>13</td>
<td>9</td>
<td>7</td>
<td>10</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>151</td>
<td></td>
</tr>
<tr>
<td>Monday</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>22</td>
<td>23</td>
<td>15</td>
<td>12</td>
<td>17</td>
<td>17</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>221</td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>17</td>
<td>16</td>
<td>14</td>
<td>20</td>
<td>12</td>
<td>11</td>
<td>17</td>
<td>18</td>
<td>14</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>3</td>
<td>12</td>
<td>8</td>
<td>9</td>
<td>3</td>
<td>216</td>
</tr>
<tr>
<td>Thursday</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>9</td>
<td>15</td>
<td>18</td>
<td>16</td>
<td>18</td>
<td>13</td>
<td>10</td>
<td>10</td>
<td>16</td>
<td>12</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>5</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>15</td>
<td>9</td>
<td>3</td>
<td>14</td>
<td>18</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>9</td>
<td>17</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>192</td>
<td></td>
</tr>
<tr>
<td>Saturday</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>11</td>
<td>15</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>27</td>
<td>23</td>
<td>7</td>
<td>12</td>
<td>14</td>
<td>11</td>
<td>22</td>
<td>76</td>
<td>61</td>
<td>66</td>
<td>97</td>
<td>113</td>
<td>97</td>
<td>94</td>
<td>91</td>
<td>76</td>
<td>70</td>
<td>57</td>
<td>44</td>
<td>26</td>
<td>40</td>
<td>38</td>
<td>21</td>
<td>1227</td>
<td></td>
</tr>
</tbody>
</table>
## Delaware Work Zone Crash Trends

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>85%</td>
<td>85% of work zone crashes occurred in New Castle County</td>
</tr>
<tr>
<td>78%</td>
<td>78% of work zone crashes resulted in Property Damage Only</td>
</tr>
<tr>
<td>68%</td>
<td>68% of work zone crashes occurred within the Activity Area of the work zone</td>
</tr>
<tr>
<td>62%</td>
<td>62% of work zone crashes occurred May through October during prime construction season</td>
</tr>
<tr>
<td>49%</td>
<td>49% of work zone crashes were rear-end crashes</td>
</tr>
<tr>
<td>42%</td>
<td>42% of work zone crashes occurred in a work zone with a lane closure</td>
</tr>
<tr>
<td>36%</td>
<td>36% of work zone crashes occurred weekdays between 9AM and 3PM</td>
</tr>
<tr>
<td>11%</td>
<td>11% of single vehicle crashes involved a vehicle striking work zone/maintenance equipment</td>
</tr>
<tr>
<td>9%</td>
<td>9% of vehicles involved in a work zone crash were truck/semi-trailer combinations (tractor-trailers)</td>
</tr>
<tr>
<td>1%</td>
<td>1% of people in work zone crashes were fatally or seriously injured</td>
</tr>
</tbody>
</table>
**Safety Section Contact Information**

**District Safety Officers**

- **Jimmy Maust**, North District
  - C: (302) 222-5997
  - E: James.Maust@delaware.gov

- **Martin Lord**, Canal District
  - C: (302) 222-5996
  - E: Martin.Lord@delaware.gov

- **Bobby Johnson**, Central District
  - C: (302) 502-1514
  - E: RobertJ.Johnson@delaware.gov

- **Dan Thompson**, South District
  - C: (302) 300-6639
  - E: Dan.Thompson@delaware.gov

**Engineering Contacts**

- **Lei Xu**, P.E.
  - Safety Programs Engineer
  - North and Central Districts
  - Reviews, TMPs and Detours
  - O: (302) 659-4070
  - E: Lei.Xu@delaware.gov

- **David Wynn**
  - Safety Programs Engineer
  - Canal and South Districts
  - Reviews, TMPs and Detours
  - O: (302) 659-4065
  - E: David.Wynn@delaware.gov

**Statewide Contacts**

- **Jeff Van Horn**, P.E.
  - Safety Programs Manager
  - C: (302) 922-7279
  - E: Jeffrey.VanHorn@delaware.gov

- **Gerald Nagyiski, Jr.**
  - Chief Safety Officer
  - C: (302) 222-5977
  - E: Gerald.Nagyiski@delaware.gov

- **Catherine Weishaupt**
  - Statewide Safety Officer
  - C: (302) 383-7570
  - E: Catherine.Weishaupt@delaware.gov
Design Considerations

• General Items
  – Plan review issues
    • Plan review comments not being addressed
      – Between formal Department-wide reviews
      – During interim reviews when specifically asking for Safety’s input
    • Coordination with Safety related to major changes in phasing during design
    • Reach out early and often to minimize back and forth commenting
  – Detour plan submittals
    • Reviewed separately from MOT plans
    • Submit detour plans directly to David Wynn or Lei Xu at semi-final for review
    • Submit detour plans directly to David Wynn or Lei Xu at final for signature
    • In-house projects – submit request to David Wynn or Lei Xu prior to semi-final to prepare detour plans
Design Considerations

• General Items
  – Lane closure restrictions
    • Provide a lane closure matrix for each roadway impacted
    • Lane closure matrix specifies allowable lane closure hours for:
      – Travel lane closures
        » Flagging operations
        » Single lane closures
        » Double + lane closures
      – Turn lane closures
      – Road closures
    • Provide separate notes for road closures occurring at a specific time of year, duration, etc.
  • Do not include road user costs
Design Considerations

- **General Items**
  - Transportation Management Plans
    - At preliminary, request TMP determination from Safety
    - Send request to David Wynn or Lei Xu and Jeff Van Horn
  - Submit draft TMP at semi-final
  - Submit final TMP for signature at final, or prior to PS&E
  - Contractor TMP requirements MUST be noted in MOT plans or via special provision
    - TMP document typically not included in bid documents
  - Lane Closure Hour Restriction Checklist
    - Required for all projects per Policy Implement C-09
    - Checklist signed prior to PS&E
    - Start coordination early, especially for high profile projects
Design Considerations

- General Items
  - Road User Costs
    - REQUIRED for all lane closures and/or detours
  - Lane closures
    - Daily lane closures – RUC calculated for LATE opening (15 min. cost basis)
    - Static lane closures – RUC calculated for LATE opening based on phase duration or other milestone (daily cost basis)
  - Detour RUCs calculated similarly
  - Calculated costs reviewed with designer, Safety, Construction and Contract Administration
  - RUCs noted in General Notices for bidding purposes

- REQUIRED for all lane closures and/or detours
- Lane closures
  - Daily lane closures – RUC calculated for LATE opening (15 min. cost basis)
  - Static lane closures – RUC calculated for LATE opening based on phase duration or other milestone (daily cost basis)
- Detour RUCs calculated similarly
- Calculated costs reviewed with designer, Safety, Construction and Contract Administration
- RUCs noted in General Notices for bidding purposes
Design Consideration

- Maintenance of Traffic Plans
  - Label all roads, provide stationing, north arrows, etc.
  - MOT Notes
    - Use current pay item numbers within notes, still seeing projects with pay items from 2001 spec
    - Use current approved MOT notes
      - Should not see “TRAFFIC CONTROL MANUAL”, but see “DE MUTCD”
    - If using Traffic Officers, provide traffic officer notes from approved MOT notes document
  - “Permanent” Warning Sign Plan
    - Advance warning signs
    - Begin/End higher fines zone signage
    - Divided highways – double post signs (show two sign symbols to indicate double posting)
Design Considerations

• MOT/Phasing Plans
  – Pavement markings
    • Depict/callout striping to be placed and removed
    • Show existing striping where temporary ties into existing and label
    • Durations > 30 days, consider “permanent” striping items to minimize repainting and maintenance needs
  – Temporary Barrier
    • Length of Need calculations
    • Pinned vs. unpinned
    • Barrier offsets
    • Typical sections – provide anytime barrier is used
  – TMAs
    • Ensure appropriate quantity based on work operations and anticipated number of crews
      – May need multiple TMAs each day
      – TMAs are required for installing/removing all TTC when a TMA is required by the DE MUTCD
Design Considerations

• Work at intersections
  – Right-turning paths need to be considered when working around channelizing islands
    • Temporary truck detours may be needed
  – Sequence intersection work to minimize MOT
    • Review Intersection TTC memo on DE MUTCD webpage
    • Consider turning restrictions and side street restrictions to reduce conflict points during active intersection work
    • Temporary signal plans and temporary timesheets may be required

• Pedestrian MOT
  – Still required and we’re seeing good plan information
  – Sequence work to account for continued use of pedestrian signals at signalized pedestrian crossings
Inspection Consideration

• General Compliance
  – Safety vests – yes, I had to remind everyone!
  – Coordination with adjacent projects / work zones
    • Signing overlaps
    • Avoid overlapping MOT
  – Workers entering unprotected lanes of freeways

Section 6D.03 Worker Safety Considerations

628. (DE Revision) Workers should not enter unprotected travel lanes of interstates, freeways, or expressways during planned activities, including crossing the roadway to access the median or shoulder on the opposite side from the protected work area.

– Quality of TTC Devices
  • Marginal or better based on ATSSA Quality Guidelines Brochure (Section 801 of Std. Spec.)
– Taper lengths
  • Lengths based on Tables 6C-3 and 6C-4 of DE MUTCD
Inspection Considerations

• Work Zone Signage
  – Sign Storage

Section 6F.03 Sign Placement

Standard:
19 (DE Revision) When portable signs are no longer in use, the signs and their supports shall be removed or placed behind positive protection.
Inspection Considerations

• Work Zone Signage
  – Sign Placement
    • Use the correct sign
    • Place signs in accordance with DE MUTCD, Section 6F.03, the Plans and appropriate Typical Applications
    • Ensure sign stands are oriented correctly.
      – Hi-Pro sign stands, short side of base is installed towards approaching traffic
    • Make sure signs are visible to motorists
    • Do not block sidewalks with signage
  – Sign Covering
    • Cover entire face of sign when sign is not needed for work operation or for detour
    • Use approved sign cover (see Std. Specification Section 810)
Inspection Considerations

• TMA Usage
  – See DE MUTCD for TMA requirements, Section 6F.86, paragraph 05-08.
  – When required, use for appropriate operations INCLUDING placement and removal of temporary traffic control devices INCLUDING:
    • Setting and removing advance warning signs from the “permanent” warning sign plan
    • Setting and removing daily temporary warning signs for daily MOT setups
    • Setting and removing detour signs
    • Setting and removing cones, drums, barricades, etc. within work zone
      – Work shall not occur from the TMA vehicle
    – See typical applications of DE MUTCD for information on TMA placement for various setups
    – Section 6G.23 for standards and guidance for installing and removing TTC
  – SAFETY is paramount for the workers and traveling public
MASH and Temporary Traffic Control

• 2009 MASH
  – Anticipated manufacturers would develop MASH-compliant devices
  – No sunset requirements of NCHRP 350 devices
  – Safety benefits not realized

• 2016 MASH
  – FHWA/AASHTO Joint Implementation Agreement
  – Sunset dates of NCHRP-350 roadside hardware
    • 12/31/2017: W-beam barriers and cast-in-place concrete barriers
    • 6/30/2018: W-beam terminals
    • 12/31/2018: Cable barriers, cable barrier terminals and crash cushions
    • 12/31/2019: Bridge rails, transitions, all other longitudinal barriers, all other terminals, sign supports and all other breakaway hardware

• Specific requirements for work zone devices dependent on normal service life
MASH and Temporary Traffic Control

• Work Zone Devices
  – Devices manufactured after December 31, 2019 must have been successfully tested to the 2016 edition of MASH
  – Devices manufactured on or before December 31, 2019 and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives
  – Includes:
    • Sign stands
    • Barricades
    • Channelizing Devices
    • Portable barrier
    • TMAs
  – Delaware specific sunset dates provided on Approved Products Lists for Temporary Traffic Control Devices
Approved Products List

- Approved Products Lists for TTC devices developed in 2018
  - Continuously updated with new approved devices as they are submitted by vendors
  - Updates forthcoming to be consistent with 2020 Standard Spec
  - APLs for:
    - Permanent Sign Stands
    - Temporary Sign Stands
    - Type III Barricades
    - Truck/Trailer Mounted Attenuators
    - Temporary Impact Attenuators/Sand Crash Cushion Arrays
    - Temporary PCC Safety Barrier
  - Vendor product submittal process and form currently under development
  - Intent is to eliminate the need for the dreaded “NCHRP 350” packet
- See Section 801 of 2020 Standard Specs
Smart Work Zones

• Smart Work Zones have been deployed on select projects since 2010
  – First “Smart Work Zone” was the I-95 Toll Plaza project with remote programmable message boards controlled by the TMC
  – Queue Detection System used on I-95 with the I-95/SR 141 Ramps G&F Project
  – Remote programmable PCMS used on SR 1 Frederica GSI
  – Smart work zones planned for SR 24
    • Open end, task order based contract to be utilized
    • System provided by and maintained by vendor with minimal Department involvement
      – Devices linked to TMC, website, etc.
      – DelDOT owned modems in devices
  – Mega Smart Work Zone currently active for I-95 Corridor Rehabilitation
    • Contractor provided message boards with DelDOT modems
    • Consultant developed logic for messaging plans
    • Use of existing TMC systems to integrate devices and logic into an automatically managed plan, minimal human interaction
I-95 Corridor Rehab. Smart Work Zone
I-95 Corridor Rehab. Smart Work Zone

- 2:52 PM, Feb. 23, 2021 – I-95 SB @ US 202 (looking south)
I-95 Corridor Rehab. Smart Work Zone

- 2:53 PM, Feb. 23, 2021 – I-95SB @ Delaware Avenue (looking north towards BRB)
I-95 Corridor Rehab. Smart Work Zone

- Fixed detection showing speeds <35 MPH – triggers Tier 1 messaging
I-95 Corridor Rehab. Smart Work Zone

- System Activity Log

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Username</th>
<th>Activity</th>
<th>Event Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/23/2021</td>
<td>System</td>
<td>Activating Sign[Fixed NVMS004 - I-95 at DE &amp; PA Line (SB)]</td>
<td>95 SOUTH DELAYS AHEAD USE EXIT 3</td>
</tr>
<tr>
<td>02/23/2021</td>
<td>System</td>
<td>Activating Sign[Fixed NVMS007 - I-95 &amp; 12th St (SB)]</td>
<td>TRAFFIC IN WILMUSE 12TH ST EXIT 3</td>
</tr>
<tr>
<td>02/23/2021</td>
<td>System</td>
<td>Activating Sign[VMS0514]</td>
<td>TRAFFIC IN WILMUSE 3</td>
</tr>
<tr>
<td>02/23/2021</td>
<td>System</td>
<td>Activating Sign[VMS0512]</td>
<td>TRAFFIC IN WILMUSE 202</td>
</tr>
<tr>
<td>02/23/2021</td>
<td>System</td>
<td>Activating Sign[VMS0511]</td>
<td>TRAFFIC IN WILMUSE 8</td>
</tr>
<tr>
<td>02/23/2021</td>
<td>System</td>
<td>Activating Sign[VMS0513]</td>
<td>TRAFFIC IN WILMUSE 141 S</td>
</tr>
</tbody>
</table>
I-95 Corridor Rehab. Smart Work Zone

- Activated VMS – Based on Plan Logic
Thank you

Questions???

Jeff Van Horn, PE
Safety Programs Manager
Jeffery.VanHorn@delaware.gov
(302) 922-7279

Adam Weiser, PE, PTOE, RSP
Whitman, Requardt & Associates, LLP
aweiser@wrallp.com
(302) 485-0863 (direct line)