DELAWARE’S ELECTRONIC SPEED SAFETY PROGRAM

Scott Neidert, PE, PTOE, RSP
HSIP Manager/Traffic Resource Engineer
BACKGROUND

• Section 142 of Senate Bill 200 of the 151st General Assembly
  • Authorized the installation of temporary mobile speed enforcement devices
  • Only within the work zone of the I-95 Restore the Corridor project in Wilmington
  • Goal: to reduce speeding and crashes and increase safety

• Entered agreement with Conduent, DelDOT’s Red Light Camera vendor

• Devices were first made operational on January 17, 2022
CAMERA LOCATIONS

• Critical Crash Areas
  • Installed in single-lane segment where a crash could close entire direction

• Centralized Location
  • Between Brandywine River Bridge and Viaduct

• Maintenance Practicality
  • Locations identified that were easily accessible to safely perform any required maintenance and repairs
MILESTONES

• Warning Period
  • First 3 months
  • Only warning notices issued

• Citation Period
  • Began April 17, 2022
  • First violations still issued only a warning
  • Subsequent violations issued citations
FINES

• A violation was recorded if a vehicle was traveling at a speed of **58 mph or greater**
  • **13+ mph** in excess of the posted **45 mph** work zone speed limit

• Fine components:
  • **$20 base fine**
  • additional fine for the speed difference over 45 mph:
    • **$1** for each mph over 45 for recorded speeds of 58-60 mph,
    • **$2** for each mph over 45 for recorded speeds of 61-64 mph,
    • **$3** for each mph over 45 for recorded speeds of 65 mph or greater
  • a surcharge of 50% of the speed violation,
  • **$10** assessment for the Volunteer Ambulance Company Fund
  • **$15** assessment for the Fund to Combat Violent Crimes
News Room

News

Statewide - Electronic Speed Safety Program to Begin in I-95 Restore the Corridor Construction Zone

The Delaware Department of Transportation (DelDOT) in partnership with the Delaware State Police announce that beginning Monday, January 17, 2022, the pilot Electronic Speed Safety Program will be active only in the I-95 construction zone in Wilmington and will last until the end of the project. The goal of the pilot program is to reduce work zone speeds and crashes, change driver behavior, and improve work zone safety for workers and motorists. In 2021, there were 423 crashes in the I-95 work zone in Delaware, an increase of 49 percent in the same area from 2019. The first 30 days of the program will be a warning period. After that warning notices will be mailed to motorists for the first violation of exceeding the posted work zone speed limit, and all subsequent violations will result in a violation notice. Registered vehicle owners will receive a base violation of $20.00 and an additional amount is added for each mile per hour over the posted work zone speed limit in accordance with Del. C. 94169(c).
DAY ONE
CRASH DATA

- Camera monitoring period in 2022 (January 17 – November 4) was compared to same period in prior years.
- Because the 2021 data may be skewed by the beginning of construction along I-95 and the first driver experience with contraflow conditions, 2019 crash data prior to construction and the COVID-19 pandemic was also analyzed.

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2022</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Crashes</td>
<td>237</td>
<td>191</td>
<td>-19%</td>
</tr>
<tr>
<td>Injury &amp; Fatal</td>
<td>39</td>
<td>31</td>
<td>-21%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2022</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Crashes</td>
<td>300</td>
<td>191</td>
<td>-36%</td>
</tr>
<tr>
<td>Injury Crashes</td>
<td>45</td>
<td>31</td>
<td>-31%</td>
</tr>
<tr>
<td>Fatal Crashes</td>
<td>1</td>
<td>1</td>
<td>0%</td>
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</table>

2021 – Viaduct Under Construction

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2022</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>Total Crashes</td>
<td>342</td>
<td>191</td>
<td>-46%</td>
</tr>
<tr>
<td>Injury Crashes</td>
<td>50</td>
<td>31</td>
<td>-38%</td>
</tr>
<tr>
<td>Fatal Crashes</td>
<td>1</td>
<td>1</td>
<td>0%</td>
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2019 – Pre-Construction & Pre-COVID

2018 – Additional “Before” Comparison
SPEED RESULTS

• **Before** period
  • Following major traffic shift on December 19, 2021, to January 16, 2022

• **After** period
  • Following camera activation on January 17, 2022, to two-lane reopening on November 4, 2022

• Speeds recorded by Wavetronix devices within the work zone reported significantly lower speeds following the camera activation and warning notices being issued

<table>
<thead>
<tr>
<th>Daily Average Speeds (mph)</th>
<th>NB I-95</th>
<th>SB I-95</th>
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</thead>
<tbody>
<tr>
<td>Before Cameras</td>
<td>54.3</td>
<td>49.0</td>
</tr>
<tr>
<td>After Cameras</td>
<td>49.0</td>
<td>43.1</td>
</tr>
<tr>
<td>Difference (mph)</td>
<td>-5.4</td>
<td>-5.9</td>
</tr>
<tr>
<td>% Difference</td>
<td>-9.9%</td>
<td>-12.1%</td>
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CITATIONS & FINES

• Minimum fine (58 mph):
  • $74.50

• Median fine (60 mph):
  • $77.50

• 85th-percentile fine (65 mph):
  • $145.00

• Highest speed recorded in the single-lane work zone was 110 mph
  • Occurred during warning period
VIOLATION & FINANCE DATA

• Revenue/Expenses through November:
  • Expenses: $722,811.00
    • $712,900.00 to Conduent
      • 2 cameras @ $35,645 each, monthly
      • $9,911.00 in payroll expenses to DSP
  • Fines Issued: $977,403.50
    • $664,918.50 in base fines and surcharges
    • $93,360.00 in late fees
    • $219,125.00 for Violent Crimes and Ambulance Funds
  • Actual Receipts: $462,252.60

<table>
<thead>
<tr>
<th>Warnings Mailed</th>
<th>Citation Notices Mailed</th>
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<tbody>
<tr>
<td>63,714</td>
<td>8,765</td>
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</tbody>
</table>
IN-STATE vs. OUT-OF-STATE

Pennsylvania
20,042
28%

Maryland
4,728
7%

New Jersey
4,065
6%

Virginia
1,420

Florida
1,198

New York
1,092

North Carolina
423

Delaware
36,437
51%

Other
2,099

Massachusetts
246

Texas
224

Georgia
220

Connecticut
112

District of Columbia
111

South Carolina
150

California
129

Ohio
116

Arizona
85

Tennessee
84

Illinois
83

North Carolina
42

All Other
319
REPEAT OFFENDERS

- Tracking data showed 7,331 vehicles violated the work zone speed limit at least twice
  - May include multiple warnings during warning-only period

<table>
<thead>
<tr>
<th># of Violations</th>
<th># of Vehicles</th>
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<tbody>
<tr>
<td>2</td>
<td>5,218</td>
</tr>
<tr>
<td>3</td>
<td>1,289</td>
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<tr>
<td>4</td>
<td>414</td>
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<tr>
<td>5</td>
<td>180</td>
</tr>
<tr>
<td>6</td>
<td>99</td>
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<tr>
<td>7</td>
<td>51</td>
</tr>
<tr>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
</tr>
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PA Vehicle – received 8 citations from April to June

DE Vehicle – all during 3-month warning period
NEXT STEPS

• Legislative support and approval is needed to continue the program
  • DelDOT granted this one-time pilot program by the General Assembly

• DelDOT was pleased with the outcome of the pilot since crash numbers and speeds were significantly reduced

• Speeding is an emphasis area in DE Strategic Highway Safety Plan
THANK YOU

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