MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

MDOT State Highway Administration

MD 405 at US 301

October 20, 2025 - Price Community Center

Ground Rules

- Please mute phones!
- Civil discussion
- Jot down slide/page numbers for easy reference later
- Q&A after presentation - informal, but must be orderly
- Try to limit comments to a few minutes so others can speak
- This presentation is available on the web – scan the QR code here or on the last slide

Why close the MD 405 crossover again?

- 6 crashes from October 2024 reopening through June 2025
- Two fatal crashes in one week in July 2025
- *Did something change suddenly to influence driver behavior?*

Crash history 2020-2025

A Queen Anne's County study indicated US 301 traffic volume has increased more than 30 percent since the Middletown bypass opened in 2019.

January 2020 through July 2025:

Vehicle traveling...	Crashes
MD 405 west at US 301 south	66
MD 405 east at US 301 south	6
MD 405 west at US 301 north	2
MD 405 east at US 301 north	6

Crash history focus – 405 west at 301 south

- 66 total crashes in the past 5 years
- 64 of 66 crashes occurred during the **daytime**
- 61 of 66 crashes occurred in **dry** conditions
- 64 of 66 crashes were **angle** crashes
- 55 of 66 crashes cited as **failure to yield** or failure to give full attention

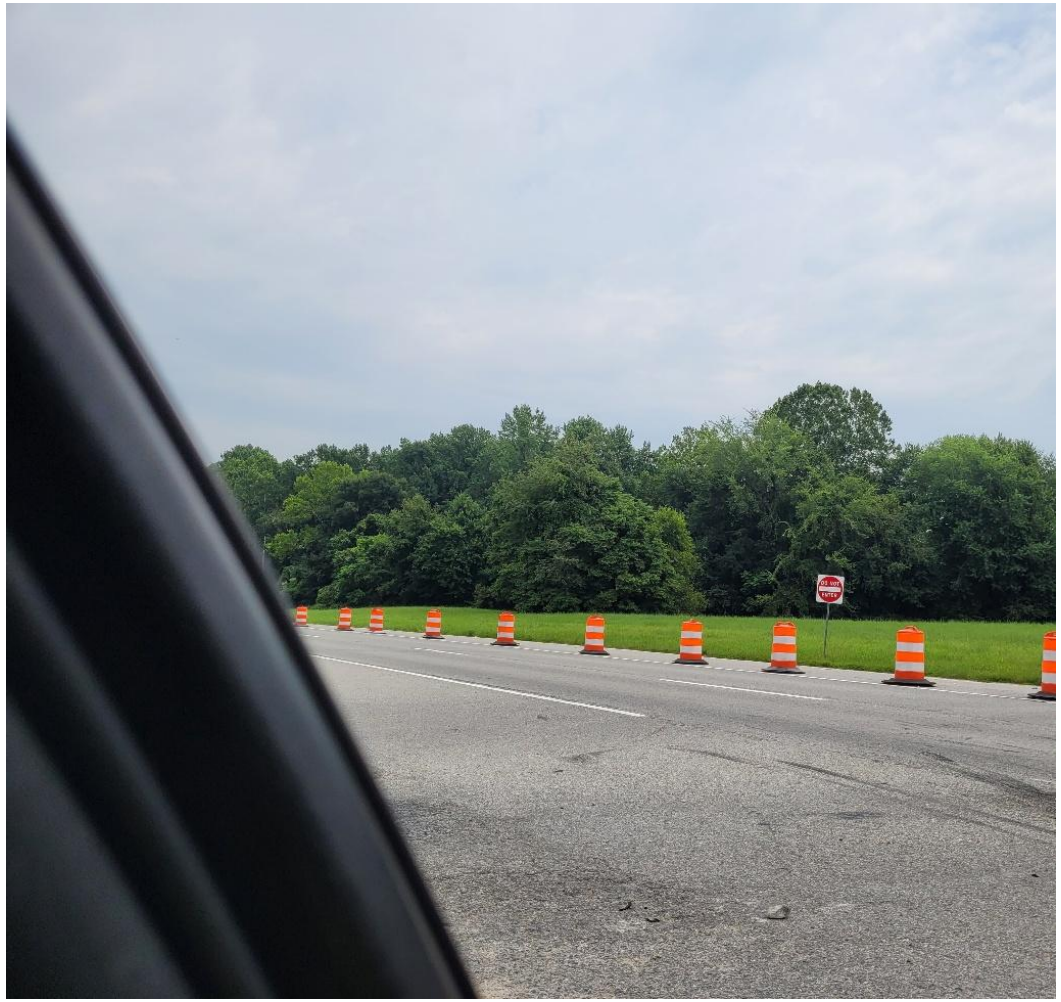
Crash history comparison 2022-2024

January 2022 through December 2024:

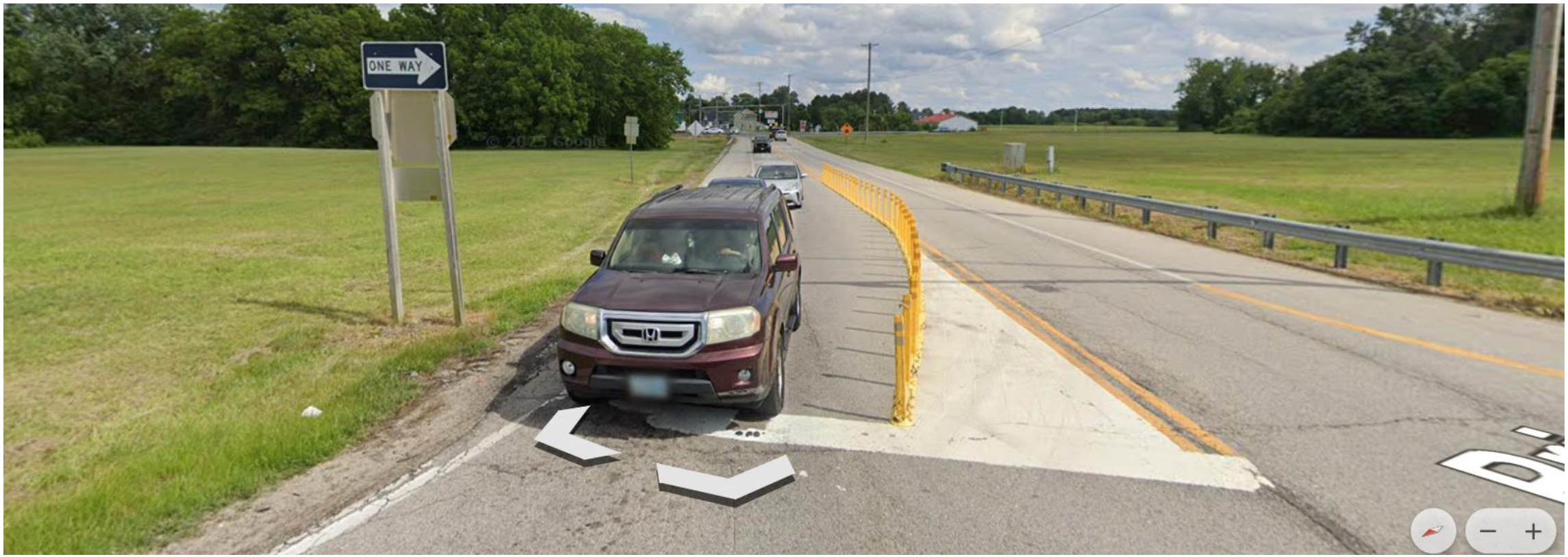
Intersection	Crashes
US 301 south at MD 405	45
US 301 north at MD 405	8
US 301 south at Hayden Clark Rd.	6
US 301 north at Hayden Clark Rd.	9
US 301 at MD 19 (both directions)	7

Visibility – windshield pillars

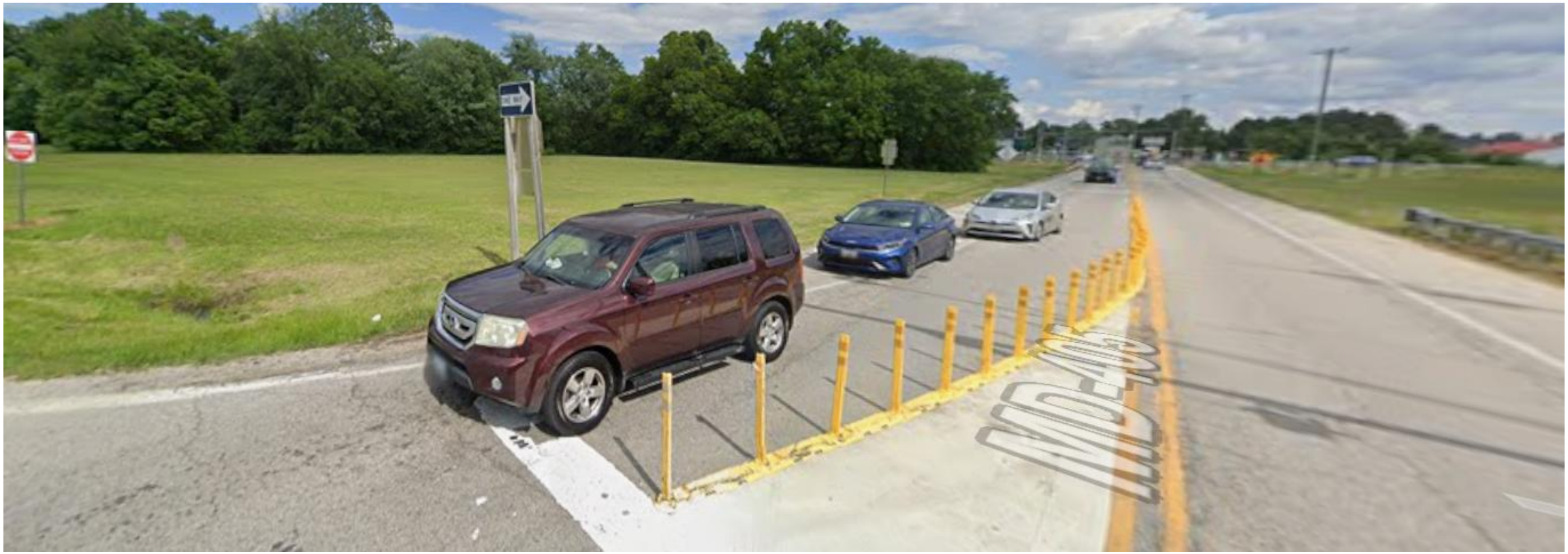
- Vehicle “A” pillar can block view of SB 301 vehicles
- Geometry and distance can “hide” a tractor trailer behind a pillar
- MD 405 driver commits to the intersection without seeing vehicle on US 301
- This is the reason for MD 405 channelization



Channelization - MD 405 west at US 301 south



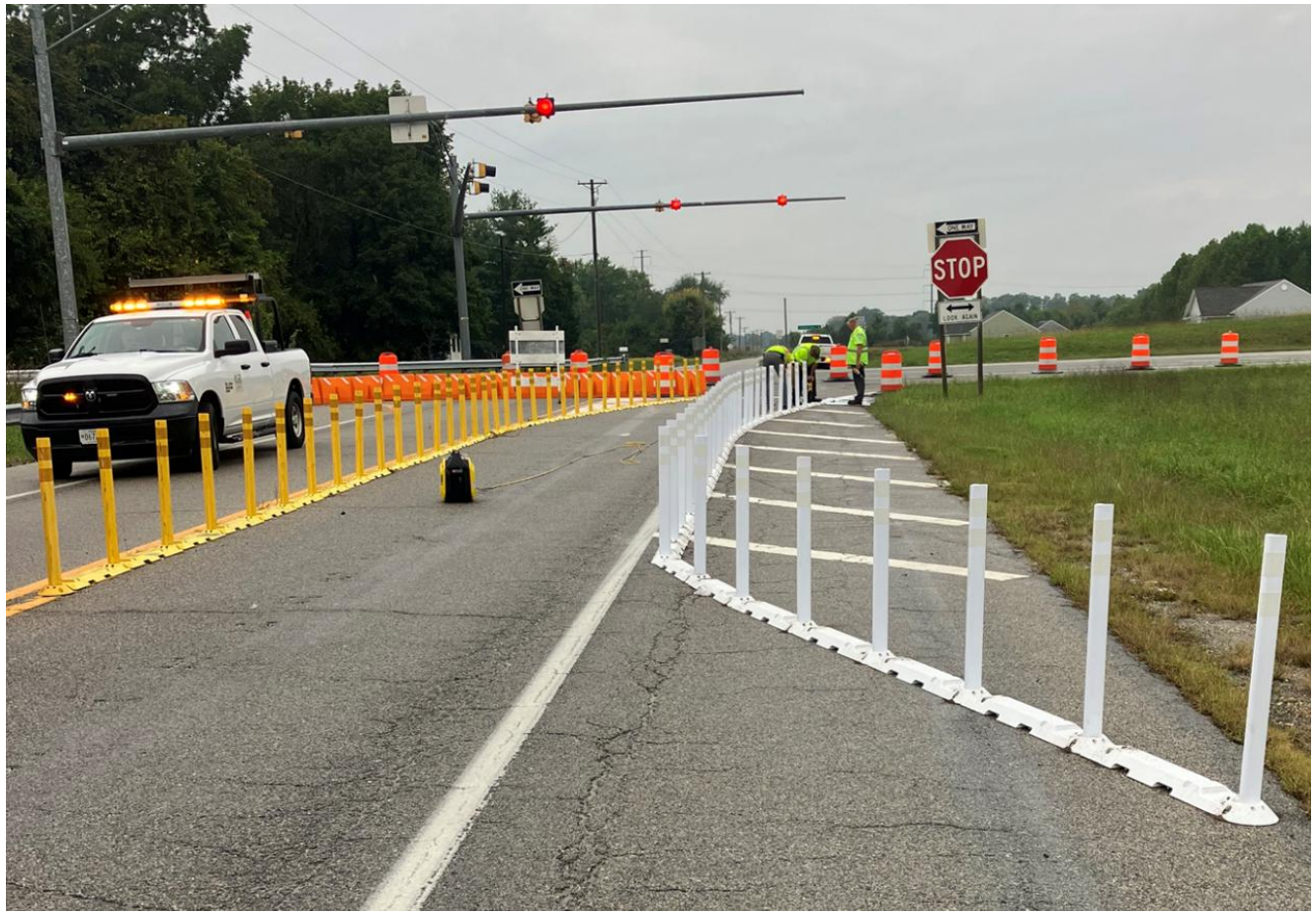
Channelization - MD 405 west at US 301 south



Channelization - MD 405 west at US 301 south

September 2025

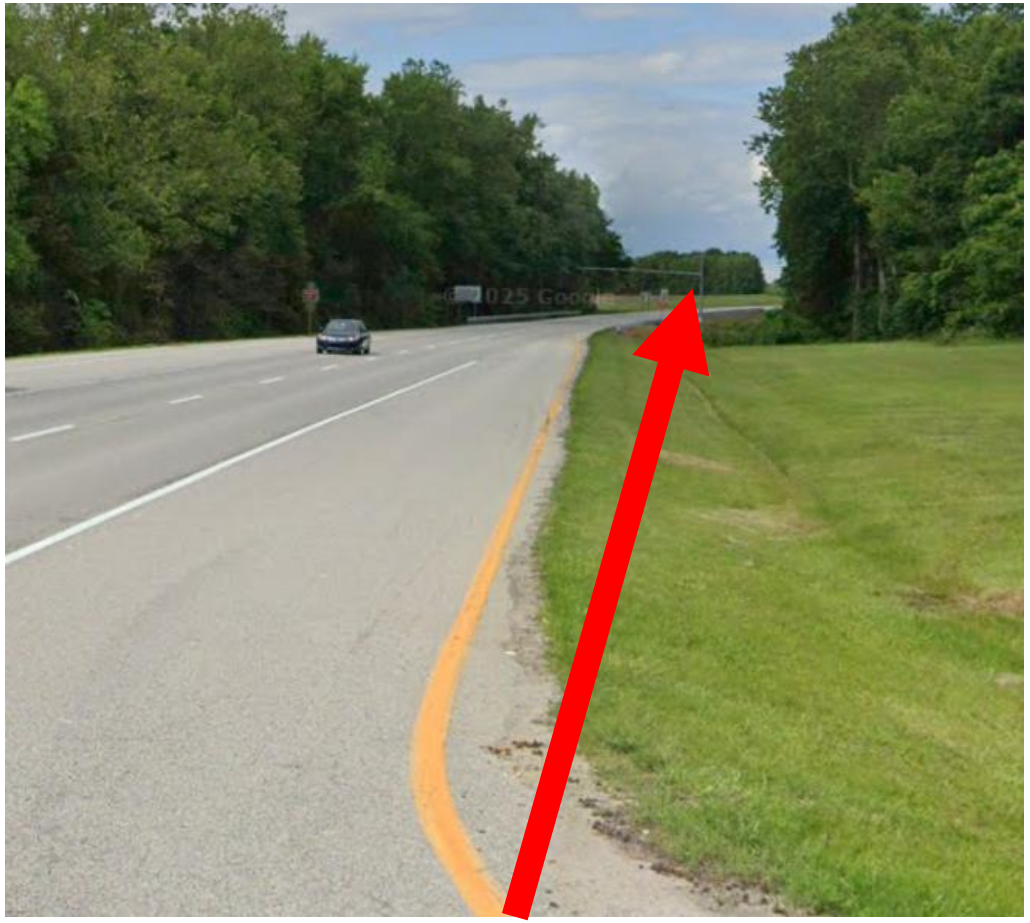
- Channelization reinforced to emphasize visibility through windshield.



Line of sight, aka “sight distance”

- Sight distance is over 1,200 feet looking up SB 301 from WB 405
- Line of sight is straight – but a road curve can skew judgement

Speed	Feet Per Second	Time from curve to MD 405
60 mph	88	13.6 seconds
80 mph	117	10.3 seconds
100 mph	147	8.2 seconds
120 mph	176	6.8 seconds



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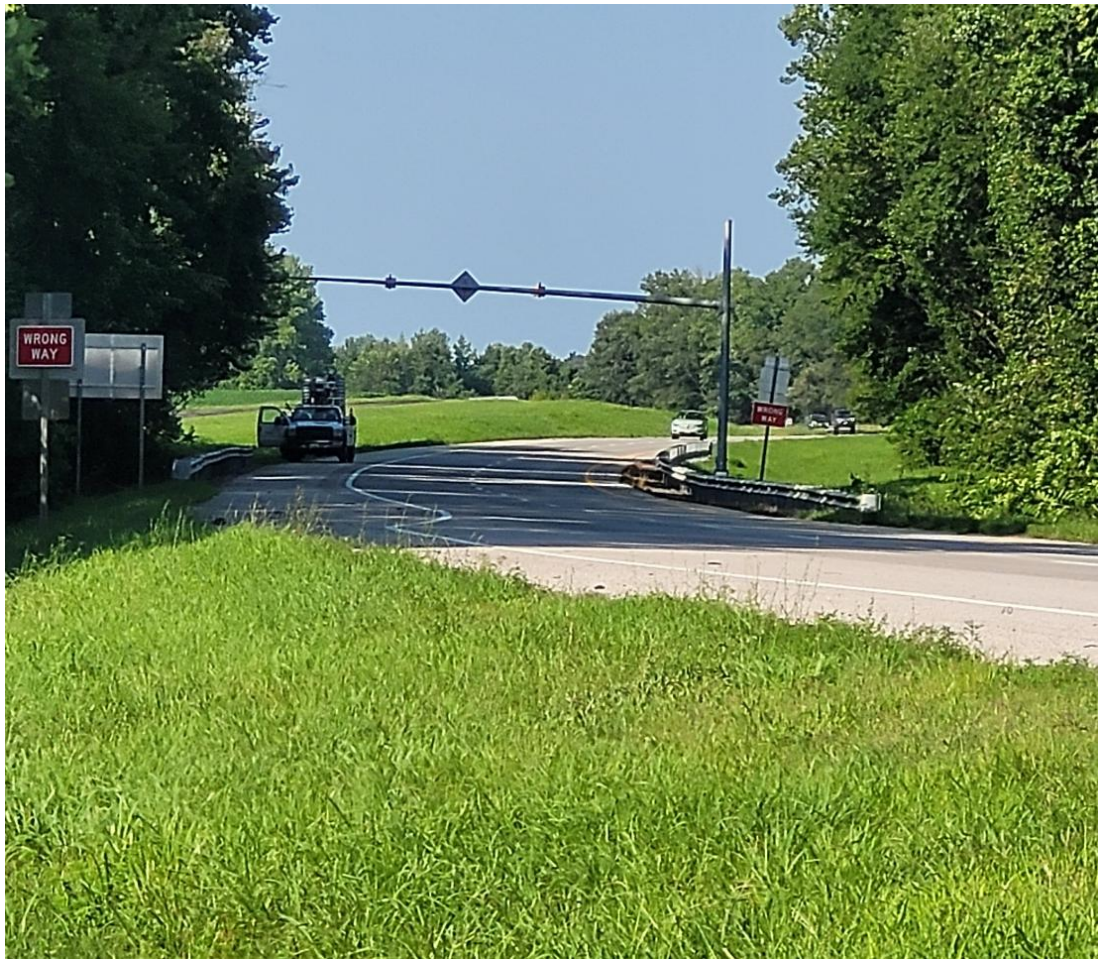
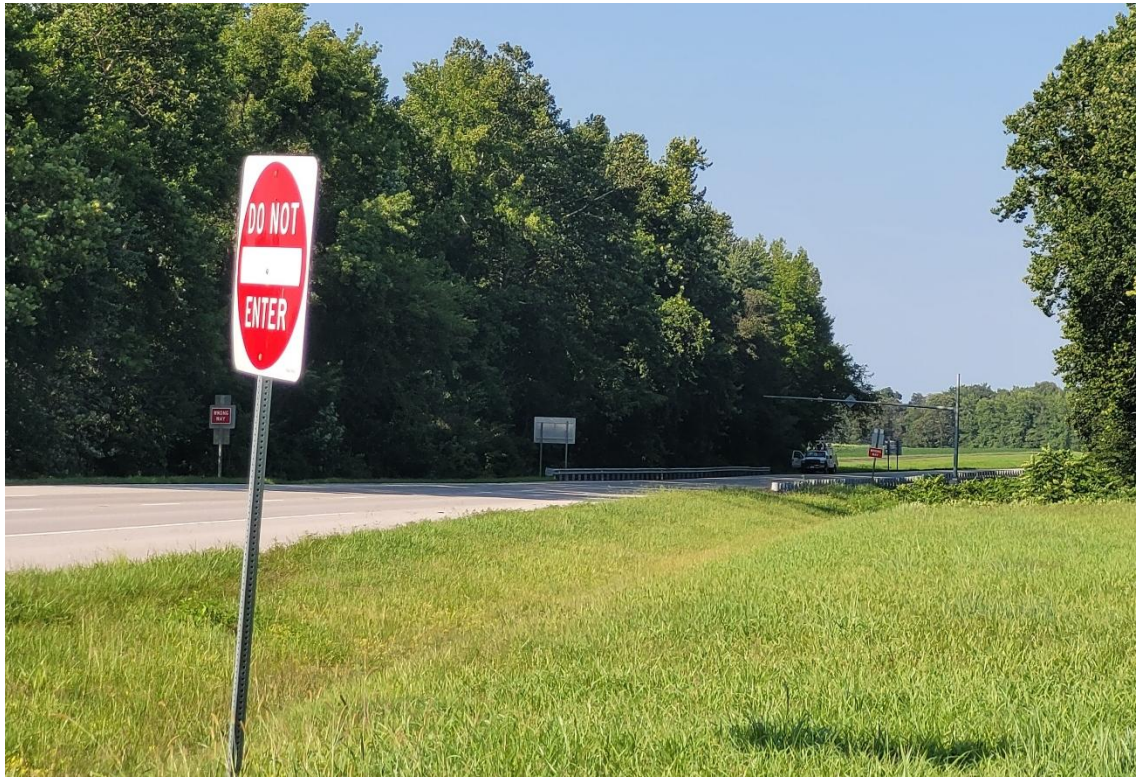
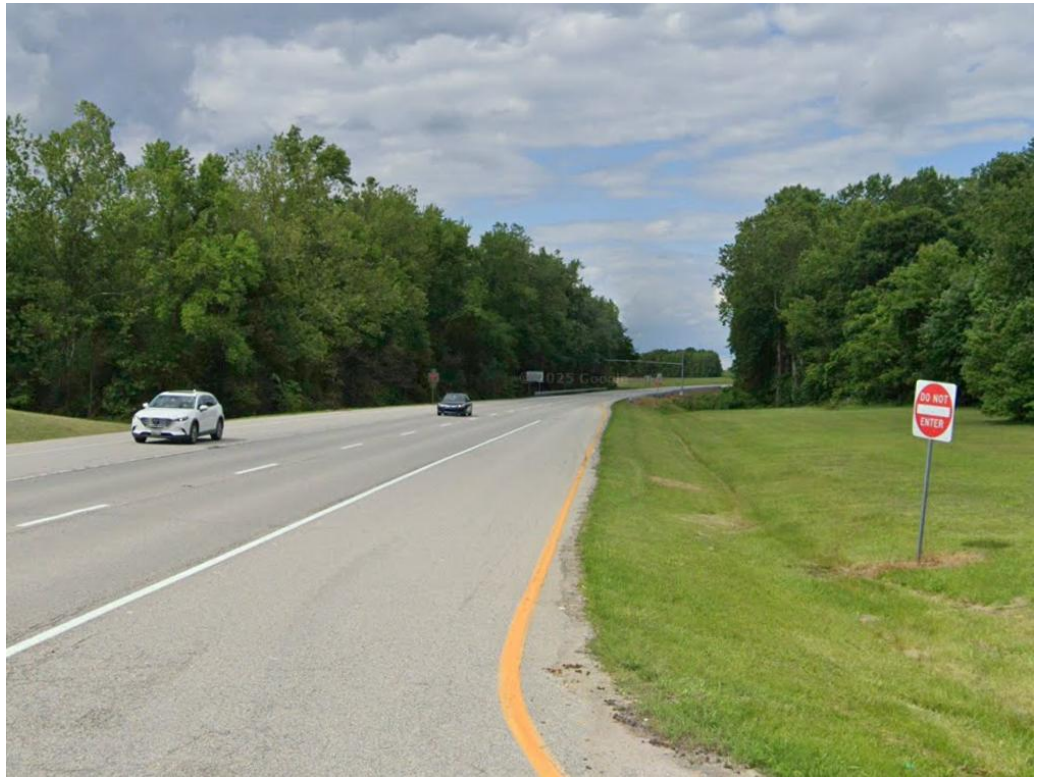
Shadows/Lighting

- Morning and evening shadows on SB 301 curve most of the day
- No shadows when overcast or sun is directly aligned with roadway
- Shadows may affect perception of oncoming vehicles
- Compounded by dark colored vehicles and no headlights
- May affect drivers on both 301 and 405



Shadow vs. no shadow





How can we fix “failure to yield”?

- Over 90 percent of all crashes are the result of driver error
- All of us can help minimize crash risks:
  - Headlights ON in daylight to help other drivers see you
  - Stop means STOP. Give yourself a few seconds to evaluate conditions
  - Reinforce good driving tips/habits with your family
- SHA’s role:
  - Help drivers make good decisions
  - Try to minimize impacts of driver errors

What can be done – short term?

- Striping/pavement marking modifications
- Rumble strips on US 301
- Speed warning signs
- Signage and delineator modifications
- Mandatory headlight use
- Tree trimming

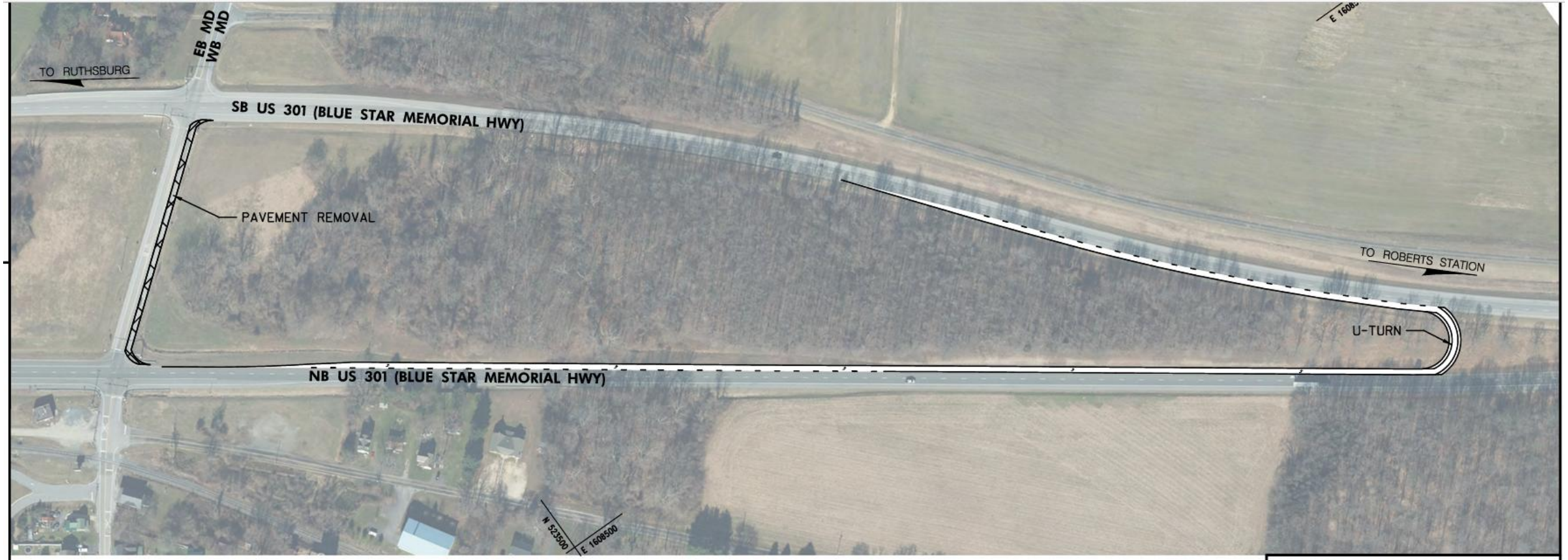
What can be done – long term?

J-turns

- $3 million (est.)
- Focus on north J-turn to eliminate high-crash location – WB 405 at SB 301

What are we doing right now?

- Focusing on short-term improvements
  - Mandatory headlight use
  - US 301 rumble strips
  - Crossover channelization improvements
  - Speed awareness digital signs on 301
- Continuing US 301 corridor data collection and evaluation
- Pursuing J-turn options
  - Design underway
  - Not currently funded for construction
  - J-turn north of the intersection



LEGEND

PAVEMENT REMOVAL

PROPOSED ROADWAY IMPROVEMENT

200' 0 200' 400'

SCALE: 1" = 200'

FIGURE 3–6: ALTERNATIVE 5

RJM ENGINEERING
CONSULTING ENGINEERS
6031 UNIVERSITY BLVD, SUITE 290
ELLICOTT CITY, MARYLAND
TEL:410.730.1001 FAX:410.730.5403

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US 301 SB AT MD 405 INTERSECTION IMPROVEMENTS

ROADWAY PLAN – ALT 5

SCALE 1"=200' ADVERTISED DATE · CONTRACT NO. ·

DESIGNED BY · COUNTY QUEEN ANNE'S
DRAWN BY · LOGMILE ·
CHECKED BY ·
MDE/PRD ·

SHEET NO. · OF ·

Keep in touch…

Social media posts can be informative and useful

- SHA monitors Facebook, Instagram, X (Twitter)
- Posting observations, thoughts, ideas can be helpful
- Rants, threats, etc. are not helpful

Contact SHA

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- Bob Rager, Community Relations, 410-810-3226, rrager@mdot.maryland.gov