



# I-95 & SR 896 INTERCHANGE PROJECT

## Winter Workshop 2021

February 17, 2021



DeIDOT Contract No. T201609002



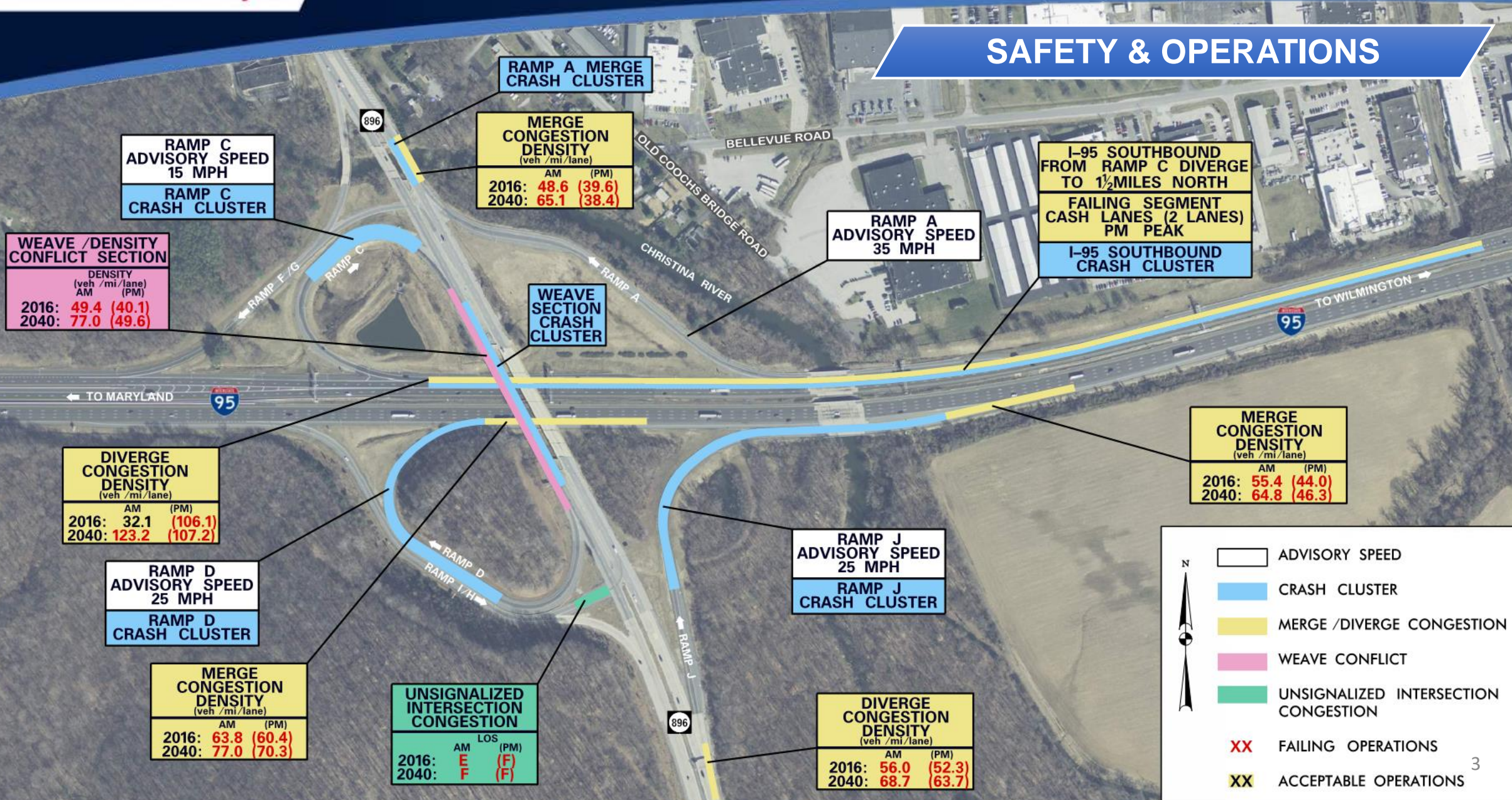
**MM** CENTURY  
ENGINEERING

## DESIGN TEAM

- Century Engineering Design Lead
- GPI Structures Lead
- Wallace Montgomery Traffic & Structures
- McCormick Taylor Lighting, Detours, and Signing & Striping
- Rybinski Engineering ITMS Design & TMP
- Navarro & Wright Geotechnical



## SAFETY & OPERATIONS



**Legend**

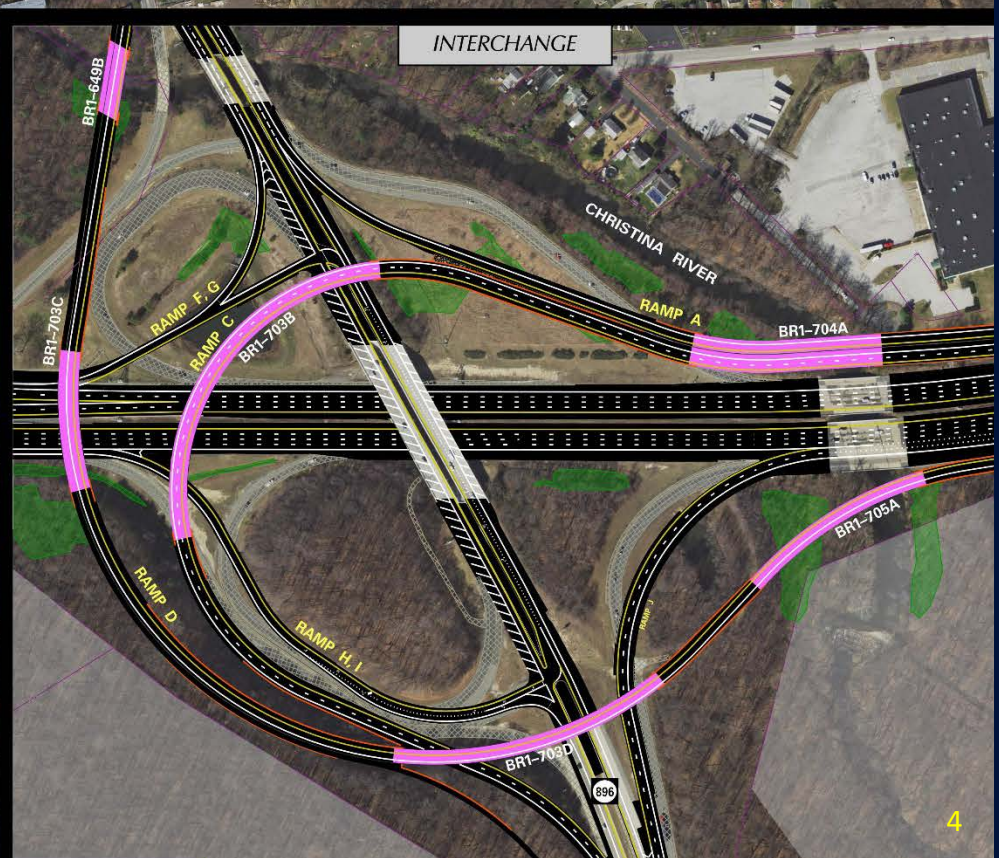
- ADVISORY SPEED
- CRASH CLUSTER
- MERGE / DIVERGE CONGESTION
- WEAVE CONFLICT
- UNSIGNALIZED INTERSECTION CONGESTION
- FAILING OPERATIONS
- ACCEPTABLE OPERATIONS

**North Arrow**

# I-95 & SR 896 INTERCHANGE PROJECT



## PROPOSED INTERCHANGE

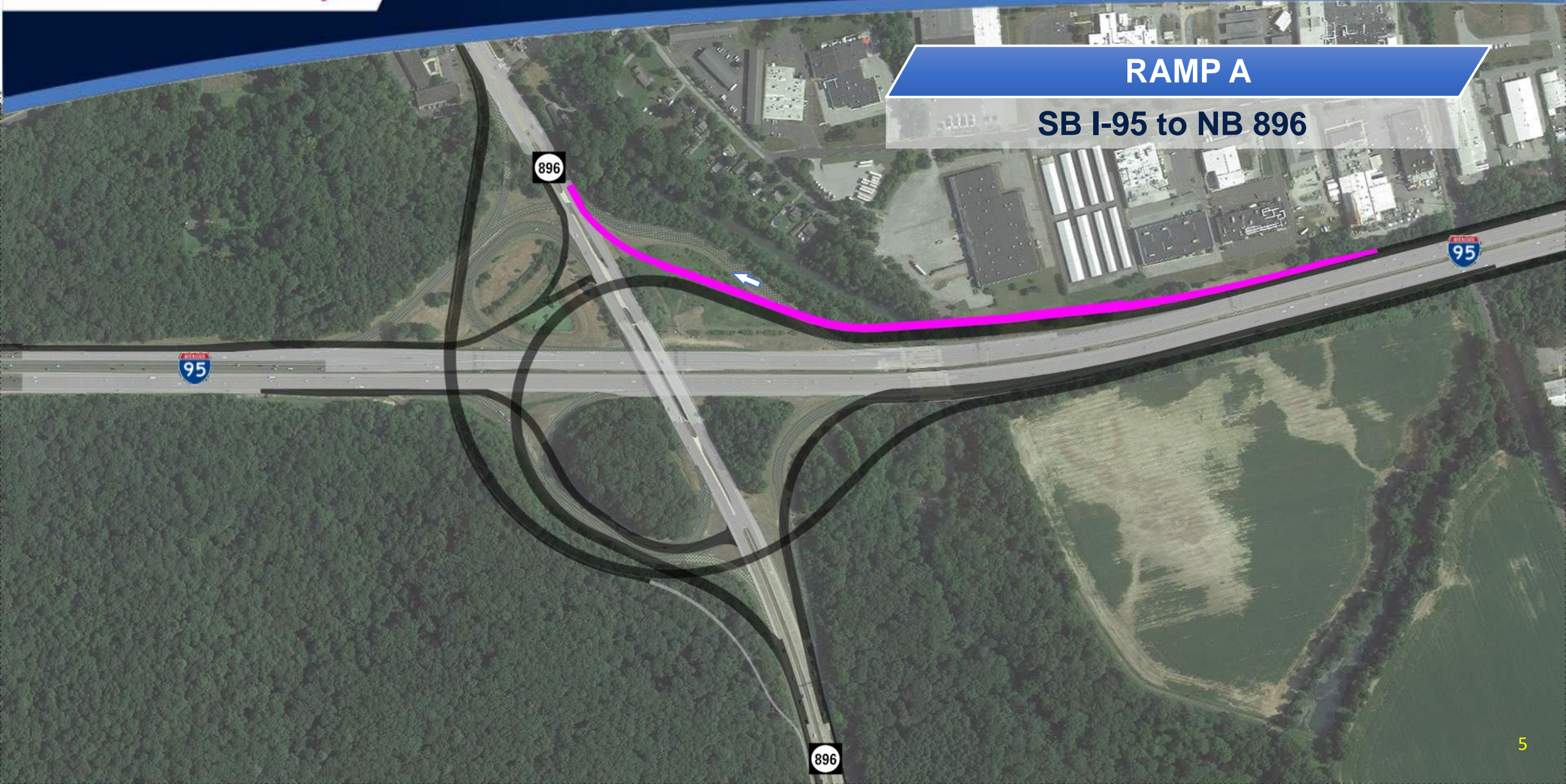


**I-95 & SR 896**  
INTERCHANGE PROJECT



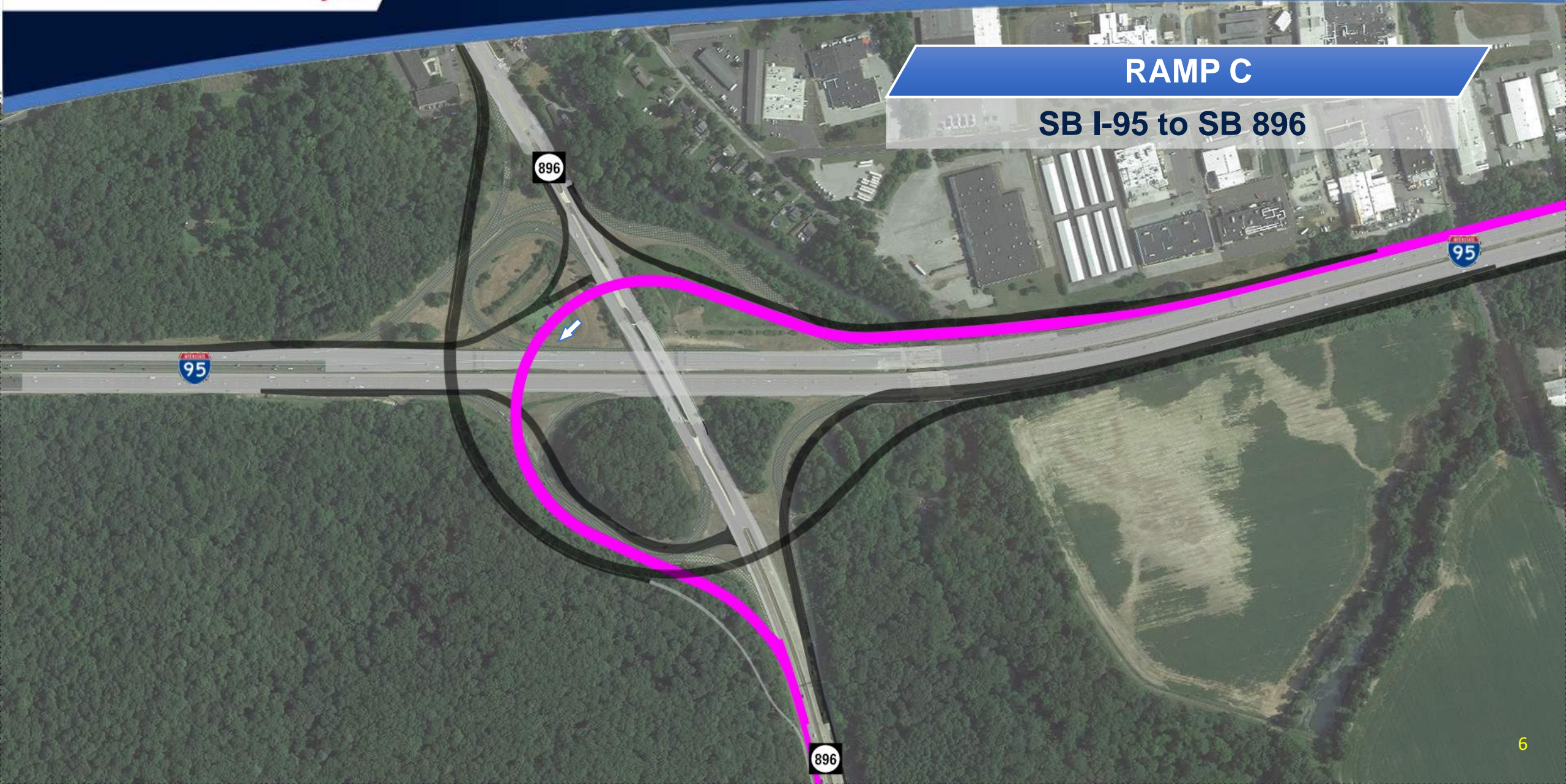
**RAMP A**

**SB I-95 to NB 896**



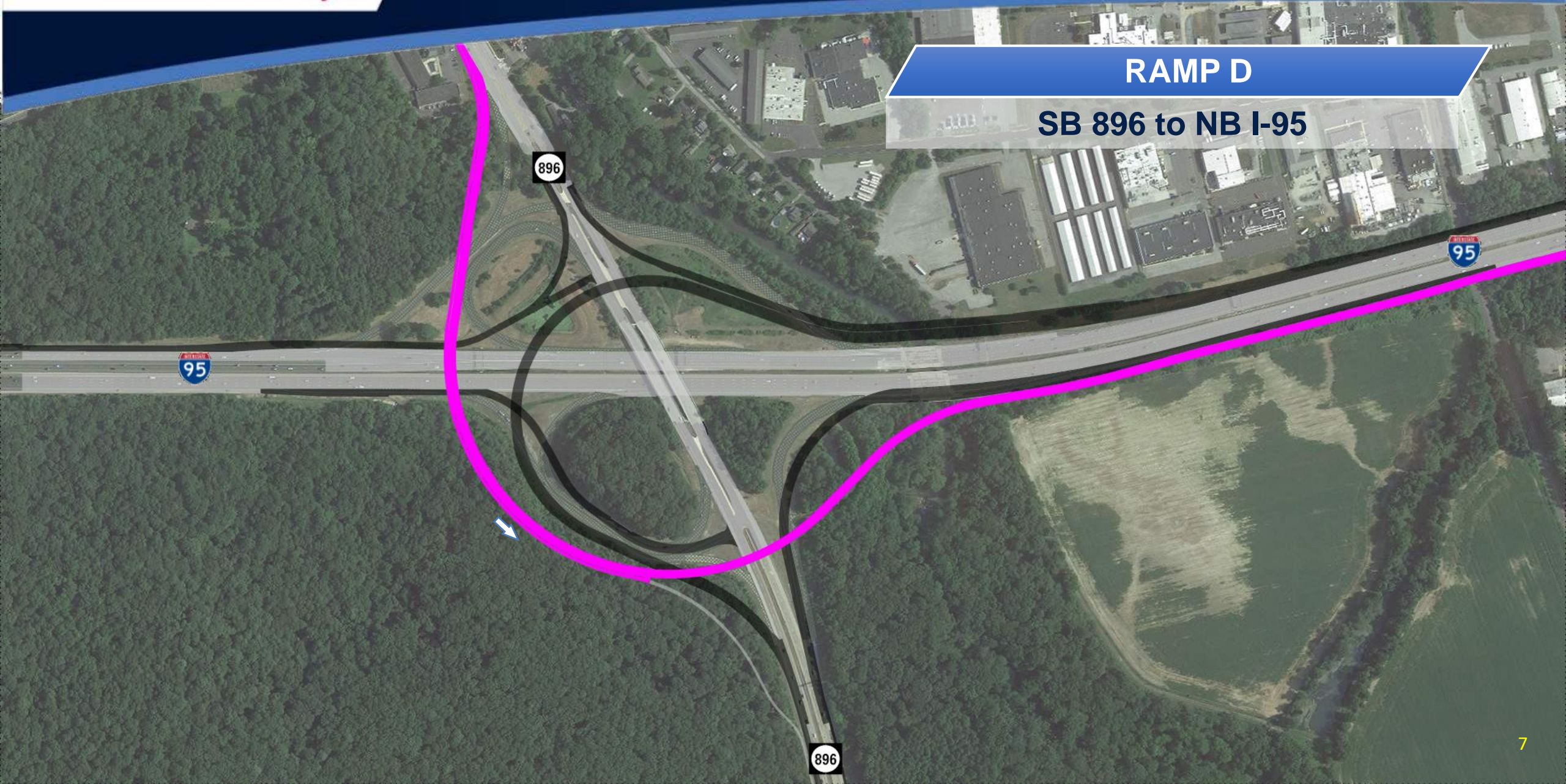
**RAMP C**

**SB I-95 to SB 896**



**RAMP D**

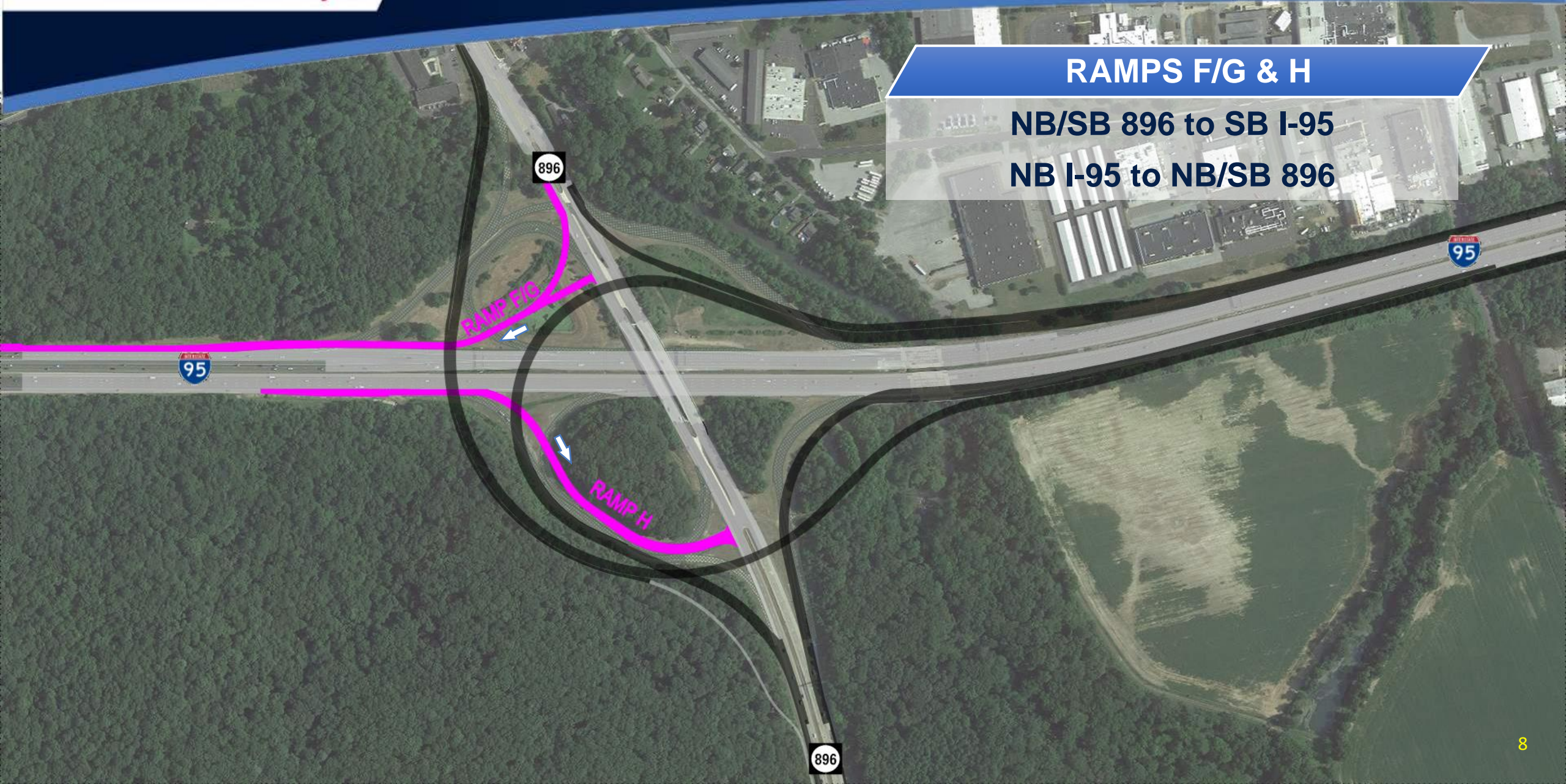
**SB 896 to NB I-95**



**RAMPS F/G & H**

**NB/SB 896 to SB I-95**

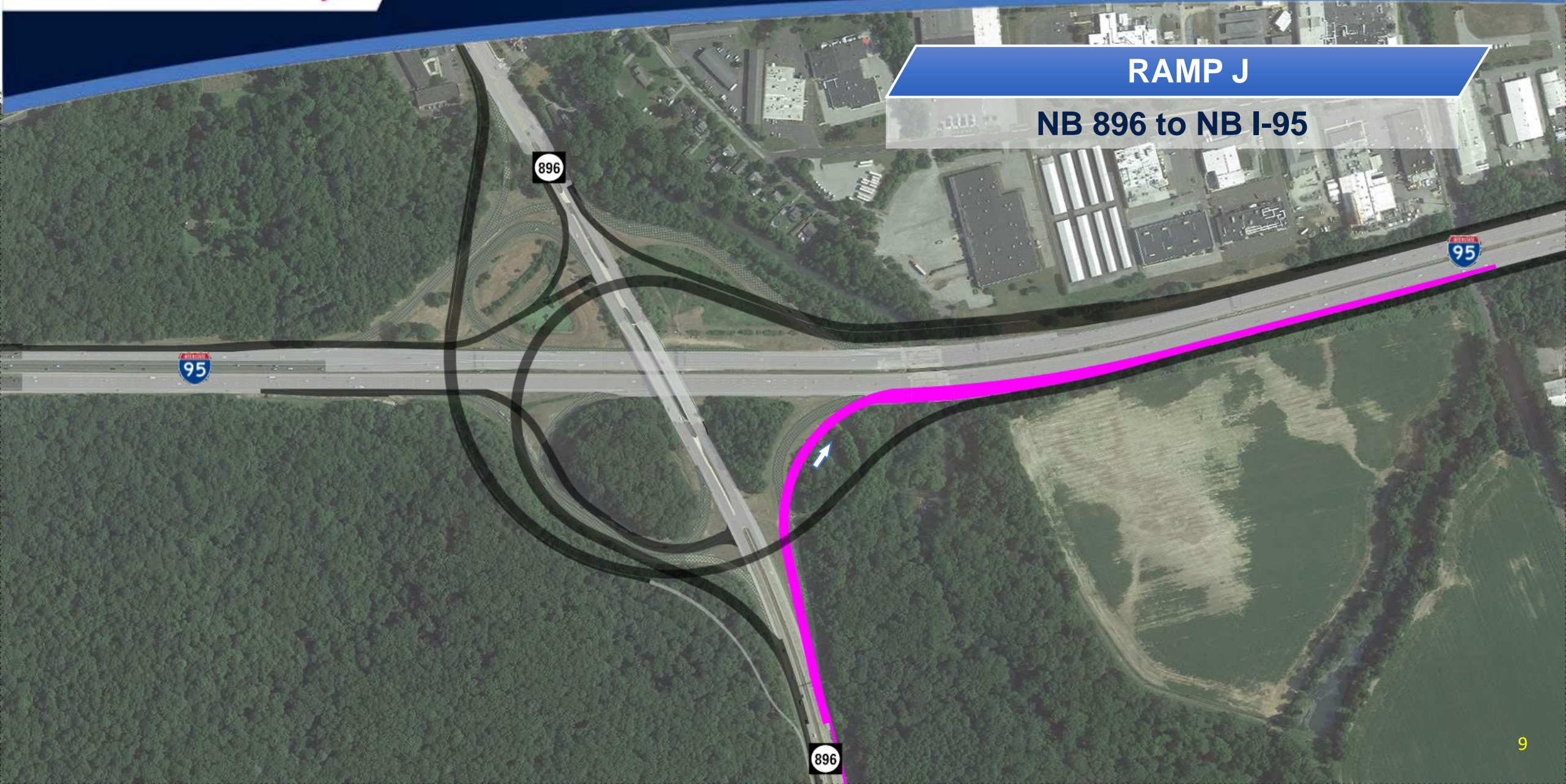
**NB I-95 to NB/SB 896**



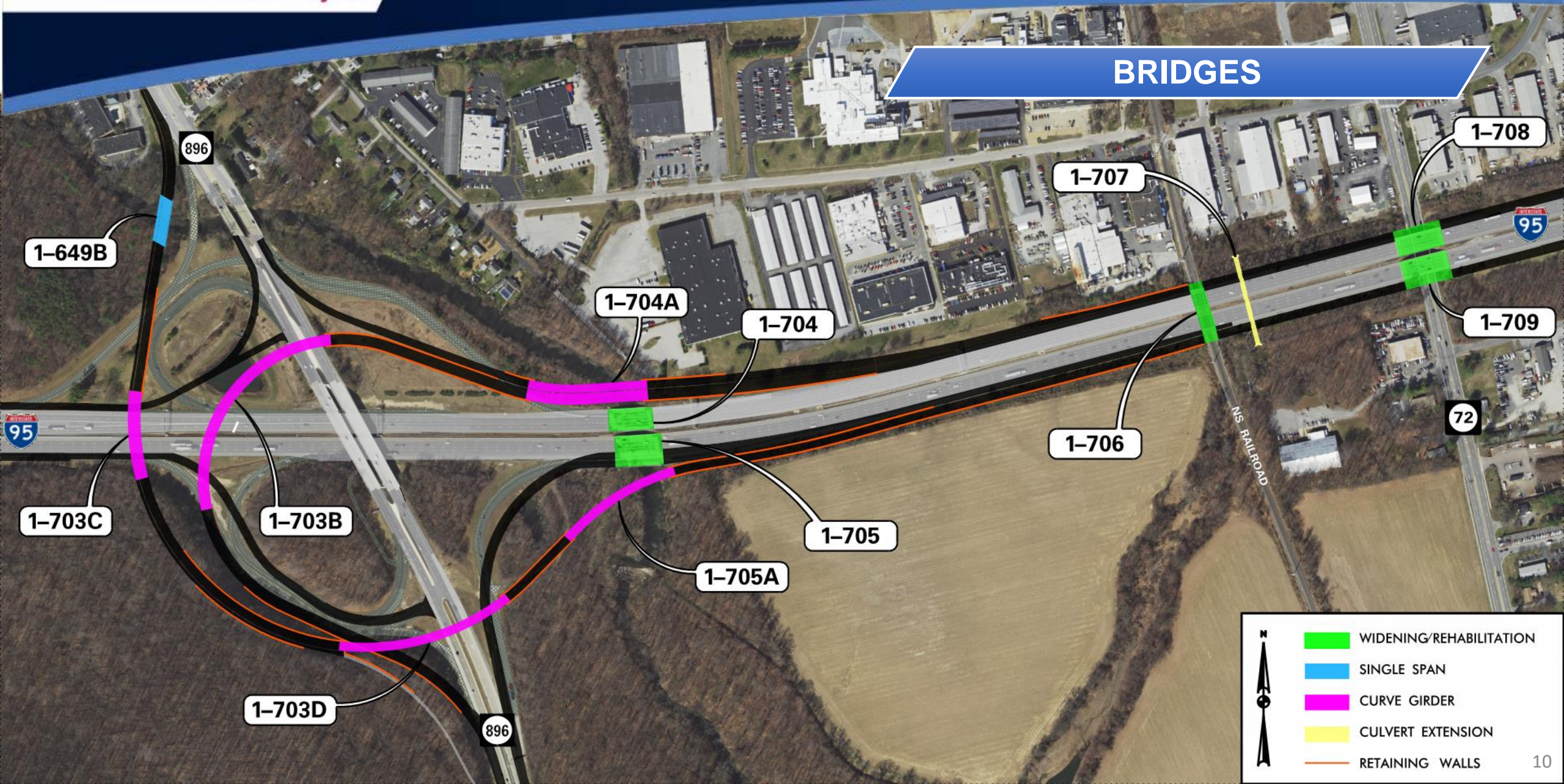


**RAMP J**

**NB 896 to NB I-95**



## BRIDGES



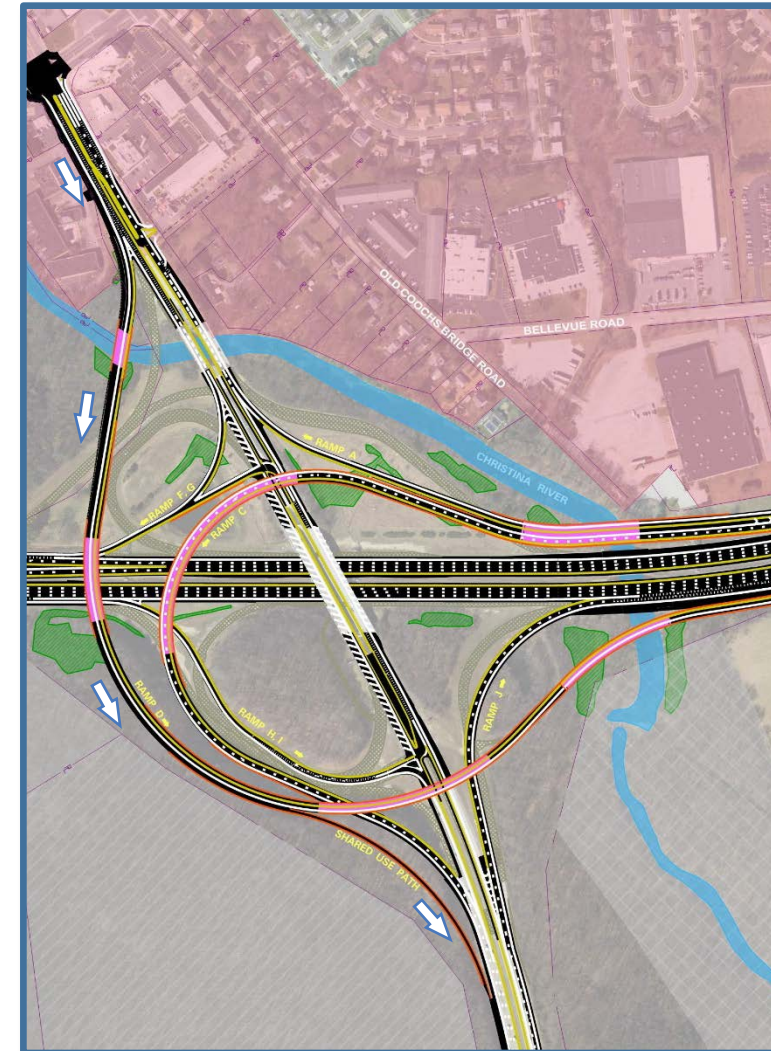
**Legend:**

- WIDENING/REHABILITATION
- SINGLE SPAN
- CURVE GIRDER
- CULVERT EXTENSION
- RETAINING WALLS

**North Arrow:** N

## PROPOSED DESIGN

- Shared-Use Path
  - Only alternative that can safely accommodate a shared-use path
  - Public requests received
  - Standard 10' wide w/ 2' offsets (14' Total Width)
  - Reduced 8' wide w/ 2' offsets (12' Total Width) across Bridges 1-649 & 1-703C
  - Provides missing multimodal link across I-95, extending from Welsh Tract Road to Old Baltimore Pike



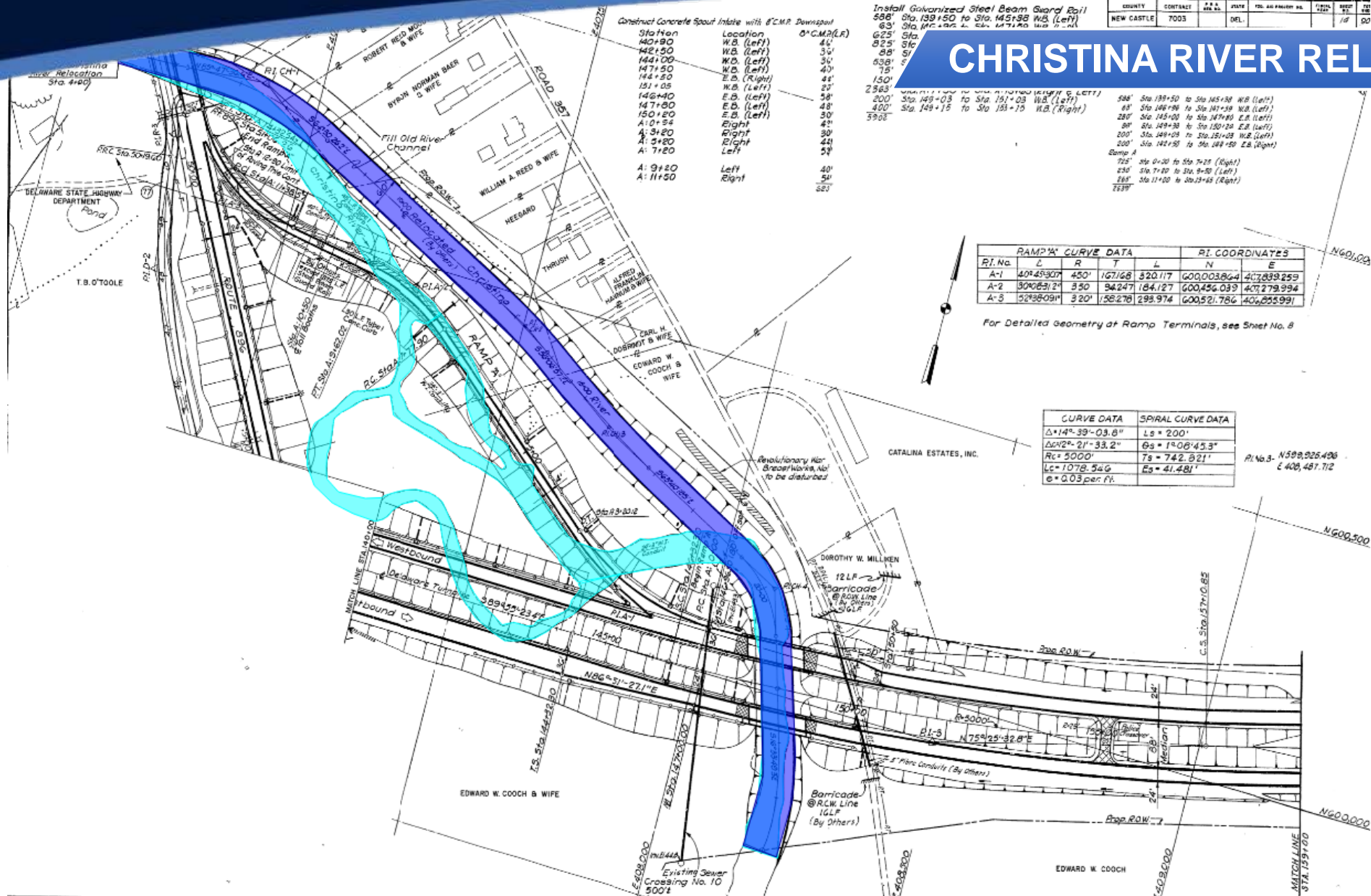
## ESTIMATED COST

- Estimated Total Project Cost = \$159.5 M
- INFRA Grant from USDOT for construction = \$56.8 M

## Construction Manager/General Contractor

- Recommendation of Value Engineering Study
- Allows Contractor to be at the table for design decisions
- CM/GC can bring experience and innovation to
  - Construction phasing
  - Complex structures
  - Complex soil conditions

## CHRISTINA RIVER RELOCATION



Construct Concrete Spout Inlets with 6"CMR Downspout

Station	Location	0"CMR(L/R)
140+90	W.B. (Left)	4'
142+50	W.D. (Left)	3'
144+00	W.D. (Left)	3'
147+50	W.D. (Left)	4'
154+50	E.S. (Right)	4'
151+05	W.B. (Left)	2'
146+40	E.S. (Left)	5'
147+80	E.S. (Left)	4'
150+20	E.S. (Left)	5'
A: 0+54	Right	4'
A: 3+20	Right	3'
A: 3+20	Right	4'
A: 7+20	Left	5'
A: 9+20	Left	4'
A: 11+50	Right	5'
		50'

Install Galvanized Steel Beam Guard Rail

588'	Sta. 139+50 to Sta. 145+58 W.B. (Left)
63'	Sta. 145+58 to Sta. 147+50 W.B. (Left)
625'	Sta. 147+50 to Sta. 151+05 W.B. (Left)
825'	Sta. 151+05 to Sta. 154+50 W.B. (Left)
838'	Sta. 154+50 to Sta. 157+50 W.B. (Left)
150'	Sta. 157+50 to Sta. 161+50 W.B. (Left)
2363'	Sta. 161+50 to Sta. 170+00 W.B. (Left)
200'	Sta. 149+03 to Sta. 151+03 W.B. (Left)
400'	Sta. 149+15 to Sta. 153+15 W.B. (Right)
5908'	Sta. 153+15 to Sta. 161+50 W.B. (Left)
586'	Sta. 139+50 to Sta. 145+58 W.B. (Left)
63'	Sta. 145+58 to Sta. 147+50 W.B. (Left)
287'	Sta. 147+50 to Sta. 149+03 E.S. (Left)
80'	Sta. 149+03 to Sta. 150+20 E.S. (Left)
200'	Sta. 149+03 to Sta. 151+03 W.B. (Left)
200'	Sta. 142+50 to Sta. 144+50 E.S. (Right)
725'	Sta. 0+30 to Sta. 7+25 (Right)
230'	Sta. 7+25 to Sta. 9+50 (Left)
285'	Sta. 11+00 to Sta. 13+65 (Right)
7539'	

COUNTY	CONTRACT	A.S.D. NO.	STATE	PROJ. NO.	PLAN NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7003		DEL.			11	20

R.I. No.	RAMP 'X' CURVE DATA			R.I. COORDINATES		
	L	R	T	N	E	
A-1	409.45907	450'	167.168	820.117	600.003864	407.839259
A-2	300.65121	350	94.247	184.127	600.456039	407.279394
A-3	529.80911	320'	158.278	298.974	600.521786	406.655991

For Detailed Geometry of Ramp Terminals, see Sheet No. 8

CURVE DATA		SPIRAL CURVE DATA	
$\Delta = 14^{\circ}39'03.8''$	$L_s = 200'$		
$\Delta\alpha = 2'33.2''$	$\theta_s = 1^{\circ}06'45.3''$		
$R_c = 5000'$	$T_s = 742.821'$		
$L_c = 1078.546$	$E_s = 41.481'$		
$e = 0.03$ per ft.			

## Construction Manager/General Contractor

- Recommendation of Value Engineering Study
- Allows Contractor to be at the table for design decisions
- CM/GC can bring experience and innovation to
  - Construction phasing
  - Complex structures
  - Complex soil conditions
  - Wetland mitigation, tree mitigation, borrow sourcing, etc.

## PROJECT TIMELINE





# Thank You!

For more information:

Project Website: [de.gov/95at896](https://de.gov/95at896)

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