



Delaware Department of Transportation



SR 1 Widening

SR 273 to Roth Bridge

Listening Tour

North of SR 273

March 5, 2013

273 to North of Bear Road

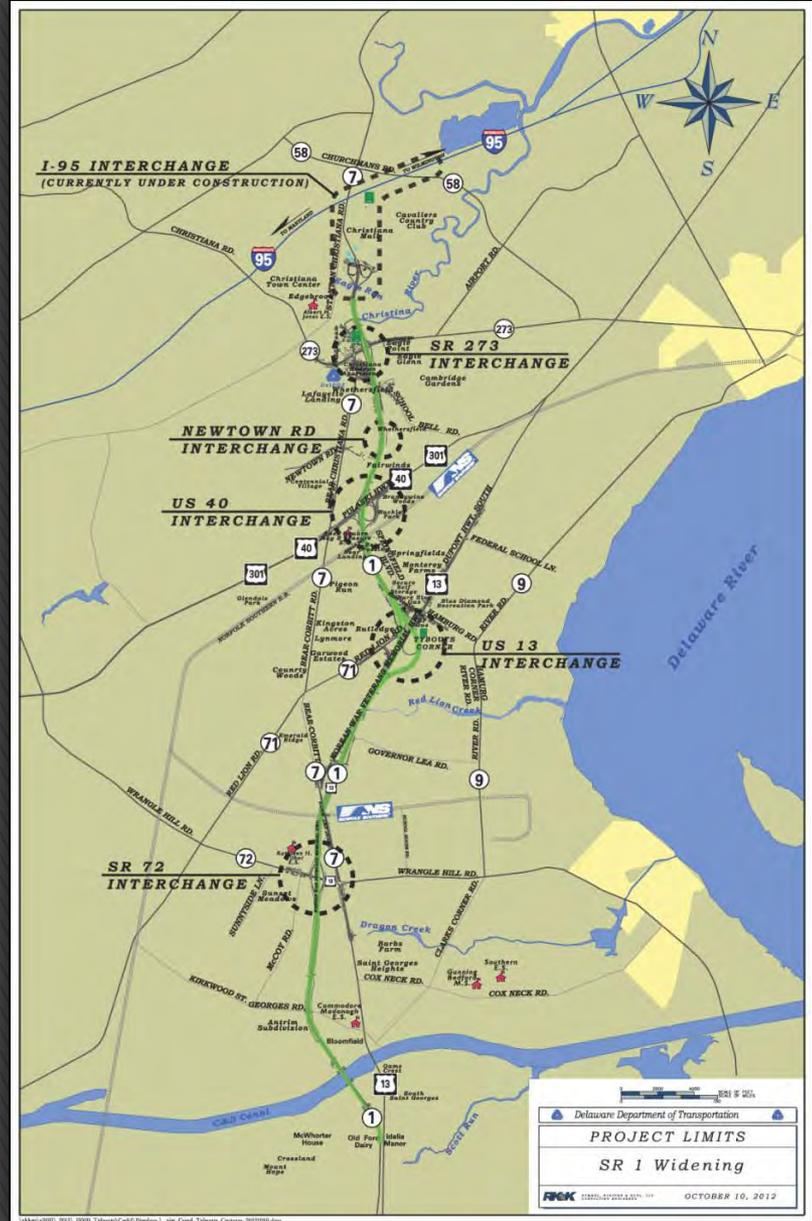
March 12, 2013

Agenda

- ▶ Project Limits
- ▶ Reason for the Project – Purpose & Need
- ▶ Environmental (NEPA) Process
- ▶ Transportation Solution Alternatives
- ▶ Improvements Specific to Your Community

Project Limits

- ▶ North of SR 273 to Roth Bridge



Purpose & Need

- ▶ Address congestion
- ▶ Improve system connectivity
- ▶ Improve local access
- ▶ Improve safety
- ▶ Ensure emergency access & evacuation



Purpose & Need

Congestion – Existing Conditions (2011)

- ▶ SR 1 Mainline **Failing** Condition
 - US 40 – I-95 (AM)
- ▶ Interchange **Failing** Condition
 - Entering SR 1 from US 40 (AM)
 - Exiting SR 1 to SR 273 (AM)
 - US 13 (Tybouts) Interchange (PM)
 - Entering SR 1 from US 13 (PM)

Roadway Segment	Existing (2011)	
	AM Peak	PM Peak
SR 1 Northbound		
South of SR 72	D	B
Diverge to SR 72	C	B
Merge from SR 72	D	C
SR 72 to US 13	D	B
Diverge to US 13	PASS*	PASS*
Merge from Bear-Tybouts Road	D	C
US 13 to US 40	D	C
Diverge to US 40	D	C
Merge from US 40	F	D
US 40 to SR 273	F	D
Diverge to SR 273	F	D
SR 1 Southbound		
Merge from SR 273	B	D
SR 273 to US 40	B	D
Diverge to US 40	B	E
Merge from US 40	B	C
US 40 to US 13	B	C
Diverge to US 13	B	C
Within US 13 Interchange	C	F
Merge from US 13	PASS*	F*
US 13 to SR 72	A	C
Diverge to SR 72	B	E
Merge from SR 72	B	E
South of SR 72	A	C

* Note: Major merge and major diverge segments are evaluated on a pass/fail basis.

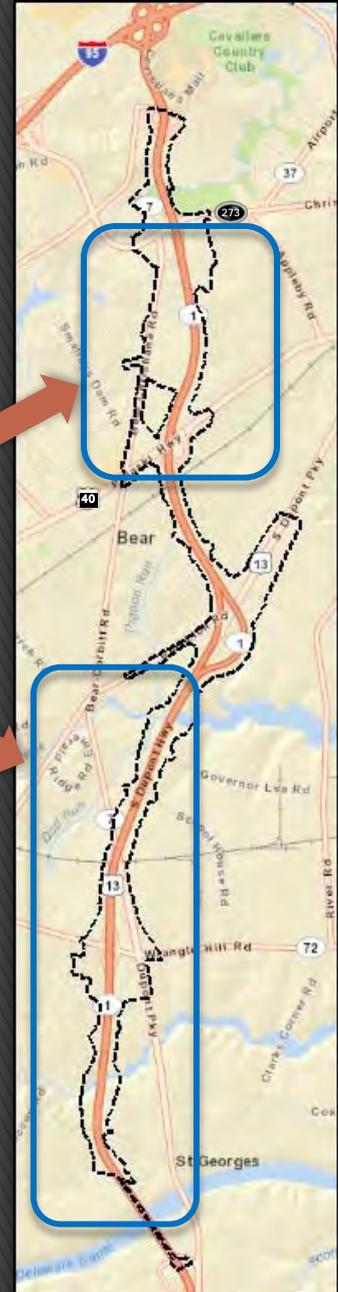
Purpose & Need

Congestion – Future Conditions (2040)

Traffic Projections

(based on WILMAPCO, NCC approved model)

Location	2011	2040	Increase
SR 1 between US 40 and SR 273	76,500	125,000	63%
SR 1 between the Roth Bridge and US 13	79,500	140,000	76%



Purpose & Need

Congestion – Future Conditions (2040)

- ▶ The entire SR 1 corridor and every interchange entrance and exit within the study area are projected to operate at a **Failing** Level of Service (LOS) during rush hour.

Roadway Segment	Future (2040)	
	AM Peak	PM Peak
SR 1 Northbound		
South of SR 72	F	C
Diverge to SR 72	F	C
Merge from SR 72	F	D
SR 72 to US 13	F	D
Diverge to US 13	F*	PASS*
Merge from Bear-Tybouts Road	F	E
US 13 to US 40	F	E
Diverge to US 40	F	E
Merge from US 40	F	F
US 40 to SR 273	F	F
Diverge to SR 273	F	F
SR 1 Southbound		
Merge from SR 273	C	F
SR 273 to US 40	C	F
Diverge to US 40	D	F
Merge from US 40	C	F
US 40 to US 13	C	F
Diverge to US 13	C	F
Within US 13 Interchange	F	F
Merge from US 13	F*	F*
US 13 to SR 72	B	F
Diverge to SR 72	D	F
Merge from SR 72	C	F
South of SR 72	B	F

* Note: Major merge and major diverge segments are evaluated on a pass/fail basis.

Purpose & Need

Congestion – Seasonal Traffic

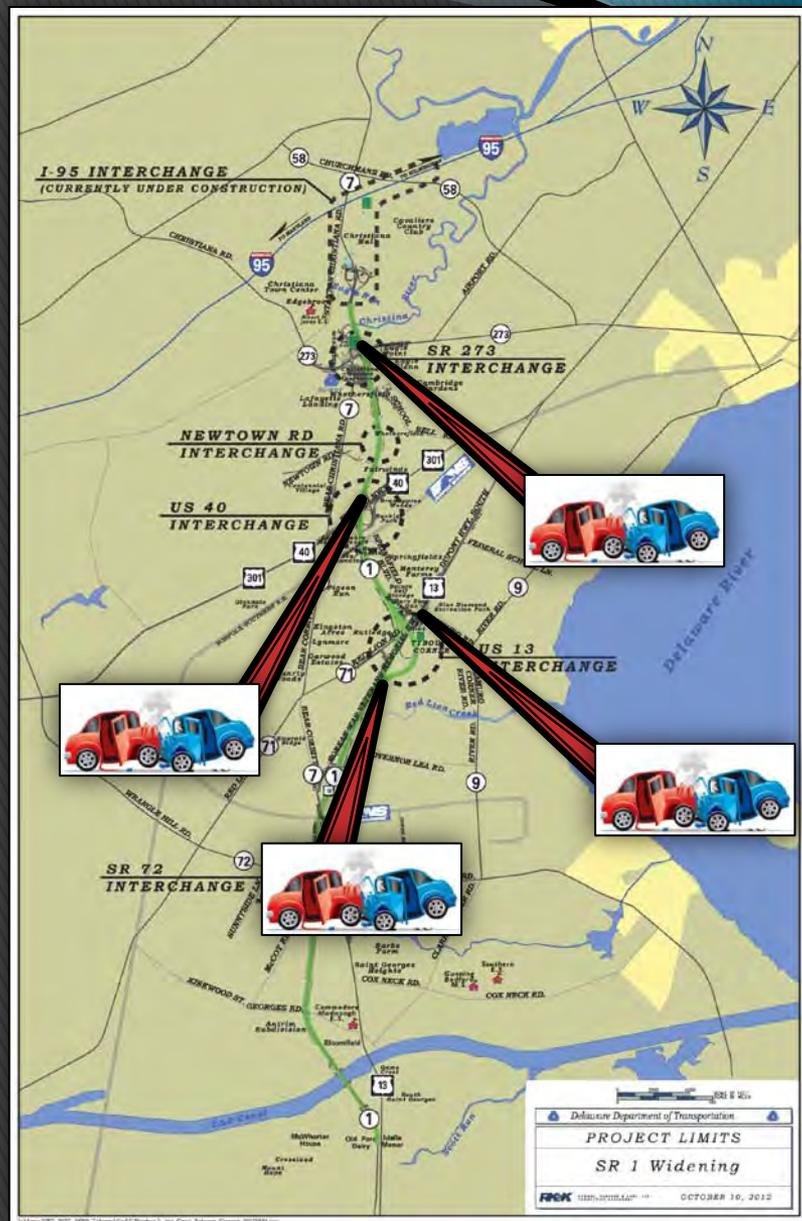
- ▶ SR 1, a designated beach route, serves as a primary route for summer travel
 - Summer Fridays, Saturdays and Sundays experience increased travel demand
 - Traffic volumes are **20-30% higher** in July and August



Purpose & Need

Safety – Crash History

- ▶ A total of **284 reported crashes** between January 2008 and December 2010
- ▶ DeDOT has identified 4 locations with frequent accidents requiring improvements (HEP):
 - SR 273 through the SR 1 interchange
 - US 40 through the SR 1 interchange
 - Hamburg Road through the US 13 intersection
 - SR 1 northbound near the diverge to US 13



Purpose & Need

Emergency Access & Evacuation

- ▶ Fire, police and EMT emergency responders
- ▶ Christiana Hospital
- ▶ Designated evacuation route (snow emergencies, hurricanes, homeland security threats, and potential hazardous materials incidents)



**How do we begin
to address these
transportation problems?**

Q.?



Environmental (NEPA) Process



Public Outreach Approach

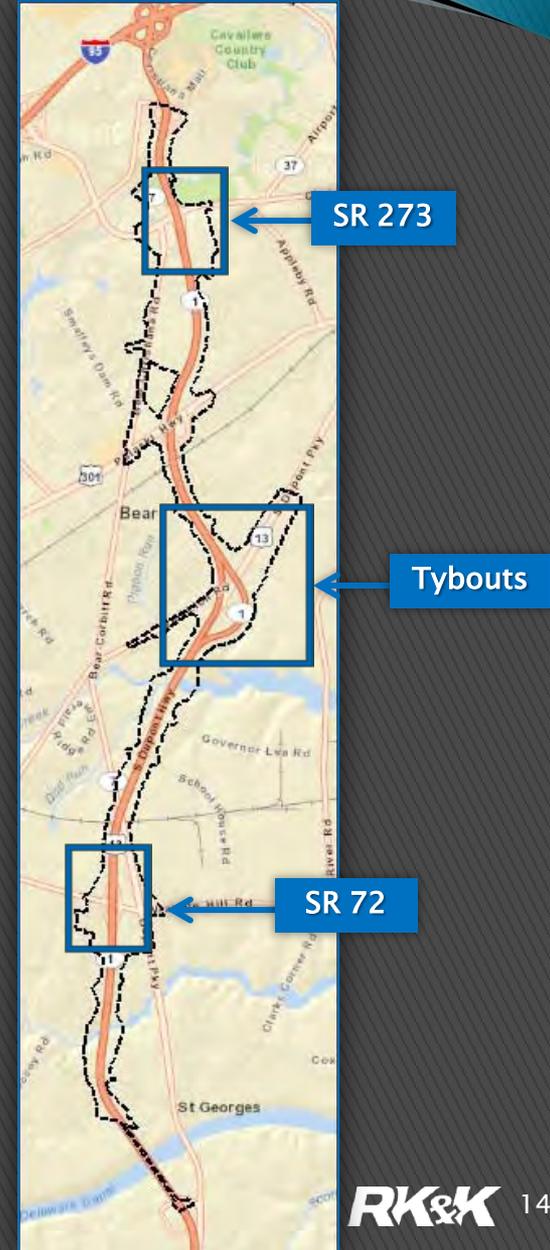
- ▶ Project Website: sr1.deldot.gov
 - Under development
- ▶ Listening Tour with Community Leaders
 - March 2013
- ▶ Public Workshop Schedule
 - April 8, 2013 (5:00 PM – 8:00 PM): Leasure Elementary School
 - April 18, 2013 (6:00 PM – 9:00 PM): Wilbur Elementary School



Transportation Solution Alternatives

▶ Proposed Solutions

- Mainline Widening – additional lane alternatives
 - Work within existing corridor
 - Meet current FHWA design requirements
 - US 40 interchange – minor traffic flow improvements
 - New access from NB SR 7 to NB SR 1
- Interchange Improvements Alternatives
 - SR 273
 - Tybouts
 - SR 72

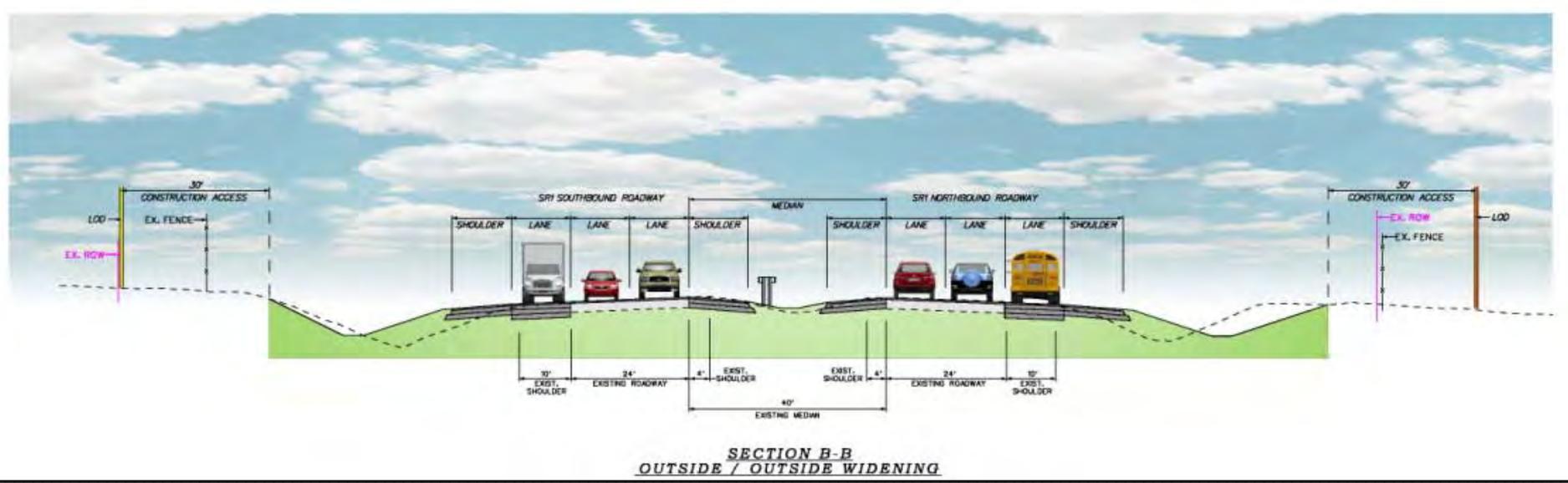


Mainline Widening

- ▶ Three Alternatives
 - Outside-Outside Widening
 - West Side Widening
 - East Side Widening

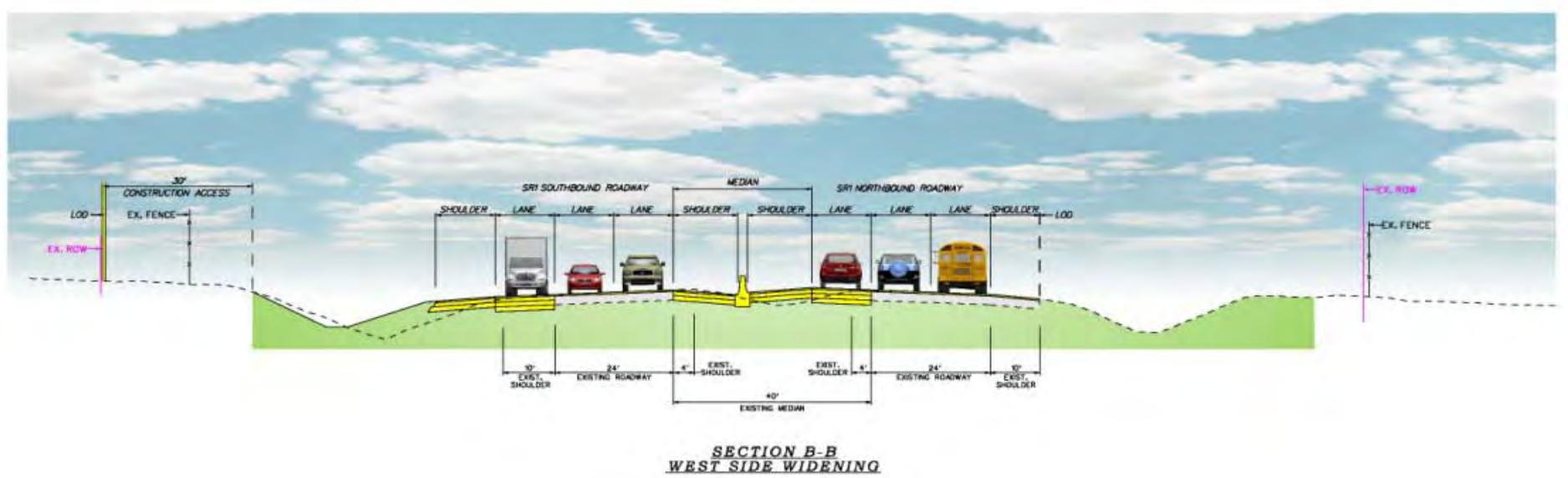
Mainline Widening

- ▶ Outside-Outside Widening Alternative



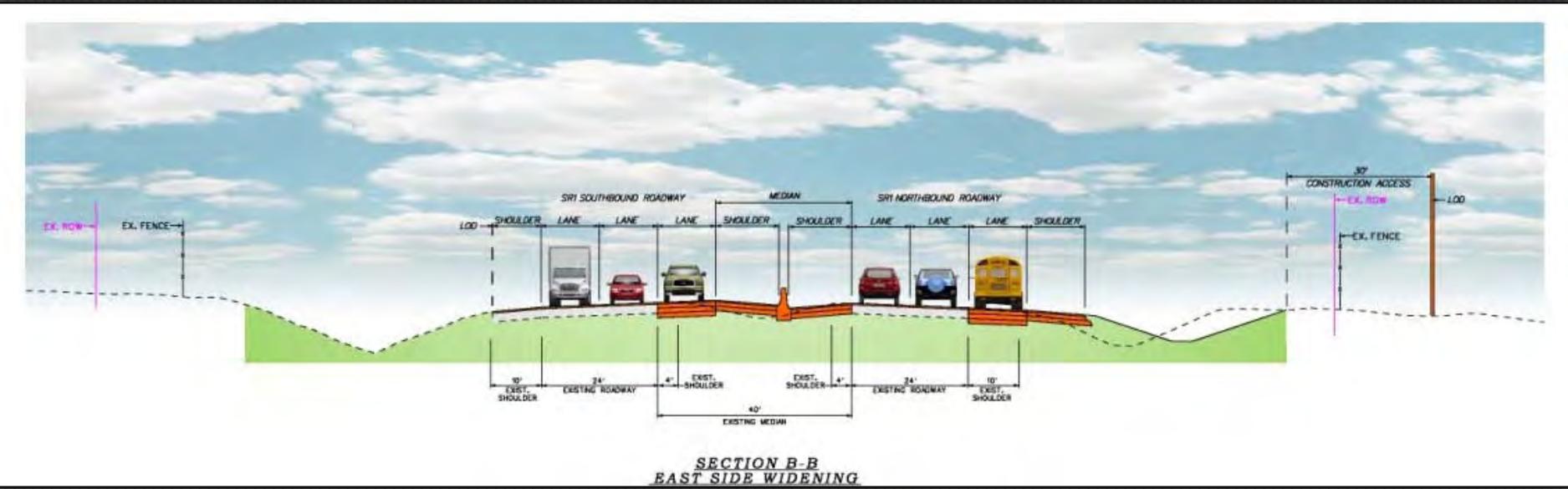
Mainline Widening

- West Side Widening Alternative



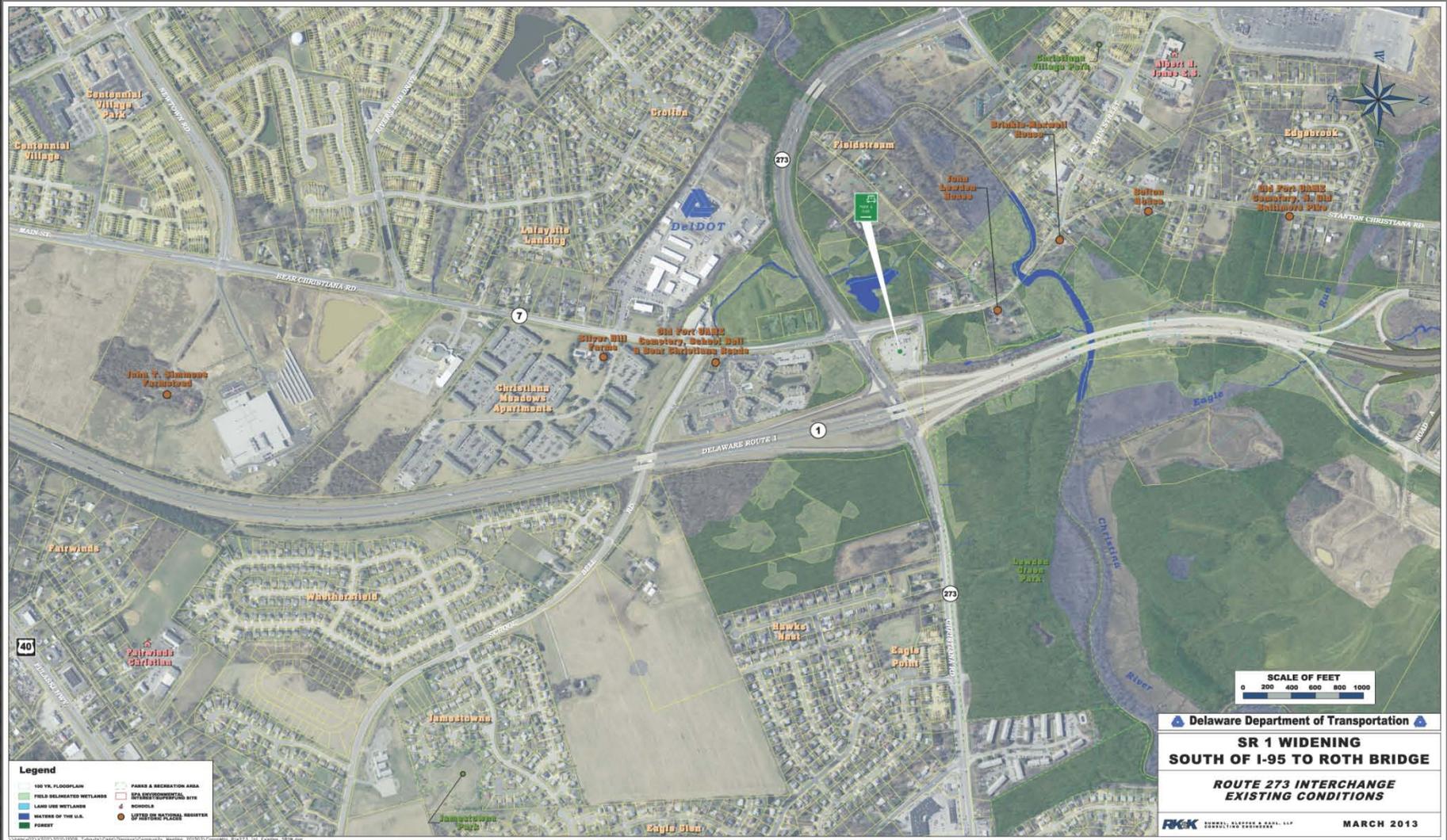
Mainline Widening

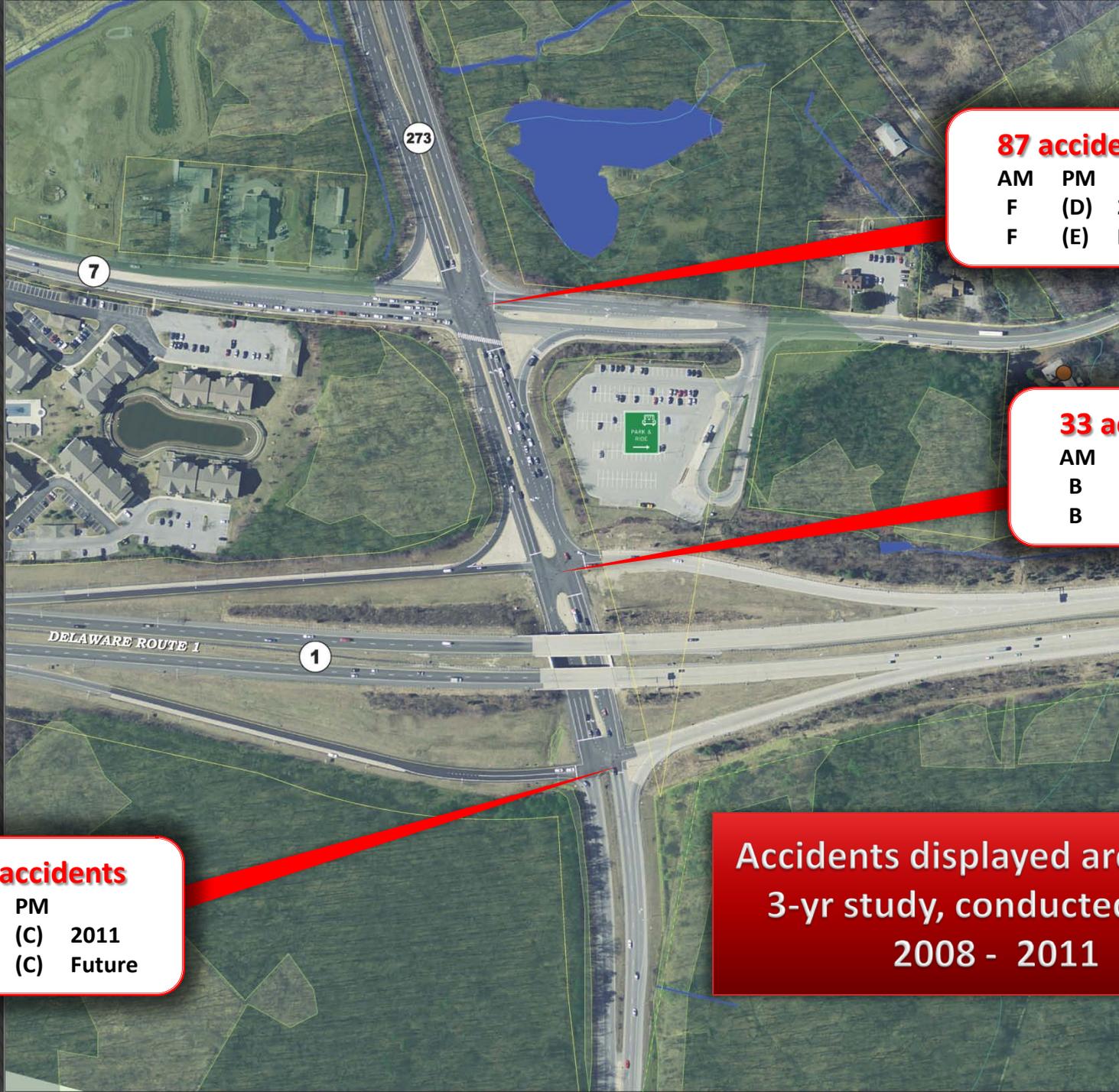
- ▶ East Side Widening Alternative



SR 273 Interchange

Existing Conditions





87 accidents

AM	PM	
F	(D)	2011
F	(E)	Future

33 accidents

AM	PM	
B	(C)	2011
B	(E)	Future

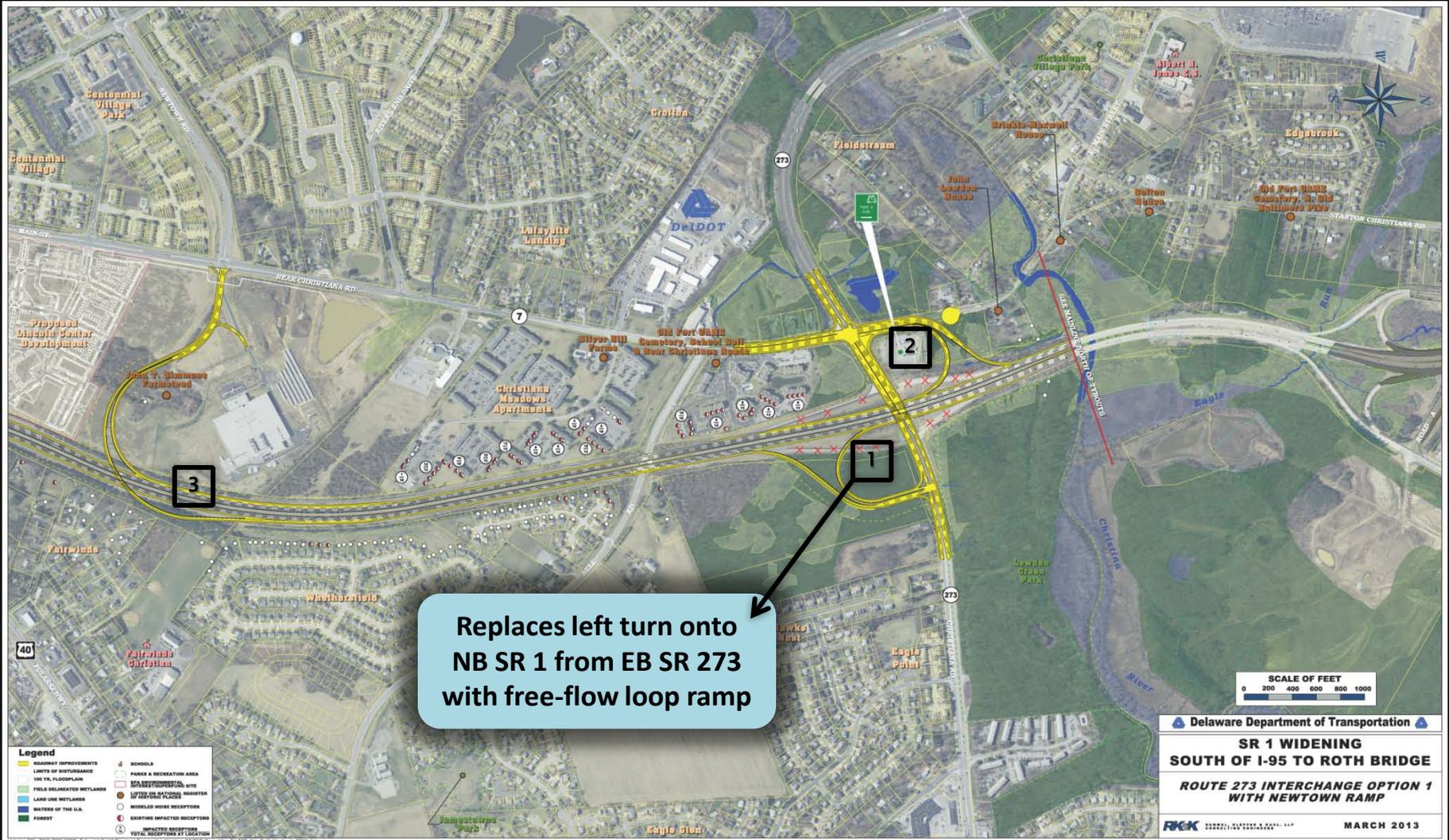
26 accidents

AM	PM	
C	(C)	2011
C	(C)	Future

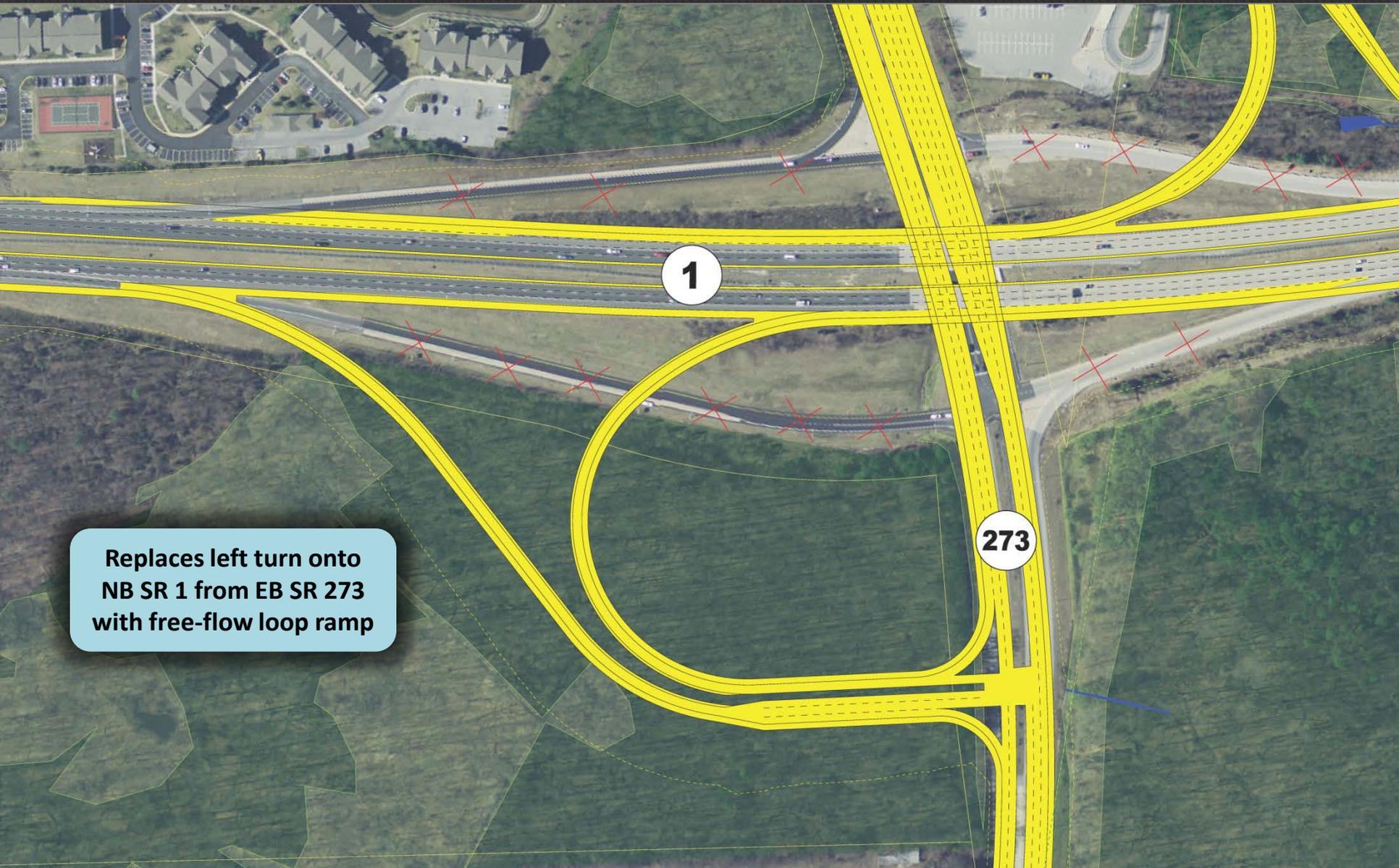
Accidents displayed are from a 3-yr study, conducted from 2008 - 2011

SR 273 Interchange

Option 1



Replaces left turn onto NB SR 1 from EB SR 273 with free-flow loop ramp



**Replaces left turn onto
NB SR 1 from EB SR 273
with free-flow loop ramp**

Replaces SB on ramp
with free-flow loop ramp

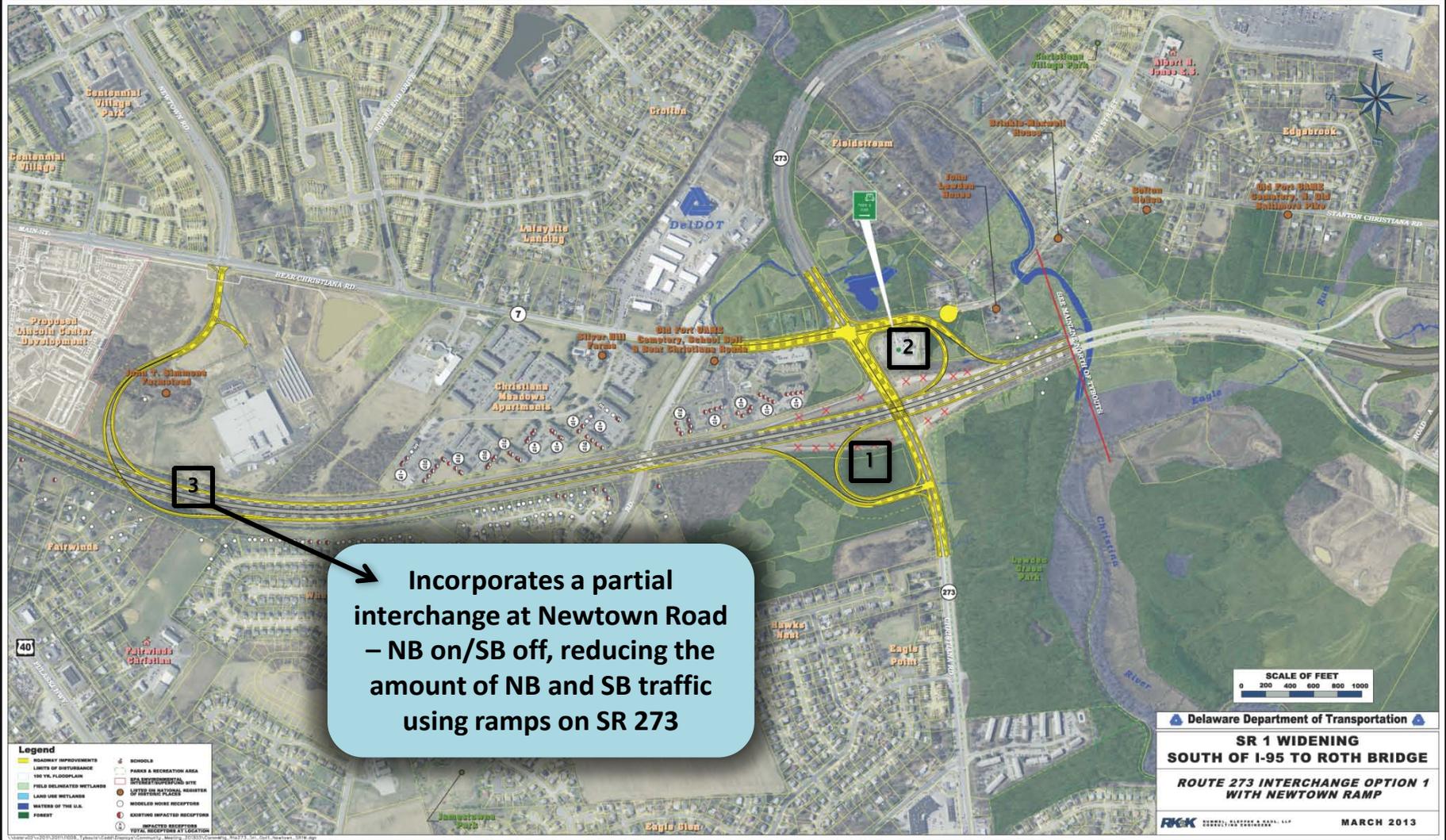
273

1

PARK &
RIDE
→

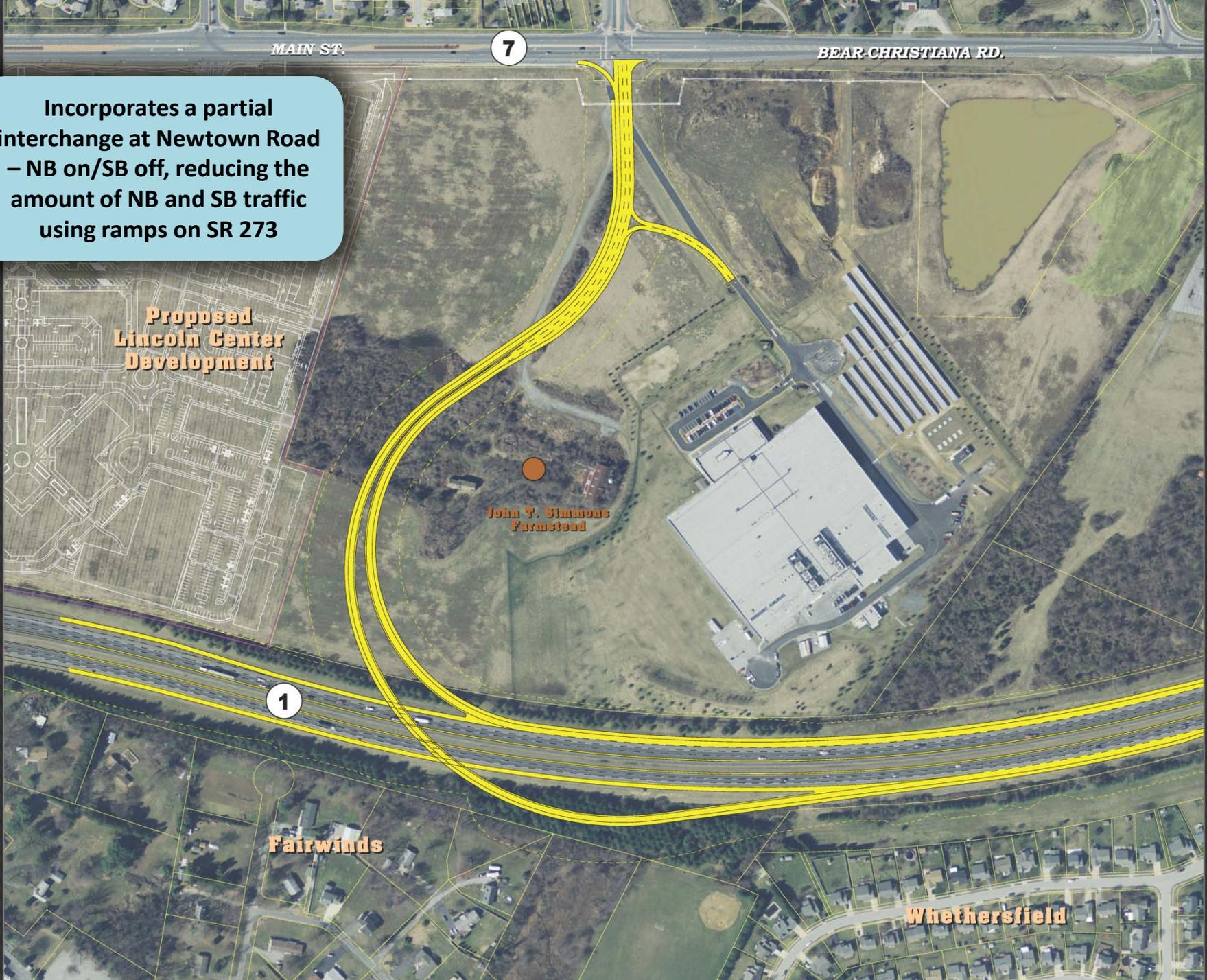
SR 273 Interchange

Option 1



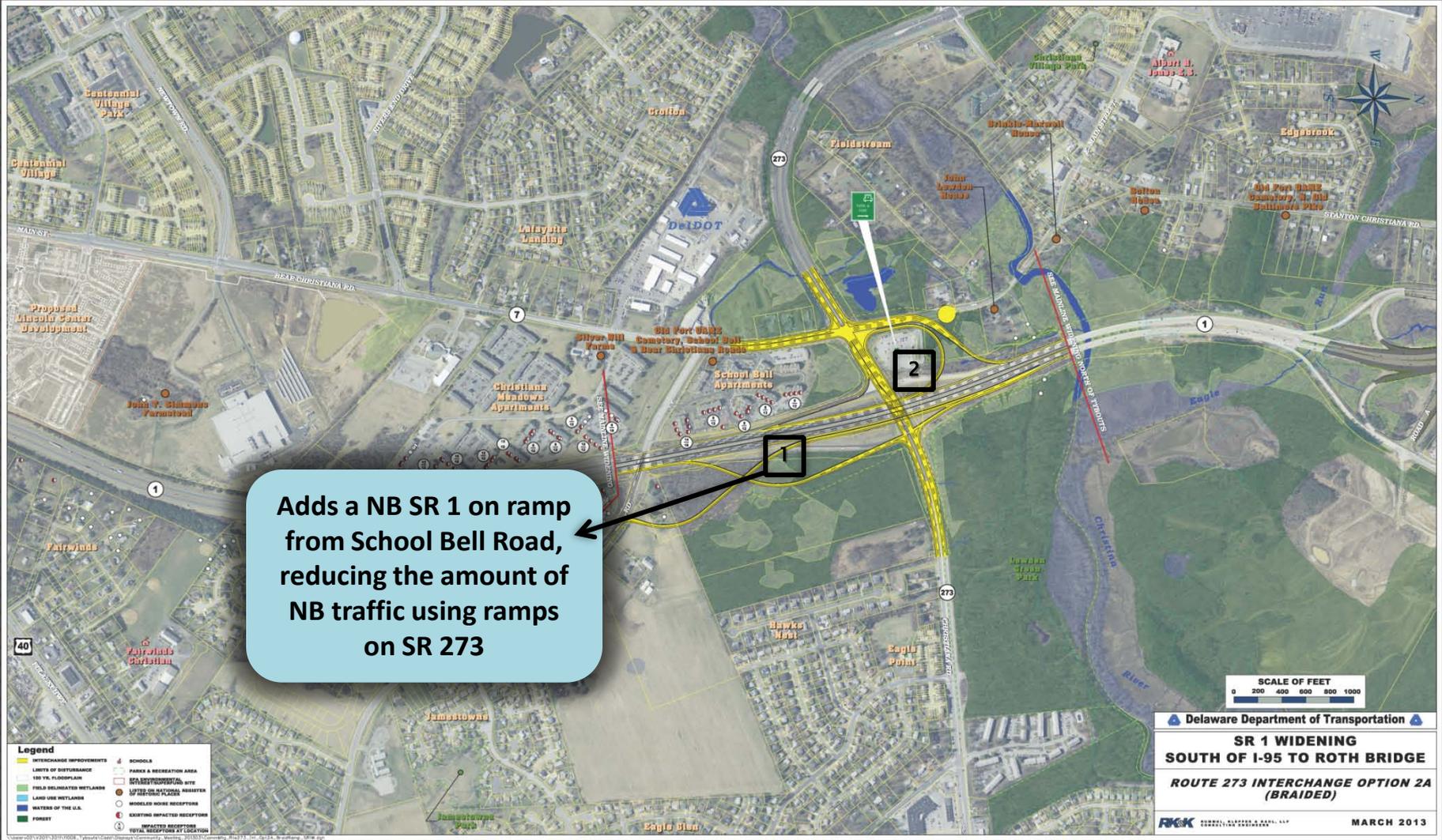
Incorporates a partial interchange at Newtown Road – NB on/SB off, reducing the amount of NB and SB traffic using ramps on SR 273

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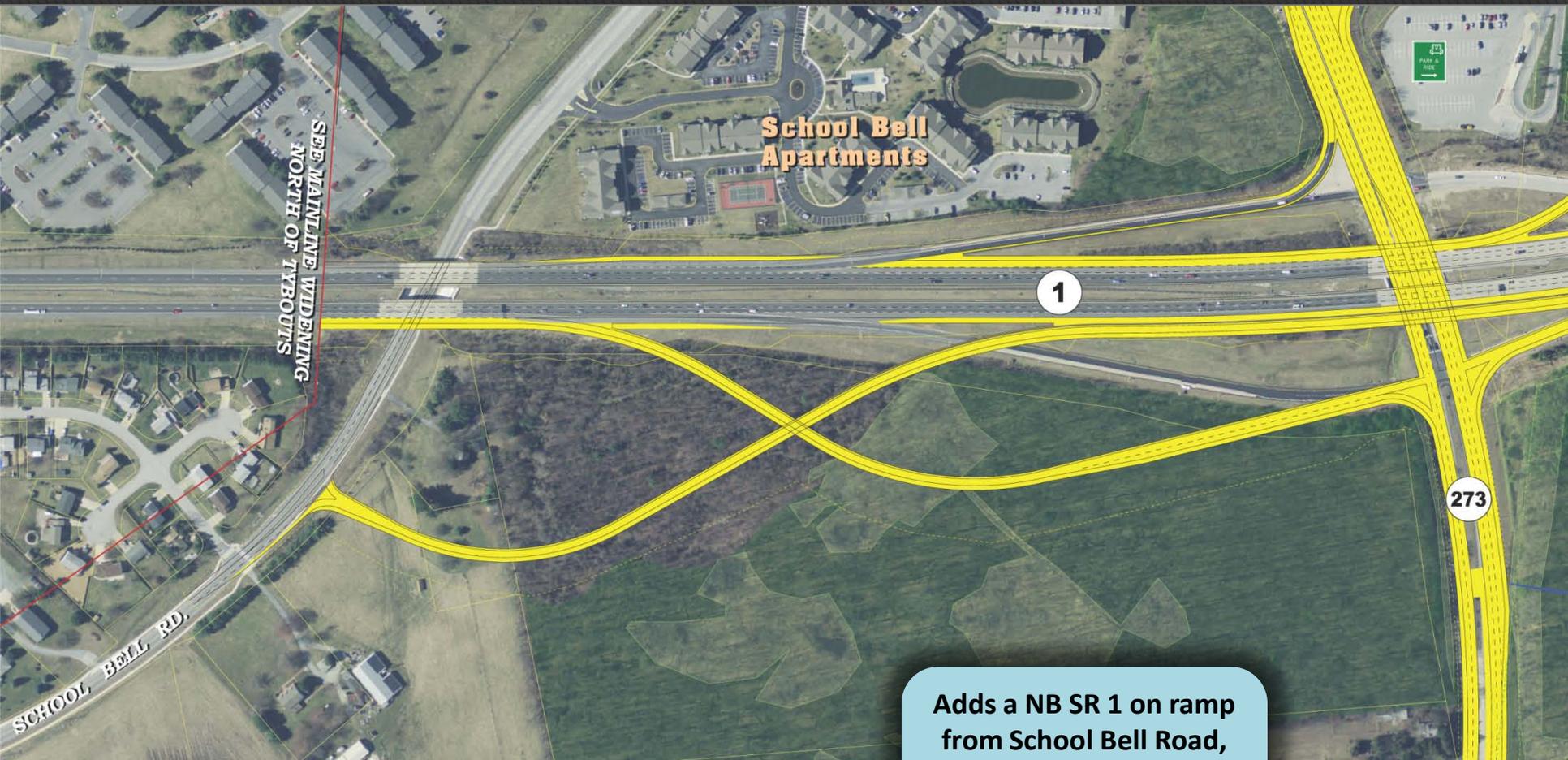


SR 273 Interchange

Option 2



Adds a NB SR 1 on ramp from School Bell Road, reducing the amount of NB traffic using ramps on SR 273



**School Bell
Apartments**

**SEE MAINLINE WIDENING
NORTH OF TYBOUTS**

SCHOOL BELL RD.

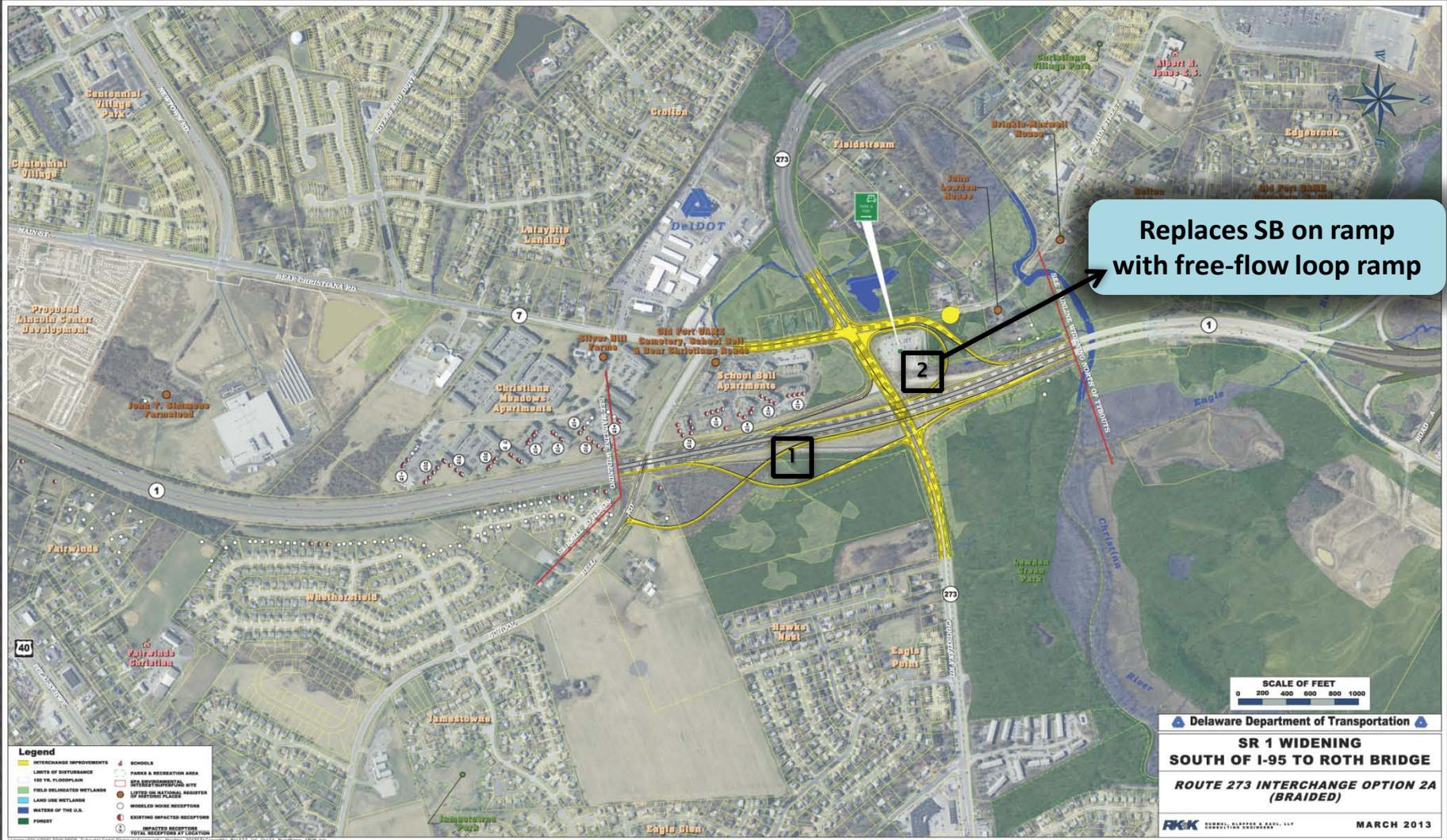
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273

**Adds a NB SR 1 on ramp
from School Bell Road,
reducing the amount of
NB traffic using ramps
on SR 273**

SR 273 Interchange

Option 2





Replaces SB on ramp with free-flow loop ramp

Specific Community Issues

- ▶ Thank you for being part of our listening tour.
- ▶ Let's discuss your community's concerns with this project, as we prepare for the upcoming Public Workshops:
 - April 8, 2013 (5:00 PM – 8:00 PM): Leasure Elementary School
 - April 18, 2013 (6:00 PM – 9:00 PM): Wilbur Elementary School