SR1 and Trap Shooters Road Interchange

Appendix D: Public Workshop Summaries







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Trap Shooters Road SR1 Interchange Public Workshop #1

01/23/2023 – Virtual Meeting via Zoom

The Dover Kent County MPO in partnership with DelDOT initiated a study to develop and evaluate alternatives at the intersection of SR1 and Trap Shooter Road to improve safety and capacity at this intersection. This initial workshop was virtual via Zoom held on January 23, 2023, provided the public with an overview of the existing conditions and solicited comments and feedback from the public on their experience at the intersection.

January 23, 2023 6:00 PM – 7:30 PM Virtual Zoom Meeting

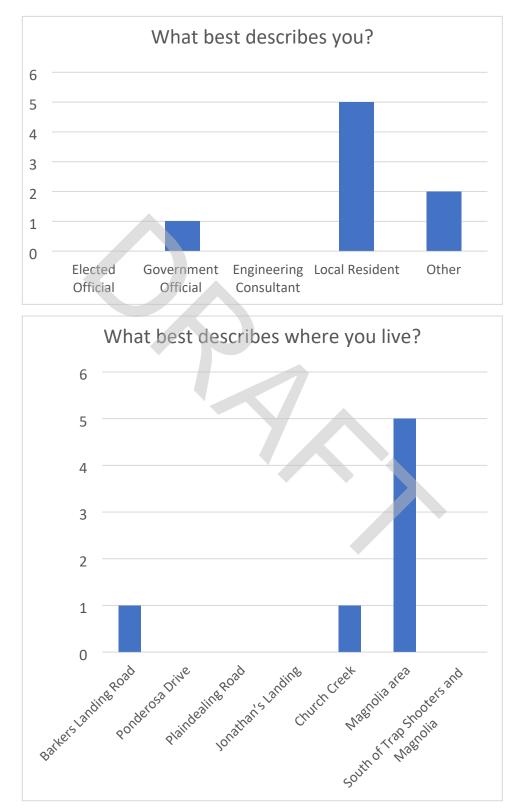
The public workshop was advertised for approximately 30 days prior to the workshop dates. Flyers and mailers were created and emailed to the elected officials and project partners for posting on their social media and web pages. The workshops were also advertised on the MPO's and DelDOT's webpage and the State's public meeting calendar. In addition, over 500 direct mailings were sent out to area residents to inform them of the upcoming workshop.

The workshop format was a virtual meeting on the Zoom platform. The virtual meeting started with a welcome video with instructions on how to participate in the public meeting. The formal presentation started at 6:10 pm. Drew Boyce provided the formal presentation with interactive polling questions throughout the presentation and a question-and-answer session at the end of the presentation. The information presented included the following:

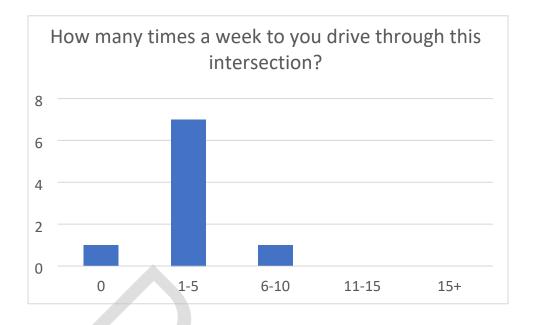
- Study Area
- Purpose and Need
- Work Plan
- Existing Conditions
- Current DelDOT Efforts
- Schedule
- Questions

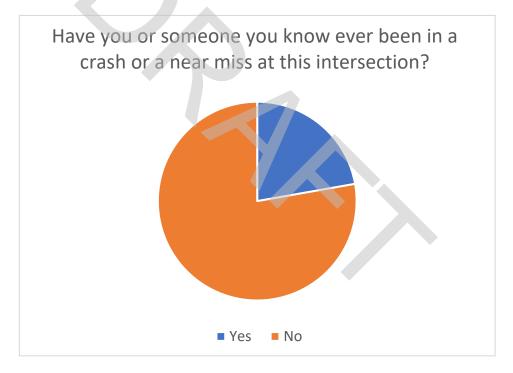
A total of 13 people registered in advance of the workshop and 8 people attended the public workshop. No elected officials attended the workshop. There was a good cross

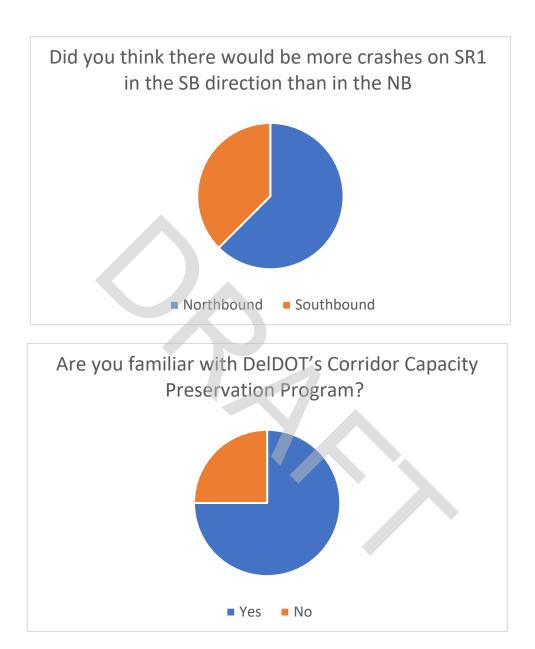
section of people that used the intersection to access SR1. Several polling questing were used to engage the participants and the results are as follows:



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In general, the feedback received was positive. Most of attendees acknowledged that the intersection needed to be improved.

The following pages contain the presentation presented at the workshop, attendees list, and post workshop survey.

All workshop materials are available on the Dover/Kent County MPO's website.

Flyer and Mailer



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Trap Shooters Road Public Workshop

Help us develop the new plan for Trap Shooters Road!



Join us for an informational meeting to understand issues and concerns. We want to hear from you!

URY

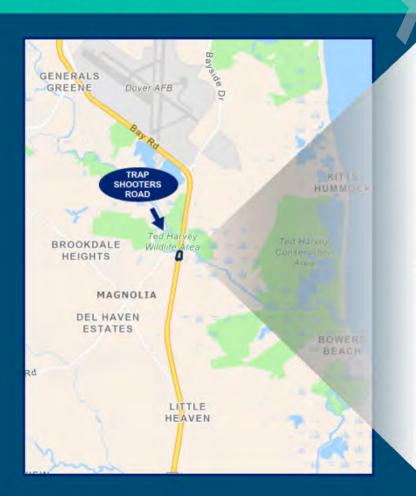
ENGINEERING

A Kleinfelder Company

January 23rd 6:00 PM On Zoom Register at:



https://us02web.zoom.us/webinar/register/WN_NcHs5xtiTuydiSPDA_K-Lw





Presentation

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SR1 and Trap Shooters Road Planning Study

Public Workshop #1 Existing Conditions



January 23, 2023







- How Can I Participate in this Workshop?
 - You Can Listen Using Your Computer Speakers or by Calling in on Your Phone
- To Listen to the Audio Using Your Phone, Please Call:
 - Phone Number:
 - Webinar ID:
 - Passcode:

1 305 224 1968 869 8564 4765 942031

• All Attendees, Whether on the Phone or Using Computer Speakers, will be Joining this Session in Listen-Only Mode



*9 - Raise Hand



*6 - Unmute/Mute

DOVER/KENT COUNTY MPO

NO





To Ask A Question

During the Session, Please Type All Questions and Comments in the Q&A Box which is Located on the Bottom Bar at the Bottom of Your Screen. Move Your Mouse to the Bottom of the Screen and the Bar will Appear.







- If you cannot use the Q&A function, please email questions directly to:
- James.Galvin@doverkentmpo.org
- Each question will be reviewed by the moderator, and panelists will respond verbally to the questions that are chosen
- Specific questions may be answered directly within the Q&A function

DOVER/KENT COUNT

No





Agenda

- Study Area
- Purpose and Need
- Work Plan
- Existing Conditions
- Current DeIDOT Efforts
- Schedule
- Questions







Study Area

- SR1
- Trap Shooter Road
- Barkers Landing Road







Poll Question #1

- What best describes you?
 - Elected Official
 - Government Official
 - Engineering Consultant
 - Local Resident
 - Other







DOVER/KENT COUNTY MPO

Poll Question #2

- What best describes where do you live?
 - Barkers Landing Road
 - Ponderosa Drive
 - Plaindealing Road
 - Jonathan's Landing
 - Church Creek
 - Magnolia area
 - South of Trap Shooters and Magnolia
 - Other

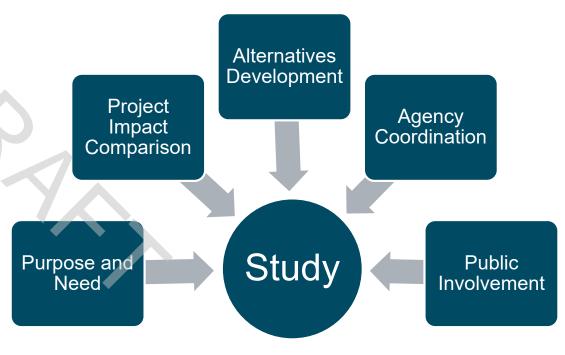






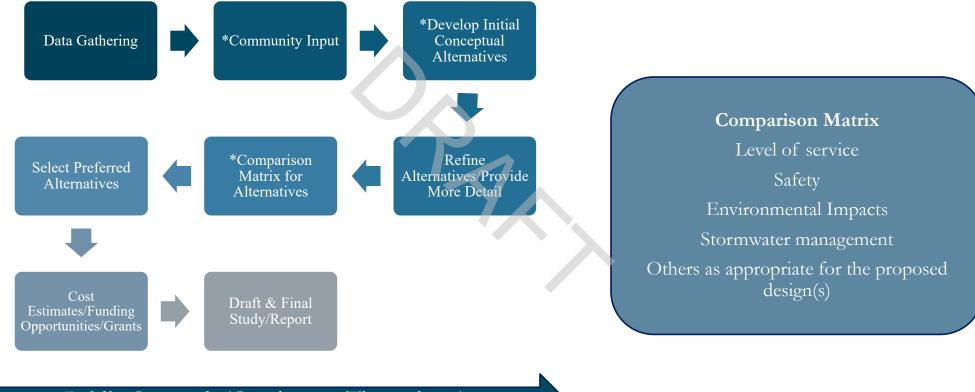
Purpose and Need

- Purpose
 - Improve safety and capacity at the intersection of SR1 and Trap Shooters Road
- Need
 - The intersection is experiencing high crash rates
 - The intersection reducing the overall capacity of SR1









Public Outreach (Continuous Throughout)

















Poll Question #3

- How many times a week to you drive through this intersection?
 - 0
 - 1-5
 - 6-10
 - 11-15
 - >15







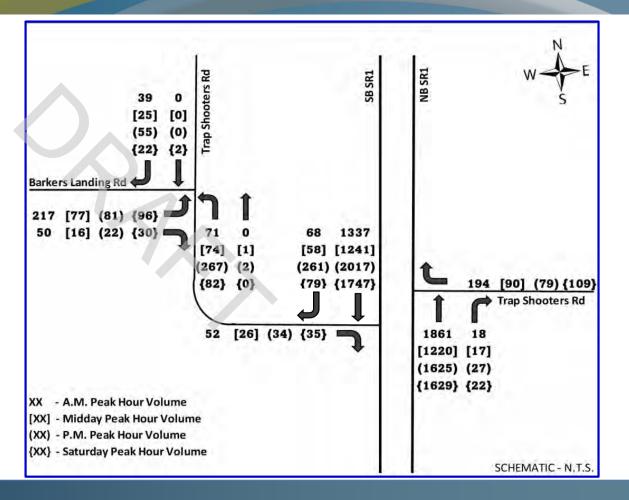
- Traffic Counts
 - Oct and Nov 2022
 - DelDOT data was used to calculate Summer Saturday turning movement volumes







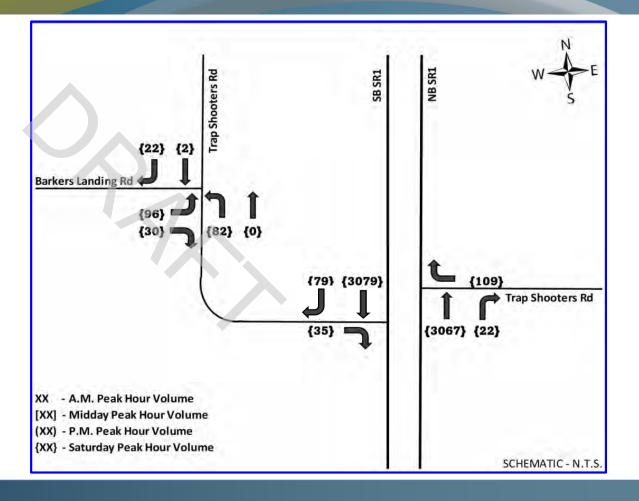
- Non summer peak hour turning movements
- AM heavy NB
- PM heavy SB







- Summer Saturday peak hour turning movements
- About ½ of the volumes during a weekday peak hour







Level of Service (LOS)

What is it?

A measure of delay

Levels of Service FREE FLOW A Low volumes and no delays. STABLE FLOW В Speeds restricted by travel conditions, minor delays STABLE FLOW Speeds and maneuverability closely С controlled because of higher volumes. STABLE FLOW Speeds considerably affected by change in operation conditions. High density traffic **UNSTABLE FLOW** . Ε Low speeds; considerable delay; volume at or slightly over capacity. FORCED FLOW LOS F Very low speeds; volumes exceed capacity; long delays with stop-and-go traffic. • • •





SB SR1 and Trap Shooters Rd

					leasu	res of	Effective	eness (under	Existing	2022 Tr	afic Co	nditions			
Control		We	ekday	AM	Week	(day N	lidday	We	ekday	/ PM	Non-Su	mmer S	aturday	Sumn	ner Sa	turday
Туре	Movement	Delay (Sec)	LOS	95th % Queue (ft)	Delay (Sec)	LOS	95th % Queue (ft)	Delay	LOS	95th % Queue (ft)	Delay	LOS	95th % Queue (ft)	Delay (Sec)	LOS	95th % Queue (ft)
Two-Way Stop	EBR Trap Shooters Rd	17.4	С	15	16.4	C	8	27.6	D	15	21.5	С	13	93.5	F	53

NB SR1 and Trap Shooters Rd

				N	Neasur	sures of Effectiveness under Existing 2022 Trafic	afic Co	onditions								
Control		We	ekday	/ AM	Week	day N	lidday	We	ekday	/ PM	Non-Su	mmer S	aturday	Sumn	ner Sa	turday
Control Type	Movement	Delay (Sec)	LOS	95th % Queue (ft)	Delay (Sec)	LOS	95th % Queue (ft)	Delay (Sec)	LOS	95th % Queue (ft)	Delav	LOS	95th % Queue (ft)	Delay (Sec)	LOS	95th % Queue (ft)
Two-Way Stop	WBR Trap Shooters Rd	87.6	F	198	16.9	С	23	27.1	D	38	35.6	E	70	301.4	F	213





- Crash Data
 - October 21, 2017, to October 31, 2022



🔳 🚽 Listen 🕨

Traffic Advisory State Police Investigating Serious Crash- Magnolia

Date Posted: Saturday, July 10th, 2021







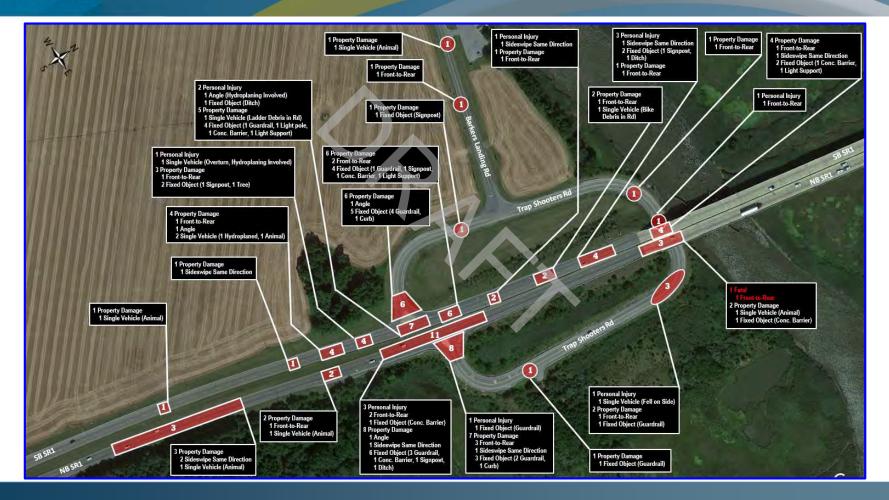
Poll Question #4

- Have you or someone you know ever been in a crash or a near miss at this intersection?
 - Yes
 - No





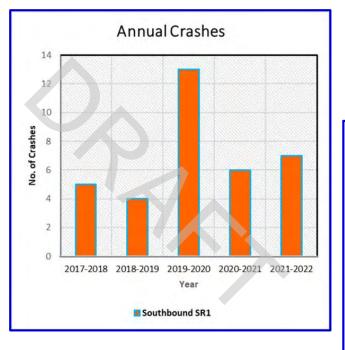


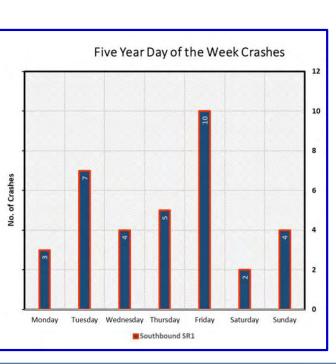






- SR1 Southbound Crashes
 - Total of 35 crashes
 - 2020 experienced an abnormally high number of crashes
 - Friday has a higher number of crashes

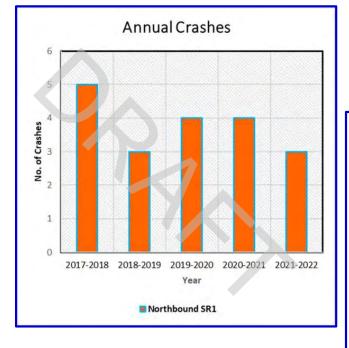


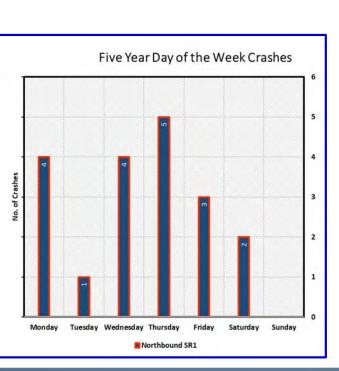






- SR1 Northbound Crashes
 - Total of 19 crashes
 - Relatively consistent number of crashes across the 5 years









0.00

Landing Rd

Existing Conditions

- Crash Rates
 - Overall the area experiences higher than average crashes
 - 2020 to 2021
 comparison shows
 crash rates are
 trending down except
 SR1 NB

Functional Class	Ratio of 2020 Roadway Crash Rate to Similar Roads in Kent County	Ratio of 2020 Roadway Crash Rate to Similar Roads Statewide				
Northbound SR1	4.70	5.63				
Southbound SR1	20.35	24.41				
Trap Shooters Rd	39,21	31.65	Functional	Ratio of 2021 Roadway Crash Rate	Ratio of 202 Roadway Cra Rate to Simil Roads Statew	
Barkers Landing Rd	0.00	0.00	Class	to Similar Roads in Kent County		
		4	Northbound SR1	7.19	7.71	
			Southbound SR1	11.51	12.33	
			Trap Shooters Rd	13.45	10.84	
			Barkers			

0.00





Poll Question #5

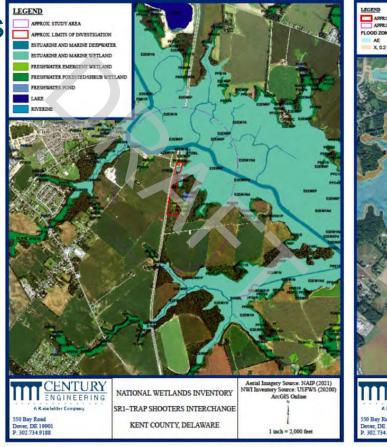
- Did you think there would be more crashes on SR1 in the SB direction than in the NB
 - Yes
 - No







- Wetlands inventory
- Natural Resources

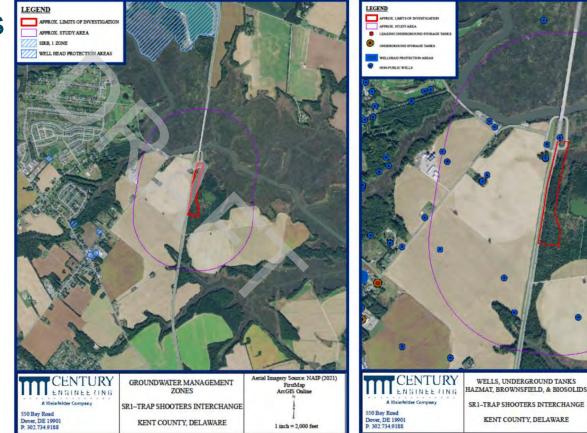








- No groundwater recharge areas near the study area
- Wells and underground tanks are located in the project area



Aerial Imagery Source: NAIP (2021)

FirstMap

1 inch = 1,000 feet

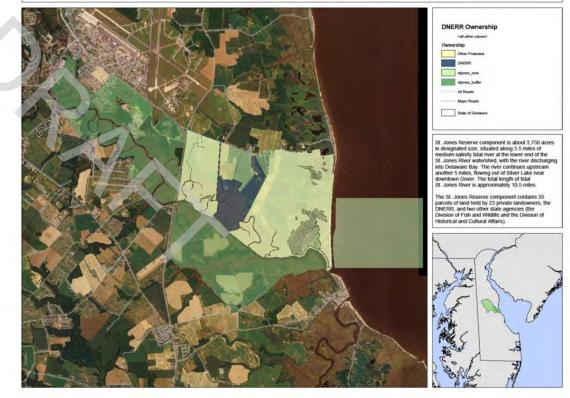
ArcGIS Onli





- DNERR is located adjacent to the project site
- The interchange area is identified as a buffer

Delaware National Estuarine Research Reserve St Jones Reserve

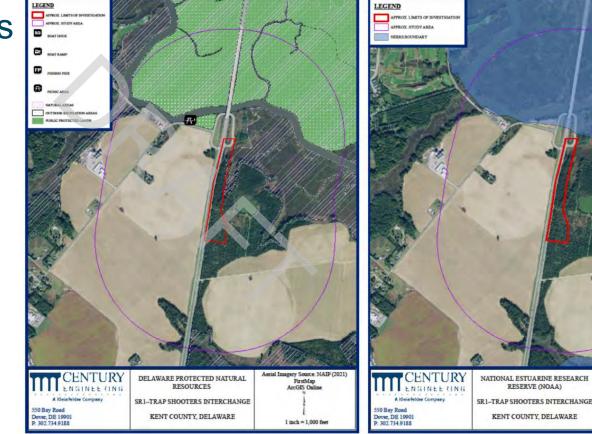






Existing Conditions

- DNREC Protected resources were identified
- The Northern boundary is in a National Estuarian Research Reserve

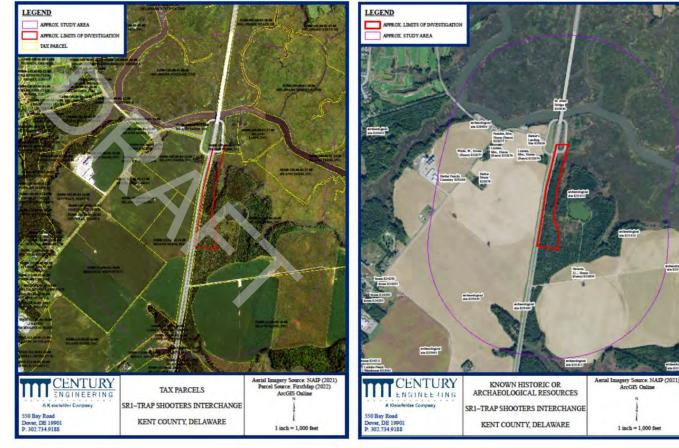






Existing Conditions

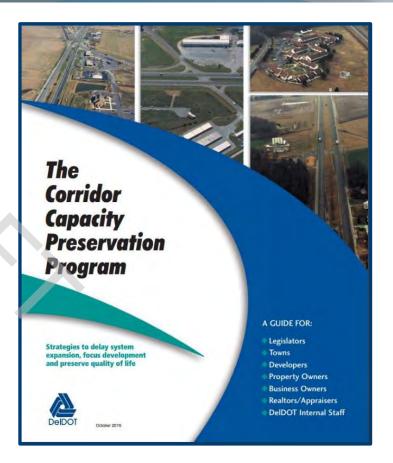
- There are known historic and archaeological resources in the area
- Most of the area is large lot farms







- CCPP SR1 Plan Update
 - Public workshops 11/15/2022
- SR1 Capacity Analysis
 - 6/20/2020
 - Triggers the need for a 3rd lane on SR1
 - 2035 2045







Poll Question #6

- Are you familiar with DelDOT's Corridor Capacity Preservation Program?
 - Yes
 - No









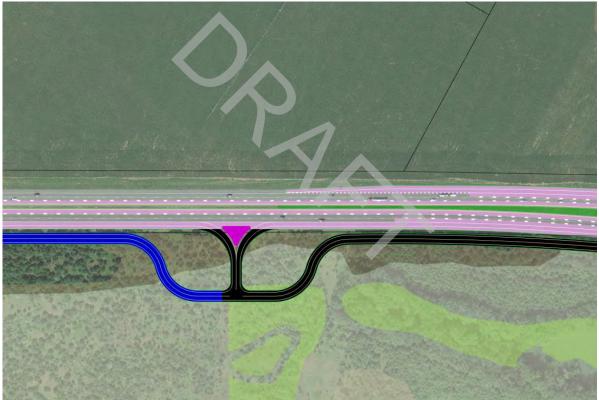








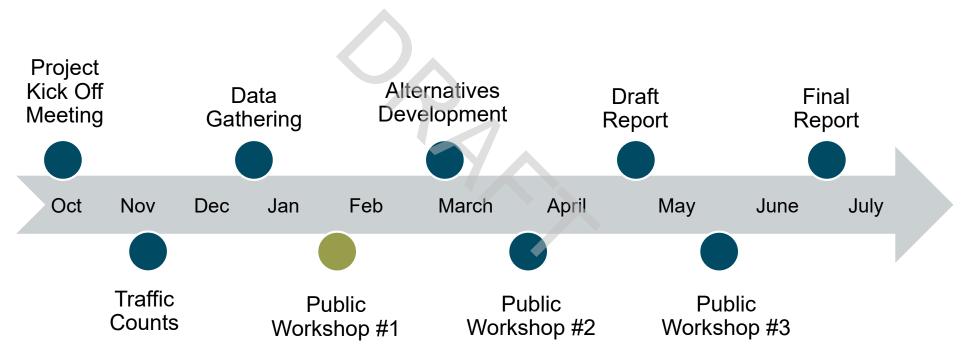








Schedule









James.Galvin@doverkentmpo.org







https://doverkentmpo.delaware.gov/projects/



Jim Galvin 302-387-6030 James.Galvin@doverkentmpo.org

Thank You!



Drew Boyce 302-734-9188 dboyce@kleinfelder.com

Participant List



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Attendee Report					
Report Generated					
Topic	Webinar ID	Actual Start Time	Actual Duration (min	_	
Trap Shooters Roa	ad 869 8564 4765	1/23/2023 1	7:42 88	8 21	
Panelist Details		F 11		· - ·	
Attended	User Name (Original Name)	Email	Join Time	Leave Time	
Yes	Sonia Marichic	smarichicgoudy@kleinfelder.com	1/23/2023 17:42		
Yes	Drew Boyce	dboyce@kleinfelder.com	1/23/2023 17:44		
Yes	MarilynSmith	marilyn.smith@doverkentmpo.org	1/23/2023 18:03		
Yes	MalcolmJacob	malcolm.jacob@doverkentmpo.org	1/23/2023 17:59		
Yes	HelenWiles	Helen.wiles@doverkentmpo.org	1/23/2023 17:58		
Yes	Ted Foglietta	tfoglietta@kleinfelder.com	1/23/2023 18:0		
Yes	JAMESGalvin	james.galvin@doverkentmpo.org	1/23/2023 18:1:		
Yes	Humaira Yusuf Nabeela	humaira.nabeela@delaware.gov	1/23/2023 18:2	5 1/23/2023 19:09	
Attendee Details					
Attended	User Name (Original Name)	First Name	Last Name	Email	
Yes	Anne Brown	Anne	Brown	anne.brown@delaware.gov	
Yes	Marilyn Smith	Marilyn	Smith	marilyn.smith@doverkentmpo.org	
<mark>Yes</mark>	lan Peters	lan	Peters	ipeters61@gmail.com	
<mark>Yes</mark>	Jeffrey Miller	Jeffrey	Miller	Jeffrey_miller@live.com	
<mark>Yes</mark>	Josh Thomas	Josh	Thomas	joshua.thomas@delaware.gov	
Yes	James Frazier	James	Frazier	Jrfcrm4@gmail.com	
Yes	Malcolm Jacob	Malcolm	Jacob	malcolm.jacob@doverkentmpo.org	
Yes	Malcolm Jacob	Malcolm	Jacob	malcolm.jacob@doverkentmpo.org	
<mark>Yes</mark>	Ron Cantrell	Ron	Cantrell	roninorbit@icloud.com	
Yes	Helen Wiles	Helen	Wiles	Helen.wiles@doverkentmpo.org	
Yes	Helen Wiles	Helen	Wiles	Helen.wiles@doverkentmpo.org	
Yes	Helen Wiles	Helen	Wiles	Helen.wiles@doverkentmpo.org	
Yes	Ted Foglietta	Ted	Foglietta	tfoglietta@kleinfelder.com	
<mark>Yes</mark>	Rick Mazol	Rick	Mazol	rick@chesapeaketurf.com	
Yes	JAMES Galvin	JAMES	Galvin	james.galvin@doverkentmpo.org	
<mark>Yes</mark>	Kristina DeRobertis	Kristina	DeRobertis	kderobertis@wboc.com	
Yes	Humaira Yusuf Nabeela	Humaira	Yusuf Nabeela	humaira.nabeela@delaware.gov	
No	Breanna	Breanna	Kovach	breanna.kovach@delaware.gov	
No	Roger	Roger	McClean	rpm030650@gmail.com	
No	Beau	Beau	Zebley	beau@emeraldc21.com	
No	Brian	Brian	Howard	bhmusic302@gmail.com	
	brian				
No	Lisamarie	Lisamarie	Doughten	lisamariedoughten@comcast.net	

Post Workshop Survey



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-	1/24 Webinar ID : 869 8564 4765	1/2023 10:13 Actual Start Time 1/23/2023 17:42	Actual Duration (mine 2 88	uutes)		
#	User Nar	ne User Email	Submitted Time	Do you agree with the purpose and need for this study?	How well do you feel that tonight's workshop provided you the opportunity to share your ideas, thoughts and concerns related to SR1 and Trap Shooters Road Study?	How was the video quality audio quality of the of the workshop? workshop?
1 Anonymous		Anonymous	1/23/2023 19:11 Yes I agree		I feel good about tonight's meeting	5 5
2	Anonymous	Anonymous	1/23/2023 19:10 y	yes	Very well, lots of opportunities to comment.	5 5



Trap Shooters Road SR1 Interchange Public Workshop #2

03/28/2023 - Magnolia, DE

The Dover Kent County MPO in partnership with DelDOT initiated a study to develop and evaluate alternatives at the intersection of SR1 and Trap Shooter Road to improve safety and capacity at this intersection. The initial workshop held on January 23, 2023 was a virtual meeting via Zoom, provided the public with an overview of the existing conditions and solicited comments and feedback from the public on their experience at the intersection and what the design team should be considering as we developed alternatives.

This second workshop presented information on the alternatives developed to meet the purpose and need of the project taking into account the information gained form the first public workshop.

March 28, 2023 6:00 PM – 7:30 PM McIlvaine Elementary School Magnolia, Delaware

The public workshop was advertised for approximately 30 days prior to the workshop dates. Flyers and mailers were created and emailed to the elected officials and project partners for posting on their social media and web pages. The workshops were also advertised on the MPO's and DelDOT's webpage and the State's public meeting calendar. In addition, over 1000 direct mailings were sent out to area residents to let them know about the upcoming workshop.

The workshop format was an in-person open house style information session. There was no formal presentation, but staff personally explained the project to attendees as they arrived. Staff were positioned at four stations to provide additional information on the alternatives presented and to answer any questions. The information presented on the information boards included the following:

- Project Location
- AgendaPurpose and Need Statement
- Vehicle Volume Data
- Crash Data

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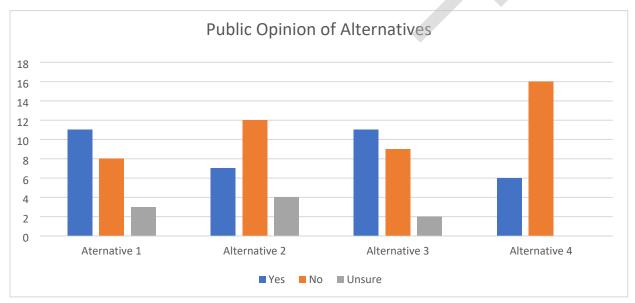
- Overview of the Alternatives
- Detailed Plans of the 4 Alternatives
- Comparison Matrix
- Anticipated Travel Time and Safety Benefits for Each Alternative

A total of 39 people attended the public workshop. No elected officials attended the workshop. There was a good cross section of people that used the intersection to access SR1. The magnolia fire company had several people attend and provided good feedback on the alternatives presented. The effected property owners were also in attendance and were able to share their opinions on the proposed alternatives.

At the end of the workshop the attendees were encouraged to fill out a comment form and provide their input on the proposed alternatives. Twenty six comment forms were received the night of the workshop.

In general, the feedback received through the formal comment forms and conversations during the public workshop was positive. There was general agreement that changes were needed at the intersection to improve both safety and capacity. There were five comment questions, one asking for an opinion on each of the four alternatives presented, as well as space for additional comments. The 4 alternatives presented included:

- Alternative 1 Extension of Trap Shooters Road with Wetland Fill
- Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland
- Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange
- Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange



CENTURY ENGINEERING, LLC, A KLEINFELDER COMPANY 550 South Bay Road, Dover, DE 19901 p | 302.734.9188 Some of the highlights of public comments include:

- Ramps need to be moved south, all alternatives are an inconvenience
- Reduce speeds on SR1
- Limit how far south you need to go before heading north
- Need temporary signage as an interim improvement
- Don't impact the farm land
- The new overpass options are good
- Need interim improvement

Based on the public opinion Alternatives 2 and 4 received the most support.

After the workshop we received 2 additional e-mails expressing opinions about the alternatives presented at the workshop. There were additional ideas proposed in the e-mails. One was to reinstall the merge lane NB to allow cars to accelerate. This condition was previously removed by DeIDOT for safety reasons. Any addition of an acceleration lane will need to meet AASHTO design requirements. The second email received proposed a tight radius design with a bridge over SR1. This idea would meet the purpose and need, however the geometrics would not need AASHTO design requirements. This alternative would also be more expensive and provide little benefit over Options 1 and 2.

All of the alternatives, including a description of each, are available for review on the MPO website.

The following pages contain the boards presented at the workshop, sign-in sheets and comment forms received.

Flyer and Mailer



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SR1 Trap Shooters Road Interchange - Public Workshop #2



DOVER/KENT COUNTY MPO Join us for the 2nd public workshop to METROPOLITAN PLANNING ORGANIZATION explore possible solutions to traffic safety



Open house format: Come anytime to review concepts and ideas and March 28, 2023 provide your input **McIlvaine Elementary School** 11 E. Walnut St.

Magnolia, DE 19962

6:00pm – 7:30pm

https://doverkentmpo.delaware.gov/sr-1-trap-shooters-intersection-study-page/

OND

We want to

A Kleinfelder Company

hear from

you!

Display Boards

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SR1 and Trap Shooters Road Planning Study

Public Workshop #2 Alternatives



March 28, 2023







Overview of Information Presented Tonight

- Purpose and Need
- Summary of Existing Conditions
- Overview Map
- 4 Alternatives
 - Extend Existing Trap Shooters
 - Extend Existing Trap Shooters with Bridge
 - New Connection with Diamond
 Interchange
 - New connection with Trumpet
 Intersection
- Comparison Matrix
- Schedule

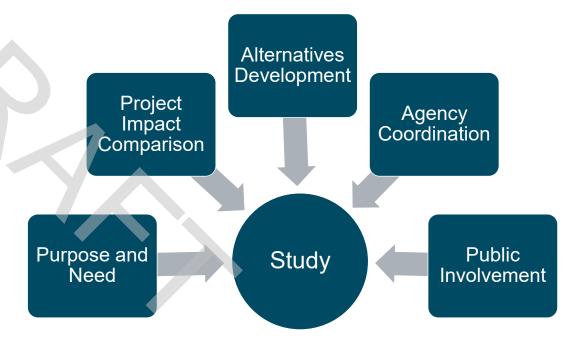






Purpose and Need

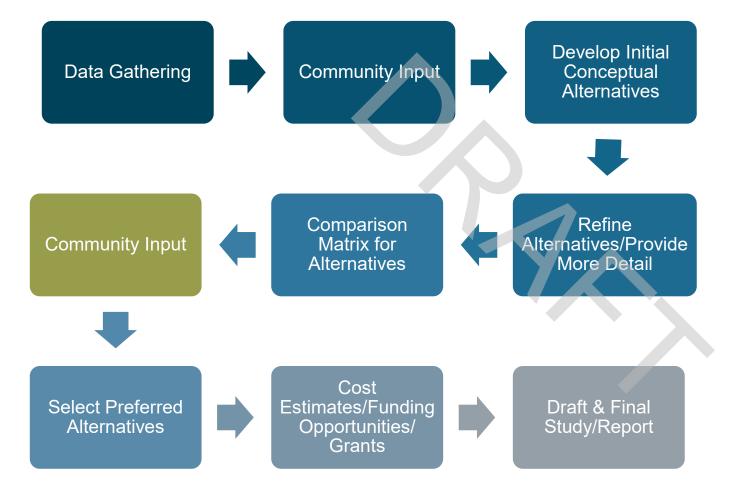
- Purpose
 - Improve safety and capacity at the intersection of SR1 and Trap Shooters Road
- Need
 - The intersection is experiencing high crash rates
 - The intersection reducing the overall capacity of SR1







Process



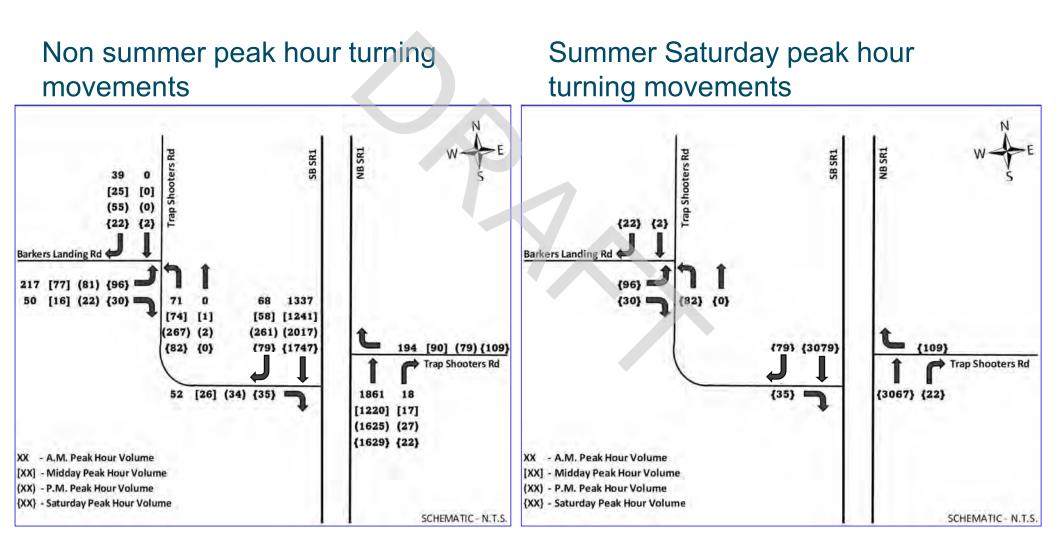
Comparison Matrix Safety Travel Time Environmental Impacts Right-of-Way Costs

Public Outreach (Continuous Throughout)



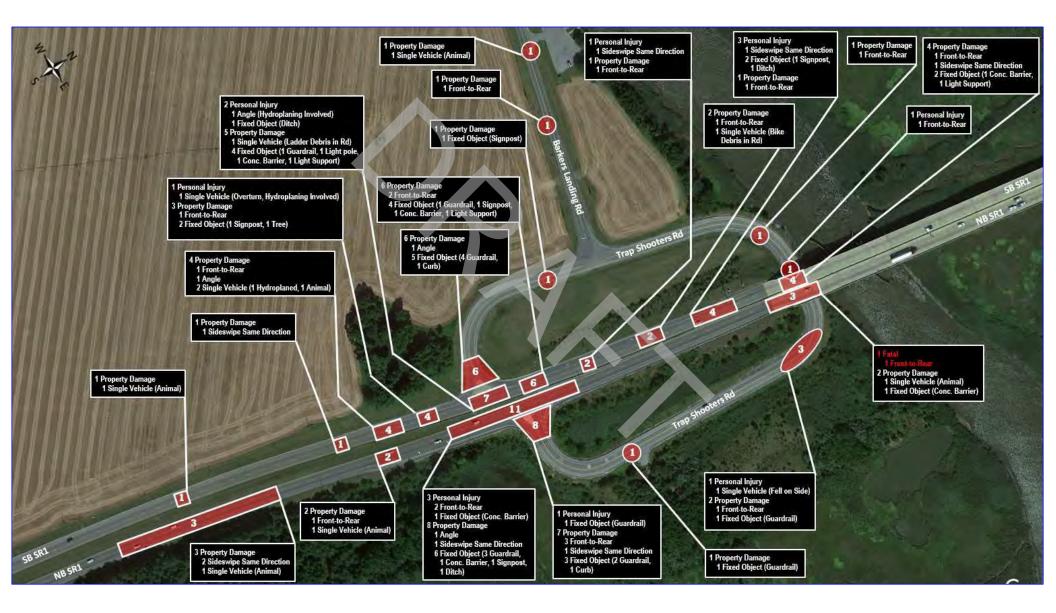


Existing Conditions





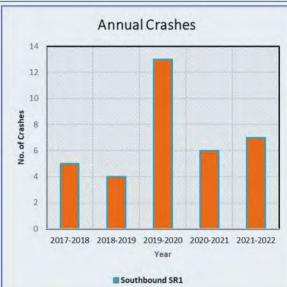








Existing Conditions



Five Year Day of the Week Crashes

Friday

Saturday

No. of Crashes

Monday

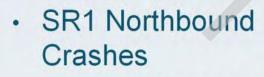
Tuesday Wednesday Thursday

Southbound SR1

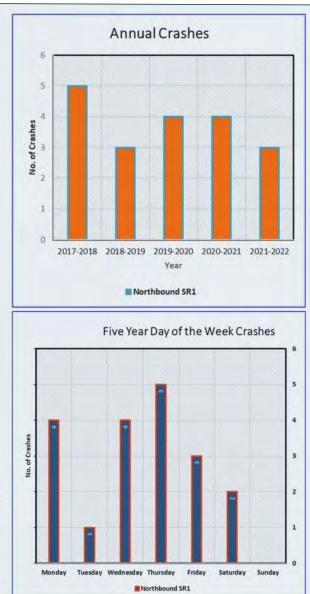
12

10

- SR1 Southbound Crashes
 - Total of 35 crashes
 - 2020 experienced an abnormally high number of crashes
 - Friday has a higher number of crashes



- Total of 19 crashes
- Relatively consistent number of crashes across the 5 years









TRAP SHOOTERS ROAD - ALTERNATIVES OVERVIEW

DelDOT=











































LEGEND

HISERVAUCH AREA



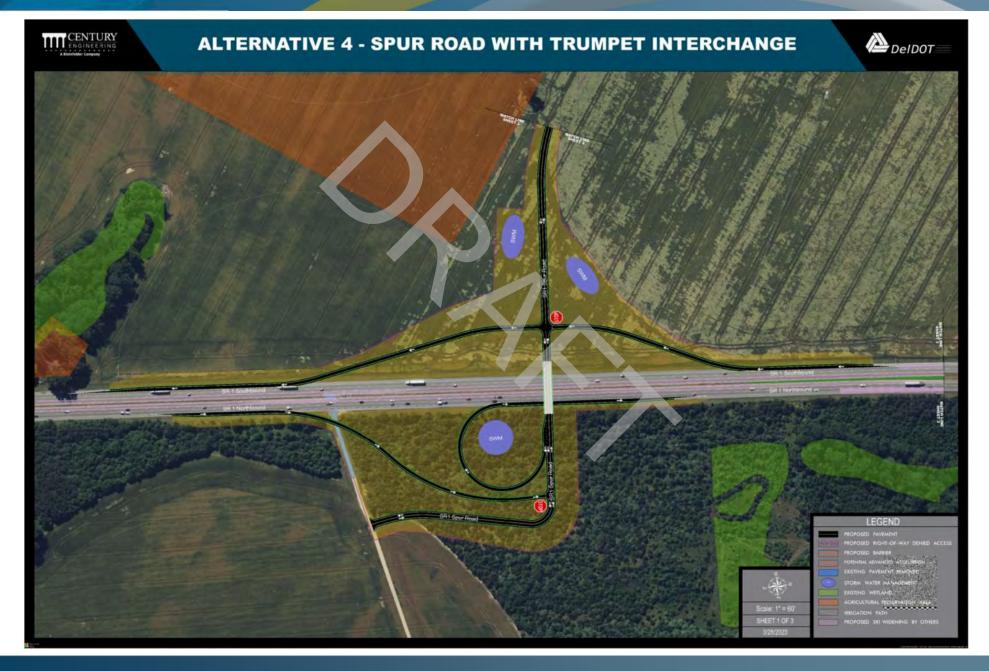
ALTERNATIVE 3 - SPUR ROAD WITH DIAMOND INTERCHANGE





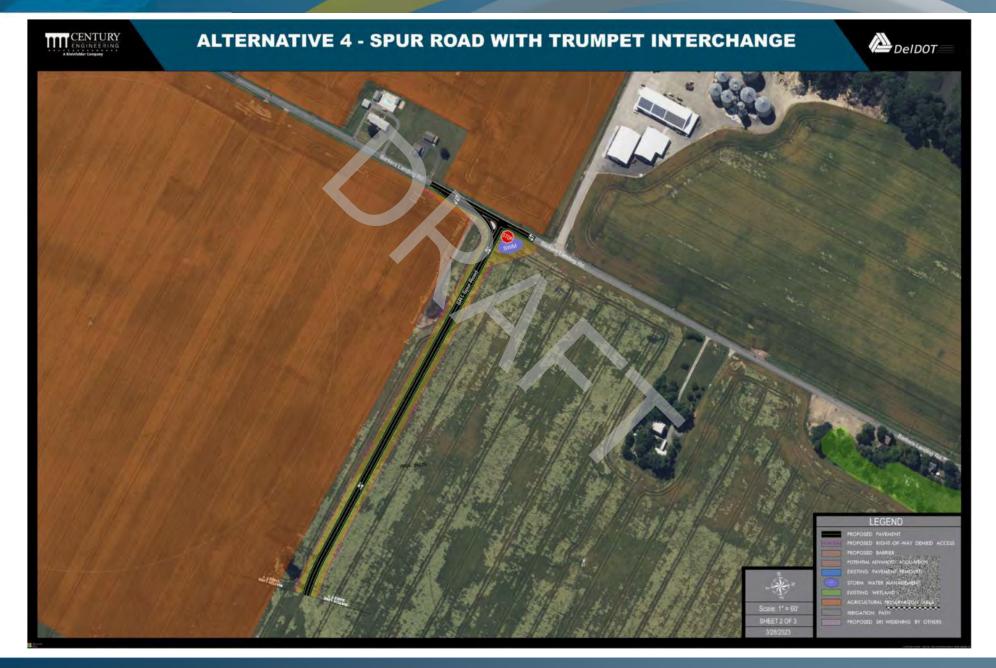


















ALTERNATIVE 4 - SPUR ROAD WITH TRUMPET INTERCHANGE







Alternatives Comparison Matrix

		SR1 Trap S	Shooters F	Road Inter	chnage St	udy			
		Measur	es of Effectiv	veness - Phys	ical Impacts				
Measure	UOM		ccess Points uth ridge	So	ccess Points uth Bridge	New Spur Roa	nate 3 ad to SR1 with nterchnage	New Spur Roa	ate 4 ad to SR1 with nterchnage
Wetland Impacts Permanent	Square Feet / Ac	10,155	0.23	786	0.02	0	0.00	0	0.00
Wetland Impacts Temp	Square Feet / Ac	0	0.00	6,621	0.15	0	0.00	0	0.00
Forested Land Impacts	Square Feet / Ac	278,036	6.38	287,930	6.61	357,621	8.21	326,427	7.49
Agricultural Land Impacts	Square Feet / Ac	164,408	3.77	164,408	3.77	549,855	12.62	558,526	12.82
Ag. Land Preservation Impacts	Square Feet / Ac	0	0.00	0	0.00	5,294	0.12	5,294	0.12
Irrigation Impacts	Square Feet / Ac	10,482	0.24	10,482	0.24	123,248	2.83	123,248	2.83
Right-of-way Area	Square Feet / Ac	519,455	11.93	553,971	12.72	919,292	21.10	969,772	22.26
Costs	Thousands Dollars	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD





Alternatives Comparison Matrix

	No. of Vehicles involved in Property Damage Crashes	Injury Crashes	Fatal Crashes	Total Annual Crash Reduction Benefit
2018 through 2021 Calendar Years*	72	11	1	
Crash Modification Factor (CMF)	0.84	0.84	0.84	
Crashes after Project	60.48	9.24	0.84	
Annual Crash Reduction	15.12	2.31	0.21	
USDOT Monetized Value per crash**	\$4,800.00	\$307,800.00	\$13,046,800.00	
Annual Crash Reduction Benefit	\$72,576.00	\$711,018.00	\$2,739,828.00	\$3,523,422.00

* Excluding Crashes with animals as they are not susceptible to reduction with any geometric changes ** 2021 Base Year Dollars

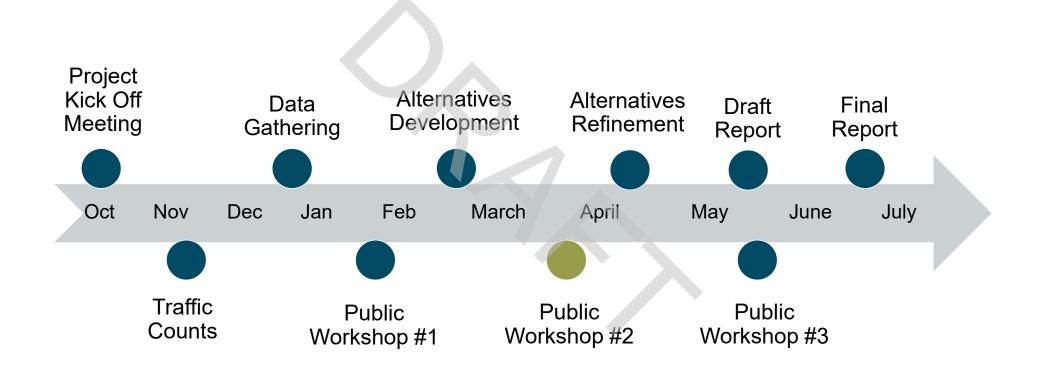
Travel Time (Change	with N	lagnol	ia Origi	n-Dest	ination		· · ·				· · · ·		· · · · · ·		
Turnel Time Change		Alt 1 Ge	ometry			Alt 2 Ge	ometry			Alt 3 Ge	ometry			Alt 4 Ge	eometry	
Travel Time Change (Seconds)	Northbo	und Trips	Southbo	ound Trip	Northbo	und Trips	Southbo	ound Trip	Northbo	und Trips	Southbo	ound Trip	Northbo	und Trips	Southbo	ound Trip
(Seconds)	Inbound	Outbound	Inbound	Outbound												
XX = Increase; (XX) = Decrease	11.7	20.6	12.5	6.7	0.2	9.2	9.7	5.7	(72.8)	(72.4)	13.3	(47.5)	(71.9)	(53.2)	12.7	(47.3)

Travel Time (Change	with P	onder	osa Driv	<i>v</i> e Origi	in-Dest	inatior)								
Travel Time Change		Alt 1 Ge	ometry			Alt 2 Ge	ometry			Alt 3 Ge	ometry			Alt 4 Ge	ometry	
Travel Time Change (Seconds)	Northbo	und Trips	Southbo	ound Trip	Northbo	und Trips	Southbo	ound Trip	Northbo	und Trips	Southbo	ound Trip	Northbo	und Trips	Southbo	ound Trip
(Seconds)	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
XX = Increase; (XX) = Decrease	11.7	20.6	12.5	6.7	0.2	9.2	9.7	5.7	(22.6)	(15.9)	63.5	9.0	(21.7)	4.5	62.6	10.4





Schedule









https://doverkentmpo.delaware.gov/sr-1trap-shooters-intersection-study-page/



Jim Galvin 302-387-6030 James.Galvin@doverkentmpo.org Thank You!



Drew Boyce

302-734-9188

dboyce@kleinfelder.com





Your comments are important to us and will be considered along with comments from government and regulatory agencies. Safety and operational requirements will also be considered.

Therefore, while all comments are considered, some comments may not be incorporate into the project.

Thank you again for your participation.

Please remember to complete the survey before you leave tonight.

Thank You!

DOVER/KENT COUNTY MPO

Sign in Sheets



CENTURY ENGINEERING, LLC, A KLEINFELDER COMPANY 550 South Bay Road, Dover, DE 19901 p | 302.734.9188

> 185024.11 April 14, 2023 Page 7 of 9

March 28, 2023



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N	Name & Yan Buft	Address 411 W Birder Ln, Magnolianse 19962	Phone 302-535.0004
	Organization Fire Chief - Mugnetici	Email Address Kidal 33(2) com custine t	
m	"Todd Burger	address Penderosa Die Magnitia DE 19962	Phone 302-270-8417
	Organization	Email Adress blade ir rigging amail 1 com	
4	Rame Rost + He mr	Address Address Localy for Rd magnetin De 19962	Phone 3 6 2 - 8 1 2 6
	(0	Email Address	
5	Robert OVEanstler	4758 South Sale Street man: In 19960	Phone 302-647-2367
	Órganization	Email Address R.D.O. 1979 Copel, Corr	
9	HATTEICK RANNIONS	HOD JOSHUA DA	Phone 30 2 399 1041
	Organization	Parayment 62 @ hatmail. com	
~	Lity we will will a for y	1578 MULLINN 12 POND 2D, MAGNOLIA DE	Phone 302222 400 6
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March 28, 2023

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DOVER/KENT COUNTY MPO

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Name		Organization	59	
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Name Name Consultation Cons		Organization	Email Address RONIN ORBITE ICLOUD, COM	
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Email Address	14		110 MASTERSLEIT	15x.086-15
		Organization	14	





DOVER/KENT COUNTY MPO



15	Name Brian Houard Organization	Address 9 S Main ST May nolig Email Address	Phone 302-310-2025
16		Address of the Manual 2	Phone 270 2325
	Creanization	dress	5/
17	Name RON & MAUREEN RED	Address 247 WICKLAUS LAWE MAGNOLIA DE 19962	Phone 302-2710-8670
	Organization		
18	Name Shani Gary	Adress 78 Plaun decling Rizad Mognitia	Phone 223 -697-8795
	Organization	Email Address	
19	Name On Unitard	Address 99 Big Had Land	Phone 222 270 -7942
	Organization		
20	Mame Hershberger	Address algindraling RD Magnolic DF	Phone 307 270-2853
	Organization		
21	Name Patricia Cerchio Organization	Address Augusta National Magnolia To 3 Augusta National Magnolia	Phone 302-387-1309

March 28, 2023





22	Name	Address Suck Davis Lane Magnetia Phone 202- 6977-1542	- 697-1542
	Organization	Email Address AUNCO CONNELL CONSUL CON	
22	Name MARVEL	Ph	5025821037
	Organization	Email Address	
2 Z	BERNIP Sannoski	Address 787 Augusta National Drive, Magnolia Phone	
	Organization		
38 20	Mame Rennet	26 N Main St. Magndie, D2 Phone 202.	302-331-8882
	Organization	marie Renett Relton ameil. com	
5 2	ROLER CRAIC	THEREY HILL RO, MAGNOCIA	Phone 302-535-8478
	Organization	Email Address	
53	Name Arice Hartung	Address Mindrow Way Magnolia DE Phone 302.	302-284-3316
	Organization	Email Address Scherling Qadi com	
Se Re	Name Kate Merie	- Fr	302,698,0443
	Organization	Email Address J leficondabbler @ Concast, net	



DOVER/KENT COUNTY MPO

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	Organization Fork Forrs	Email Address	
16 %	V) YOUR REDDING	Address HT CaNCRESSIONAL ST, MACNELIA	Phone Prove 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	Organization	Email Address Pold @ Jahoo Com	
38	JUDI & CAPPL CAPIDER	Address Cherry fiel Rd. Maguelia	Phone 302-697-3630
	Organization	Email Address	
35 82	XISAMARIE DOUGHTON	Address 458 Tullmore Rd.	Phone 302-363-9947
	Organization	Email Address MOGNO/1A Le 19962	
38	Name Hilebb	151 Quakes Hill Ad Magnolia, De	Phone 382-1179
	Organization	ebbaga	
35	Name horra Cundell	Address DIN. MAINST MOGINIA DE	Phone 8510 207 4896
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RR	Name Durus 37 De	Address 13 S. Maun St Nagnollo	Phone
	Organization	To @ ya	
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March 28, 2023



DOVER/KENT COUNTY MPO

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1				μ.
30 30	Ron Webb	Address Address (1,1) Rd Marner DE	Phone 302-222-0551	
	Organization	2		
3 %	David Nicol	Address Address Dr.; Fellen DE 19943	Phone 302-382-9848	
	Organization	Email Address d'Nicol 5530 & ginail com		
239	Name	Address	Phone	
1-	Organization	Email Address		
60	Name	Address	Phone	
1	Organization	Email Address		
61	Name	Address	Phone	
1-	Organization	Email Address		
62	Name	Address	Phone	
12	Organization	Email Address		
8	Name	Address	Phone	
12	Organization	Email Address		

Comment Sheets



CENTURY ENGINEERING, LLC, A KLEINFELDER COMPANY 550 South Bay Road, Dover, DE 19901 p | 302.734.9188

> 185024.11 April 14, 2023 Page 8 of 9







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No
 - C. Unsure
- Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland? A. Yes
 - B. No
 - C. Unsure
- 3. Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?
 - A. Yes B. No
 - C. Unsure
- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes
 - B. No
 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name:	JUDI CACIOPPO
Address:	99 CHERRY HIN RO, MAGNO (12, DE 19962
Email:	dd cheft Hu hal monoliging a un
	STARSPRO @ AOL. COM
Please tu	urn-in your comment sheets at the workshop or mail/email prior to April 25, 2023 to
	alvin, AICP – Dover/Kent Co MPO Principal Planner
james.ga	lvin@doverkentmpo.org - Ph: 302.387.6030
1783 Frie	ends Way, Ste 3, Camden, DE 19934
http://w	vww.doverkentmpo.org







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Please provide your contact information to stay informed about this project: 2419 Wood 12y towar Ed

Name: Address: Email:

Magudia







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
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Road, Widen PRide To Leather South alka	Rogd.	Widen	PR: do	TO Le	Ather	South	alkamp

Additional Comments: (please use the back of this form if you need additional space)

AN on At 1 to 35 miles

Please provide your contact information to stay informed about this project:

Name: Robert Overmiller Address: 4758 South State street, MAQNOLIA De 19962 Email: ROU1979 & AOL. Com







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No C. Unsure
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Please provide your contact information to stay informed about this project: Name: Address:

Email:







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Additional Comments: (please use the back of this form if you need additional space)

CURRENT SINAGE - NODIH 4 SOUTH OP 15 JOUR

Please provide your contact information to stay informed about this project:

Name: DAVID REDDING Address: 47 CONORESSIONAL CT., MAGRONIA Email: DARADONALOS, COM







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No
 - C. Unsure
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Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name: one Address: (AA) IP Email:







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Additional Comments: (please use the back of this form if you need additional space)

I SUGGEST A FLYOUER FROM BARKERS LAWDIKE RD TO NOLAHDOUND

Please provide your contact information to stay informed about this project:

Name: ROBER CRAIG HILL RD. MAGNOLIA Address: 100 CHERRY HILL RD. MAGNOLIA Name: ROGE 197 @GITAIL, CON Email:







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
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Additional Comments: (please use the back of this form if you need additional space)

69 ALGETING TRAFFIC TO

Please provide your contact information to stay informed about this project:

Name: Maria C Genrett Address: POB 77, 36 N. Main St., Magnolia, Dr. 19962 Email: Sennett Reather@gmail.com







1. Do you support Alternative 1 – Extension of Trap Shooters Road with Wetland Fill?



Do you support Alternative 2 – Extension of Trap Shooters Road with Bridge Spanning Wetland?
 A. Yes



3. Do you support Alternative 3 – New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?

A. Yes B. No C. Unsure

4. Do you support Alternative 4 – New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?



5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

for south ont want 9D 90124

Please provide your contact information to stay informed about this project:

Name: Paula Zimmerman Address: 696 Plaindealing Road, Magnolia DE 19962 Email: CZ 111252@ ADL. com







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes B. No C. Unsure
- 2. Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
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Additional Comments: (please use the back of this form if you need additional space)

IF you want to Spend an excessive a maint of morey we need ADA compliant side walks in magnification view water pipes, roads fixed and Thucks to be prohibited through town.

Please provide your contact information to stay informed about this project:

Name: Rolpecch Can 000 MAGINOLIA Address: 2IN. MAIN 5 8562074896 Email:







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - Al Yes
 - B. No
 - C. Unsure
- 2. Do you-support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
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Additional Comments: (please use the back of this form if you need additional space)

POR NB RT I, AS AN INTERIM MEASURE, PLACE SIGNY IN DOWANCE OF EXIST TRAP SHOOTERS ON RAMP THAT SAY "ETTE TRAPPIC ENTERING FROM THE RIGHT" TO HELP WI MAPPIC TRYING TO ENTER AUG AUGL. ON INCLING C BRIDGE.

Please provide your contact information to stay informed about this project:

Name: LANCE WILLOVS Address: 1578 MILGINNIS PONDRD, MITCHOUR, DE 19962 Email: LWILLOVY 1 & GMAIL. CON







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
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Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name: PATIZICK RAYMOND Address: 49 JOSHUA DR MAGMOLIA DE 19962 Email: PGRAYMOND 620 HOTMAIL. COM







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
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Please provide your contact information to stay informed about this project:

Name: Address: MagnoliA De 19962 TUllAMORE Email:







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - (A.)Yes
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 - B. No
 - C. Unsure
- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes
 - B. No C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name:

Address:

Email:







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes



Do you support Alternative 2 – Extension of Trap Shooters Road with Bridge Spanning Wetland?
 A. Yes

B. No



3. Do you support Alternative 3 – New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?

A. Yes

- B. No
- C. Unsure
- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes B. No C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

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Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name: T Mag Nolia Address: Email: Gual







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. NO)
 - C. Unsure
- 2. Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
 - A. Yes
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 - C. Unsure
- Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?
 - CA. Yes B. No
 - C. Unsure
- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes
 - B. NO
 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Like the proposed overpass with alternative 3. I think this would be the treat

Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name: Maureen Rat Address: 247 Hicklaus dans, Magnalia Email: Mayreen@the.Rebs, net







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No
 - C. Unsure
- Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
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 - B. No
 - C.)Unsure
- 3. Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?
 - A.) Yes
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 - C. Unsure
- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes
 - B. No
 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name: Coltan Vantan Address: 275 Main St Magnet DE Email: Coltan V&423 Cgrail. 10~







1. Do you support Alternative 1 - Extension of Trap Shooters Road with Wetland Fill? wetland tomake houd to

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- (A.)Yes
 - B. No
 - C. Unsure
- to avoid Irrigation-Bridge the wetland if necessary see Blue sticky 2. Do you support Alternative 2 - Extension of Trap Shooters Road with Bridge Spanning Wetland? A. Yes REESPE

 - B. No
 - C. Unsure
- 3. Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?
 - A. Yes B. No C. Unsure
- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes B. No
 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

- Name:
- Address:

Email:







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes B. No
 - C. Unsure

Beggest Concern in New trep Shaders have speed emforcement

2. Do you support Alternative 2 - Extension of Trap Shooters Road with Bridge Spanning Wetland?



Bridge will be too Expensive

3. Do you support Alternative 3 – New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?

A. Yes B. No C. Unsure

- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes B. No C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

Have we learned anything from the W42ming. well

Please provide your contact information to stay informed about this project: Name:

Address:

Email:







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No
 - C. Unsure
- 2. Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
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- 3. Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?
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- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
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 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name: Mike Hershberger Address: Goo plaindealing PD Magnelic. DE 19962 Email:







- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No
 - C. Unsure
- 2. Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
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- 3. Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?
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- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
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 - B. No
 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

choice is the

Please provide your contact information to stay informed about this project:

Name: Patricia Cerchio Address: 763 Augusta National Magnolia Email: patricia - Vietra, com patricilla WN.com







SR1 / Trap Shooters Road Interchange Study - Public Workshop 2 March 28, 2023 **Comment Form**

- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill? (A. Yes
 - B. No
 - C. Unsure
- 2. Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
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- 3. Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond I like the budge but don't like taling away the formers land. Interchange?

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B. No C Unsure

A. Yes

- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes
 - B) No
 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?
- If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

Thanks ar having this Those ' communit our shows in to use their with

Please provide your contact information to stay informed about this project:

Name: Amy Zook Address: 135 main St Magnitice Email: Le 8770 @yahou com

Please turn-in your comment sheets at the workshop or mail/email prior to April 25, 2023 to: James Galvin, AICP - Dover/Kent Co MPO Principal Planner james.galvin@doverkentmpo.org - Ph: 302.387.6030 1783 Friends Way, Ste 3, Camden, DE 19934 http://www.doverkentmpo.org







SR1 / Trap Shooters Road Interchange Study - Public Workshop 2 March 28, 2023 Comment Form

- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
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 - C. Unsure
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 - B. No
 - C. Unsure
- 3. Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?
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 - B. No
 - C. Unsure
- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
 - A. Yes
 - B. No
 - C. Unsure
- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

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Name:

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Need interring improvements If these alternatives den't have finding

Onled merge ahead signs so people on SRI Know to move over - This is dure very wellin Milfird Deleymeigneres signs de smethingmere Buny no indemnialts? Diving do you make me face straight out When I need to go kight you made Thing woese Thing woese DO ANY of These NOW I J JJ







SR1 / Trap Shooters Road Interchange Study - Public Workshop 2 March 28, 2023 Comment Form

- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A.) Yes
 - B. No
 - C. Unsure
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 - C. Unsure
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Additional Comments: (please use the back of this form if you need additional space)

SIGNAGE NOU would Helpful New UNTIL CONSTRU See BACK FOR Some IdeAS

Please provide your contact information to stay informed about this project:

John SSRO Name: 192 BAY HILL ROAD MAGNOLIA DE Address: Email: SGROJ@ ONTLOOK. com

Please turn-in your comment sheets at the workshop or mail/email prior to April 25, 2023 to: James Galvin, AICP – Dover/Kent Co MPO Principal Planner <u>james.galvin@doverkentmpo.org</u> - Ph: 302.387.6030 1783 Friends Way, Ste 3, Camden, DE 19934 <u>http://www.doverkentmpo.org</u>



Signage : 1) LARGER MAGNOLIA EXIT SIGNS BOTH WAYS AND A BIT EARLIER THAN THE CURRENT Signs (which could RemAin) Z CAUTION MERSINS TRAFFIC SIGNS ON RT I NORTH AND SOUTH







SR1 / Trap Shooters Road Interchange Study - Public Workshop 2 March 28, 2023 Comment Form

- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No
 - C. Unsure
- Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
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 - B. No
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- 5. Is there another configuration for the corridor you prefer?

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SIA BUCK

Additional Comments: (please use the back of this form if you need additional space)

Please provide your contact information to stay informed about this project:

Name:

Address:

Email:

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SR1 / Trap Shooters Road Interchange Study - Public Workshop 2 March 28, 2023 Comment Form

- 1. Do you support Alternative 1 Extension of Trap Shooters Road with Wetland Fill?
 - A. Yes
 - B. No
 - C. Unsure
- Do you support Alternative 2 Extension of Trap Shooters Road with Bridge Spanning Wetland?
 A. Yes
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B. No

- C. Unsure
- Do you support Alternative 3 New Spur Road from Barkers Landing Road to SR1 with Diamond Interchange?

A. Yes B. No C. Unsure

- 4. Do you support Alternative 4 New Spur Road from Barkers Landing Road to SR1 with Trumpet Interchange?
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- 5. Is there another configuration for the corridor you prefer?

If so, please describe: (please use the back of this form if you need additional space)

Additional Comments: (please use the back of this form if you need additional space)

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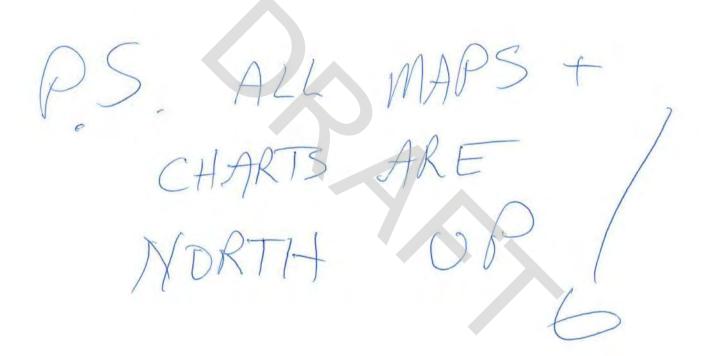
Please provide your contact information to stay informed about this project: Name: $\Box R I A M Ho W A R D$

95 MAIN ST MAGNOLIA Address: Email:

BH MUSIC 302 C GMAIL Please turn-in your comment sheets at the workshop or mail/email prior to April 25, 2023 to: James Galvin, AICP - Dover/Kent Co MPO Principal Planner james.galvin@doverkentmpo.org - Ph: 302.387.6030 1783 Friends Way, Ste 3, Camden, DE 19934 http://www.doverkentmpo.org



WE JUST SPENT MILLIONS FOR THE NEW INTERCHANGE (*80) WHY SPENDALL THIS TO DO WHY SPENDALL THIS TO DO THE SAME THING?



From: Melissa Anderson <<u>mastiller1@yahoo.com</u>> Sent: Tuesday, March 21, 2023 1:16 PM To: James Galvin <<u>james.galvin@doverkentmpo.org</u>> Subject: Trap Shooters Rd exit

Hello,

I am not sure I will be able to attend the upcoming meeting, but I wanted to pass along my quick thoughts. Yes, I knew that southbound would have more accidents, but I do not think that you know why that it is. As someone who takes that exit and entrance daily, the exit lane is too short and the curve at the end is too sharp in slippery conditions. I see this plan partially rectifies the issue, but it doesn't seem to extend the exit lane/ramp, not to mention it increases the land you will be using to only partially fix this issue. Extending the exit lane would fix the issue without utilizing more land.

As for the northbound entrance, you could simply add a merge lane and fix the issue completely because the issue there is that cars entering Rt. 1 spin their tires when entering, causing a delayed entrance and accidents. Adding traction and a merge lane would fix that issue.

Any reason why these things can't be done without taking up more land? Seems like widening the bridge is all that it would take to fix both. I hope you personally drive this route going northbound Monday mornings between 7:30-8:30am and exit Southbound Thursdays between 4-5pm starting March and ending in December. Those are the worst times.

Also, the bowers beach exit, can we please talk about the timing of those lights? Why do we have to hit every single light every time going southbound.

Thanks,

A magnolia home owner

From: Roger Craig <rogc197@gmail.com>
Sent: Sunday, April 2, 2023 5:48:52 PM
To: dboyce@centuryeng.com <dboyce@centuryeng.com>
Cc: Sen. Eric Buckson <eric.buckson@delaware.gov>; Hon. Kerri Evelyn Harris
<kerrievelyn.harris@delaware.gov>; Robert Scott <Robert.Scott@kentcountyde.gov>; Terry L. Pepper
<terry.pepper@kentcountyde.gov>
Subject: Barkers Landing Rd./Trap Shooters Rd. Interchange

Hello Mr. Boyce,

Thank you for informing residents of Century Engineering's 4 proposals to improve the Barkers Landing Rd./Trap Shooters Rd. interchange on DE Rte 1. Northbound entry onto DEL-1 is certainly one of the most serious driving hazards in the area (it makes one long for "3 deuces and a 4-speed, and a 389"). The primary problems with the existing interchange, as I see it, is northbound entry and southbound exit.

The solutions presented on March 27th would, I believe, mitigate these problems but at great expense and inconvenience to the public. I'd like to suggest a much easier and possibly less expensive solution to the problem.

As the attached drawing suggests, I believe that forking off the southbound entrance (blue line), erecting an inclined ramp parallel to the southbound roadway long enough to clear the roadway, then bridging across and down onto the roadway would provide safe, efficient access to northbound DEL-1. Distances shown are not to scale as I don't know the proscribed specifications, but the ramp's length would be adjusted to meet grade and clearance requirements. The radius of the turn would be approximately what is found at, for instance, the northbound Rte 12 – Frederica interchange.

An issue exists, though, with exiting northbound traffic. I've considered several solutions and think that moving the deceleration ramp to the right of the descending northbound entrance ramp is the cleanest and safest.

A feature noted in the exhibits is to extend the southbound exit ramp further south to provide a longer deceleration ramp. I concur that the existing ramp is much too short especially since it is on a downhill grade. I normally pull onto the shoulder as soon as I clear the bridge to give me more room for slowing with less vigorous braking. Other than moving the proposed northbound ramp bridge further south, I don't think such an adjustment represents a problem.

I realize that the sketch is crude and I'm sure that the talented and creative engineers that developed the 4 alternative proposals presented last week will make it even more workable.

Note that I believe this solution would:

- save money,
- reduce construction time,
- reduce driving time,
- reduce disruption to travel patterns,
- reduce pollution,
- reduce incursion into preserved wetlands, and
- reduce property condemnations

Yet it will still achieve the improved safety goals of the project. Did I mention save taxpayers money?

Again, I appreciate your keeping the public informed regarding plans to improve this very hazardous interchange and look forward to hearing more as the plans develop.

Regards,

Roger A. Craig

"You can't promote principled anti-corruption action without pissing off corrupt people." George Kent, Former Dep. Asst. Sec. of State



Workshop Pictures



CENTURY ENGINEERING, LLC, A KLEINFELDER COMPANY 550 South Bay Road, Dover, DE 19901 p | 302.734.9188

> 185024.11 April 14, 2023 Page 9 of 9







Appendix E: Preferred Alternatives







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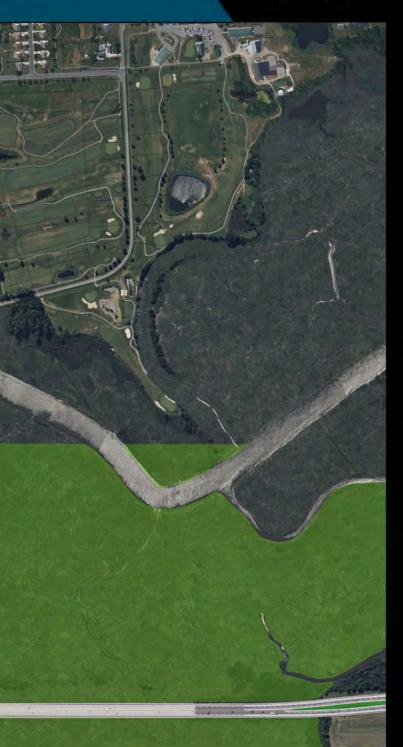
TRAP SHOOTERS ROAD - ALTERNATIVES OVERVIEW

ALTERNATIVE 3 AND 4 NEW SPUR ROAD WITH A DIAMOND OR TRUMPET INTERCHANGE AT SRI ALT 4 - TRUMPET SHOWN

ALTERNATIVE 1 AND 2 RELOCATE RAMPS FOR TRAP SHOOTERS ROAD TO THE SOUTH ALT 2 WITH BRIDGE SHOWN











ALTERNATIVE 1 - TRAP SHOOTERS ROAD EXTENDED - WETLAND FILL





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ALTERNATIVE 1 - TRAP SHOOTERS ROAD EXTENDED - WETLAND FILL







ALTERNATE 2 - TRAP SHOOTERS ROAD EXTENDED W/ BRIDGE

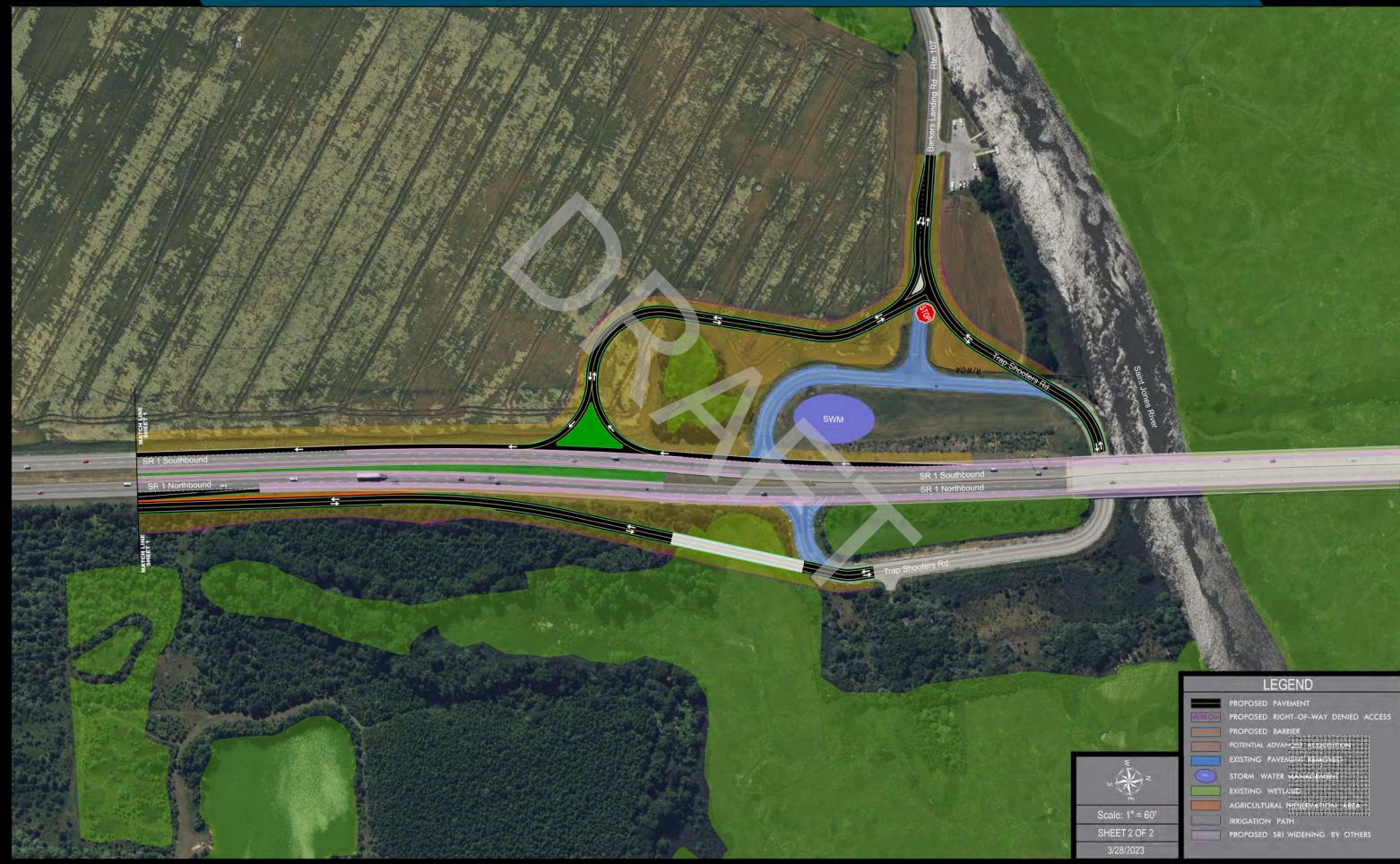








ALTERNATE 2 - TRAP SHOOTERS ROAD EXTENDED W/ BRIDGE





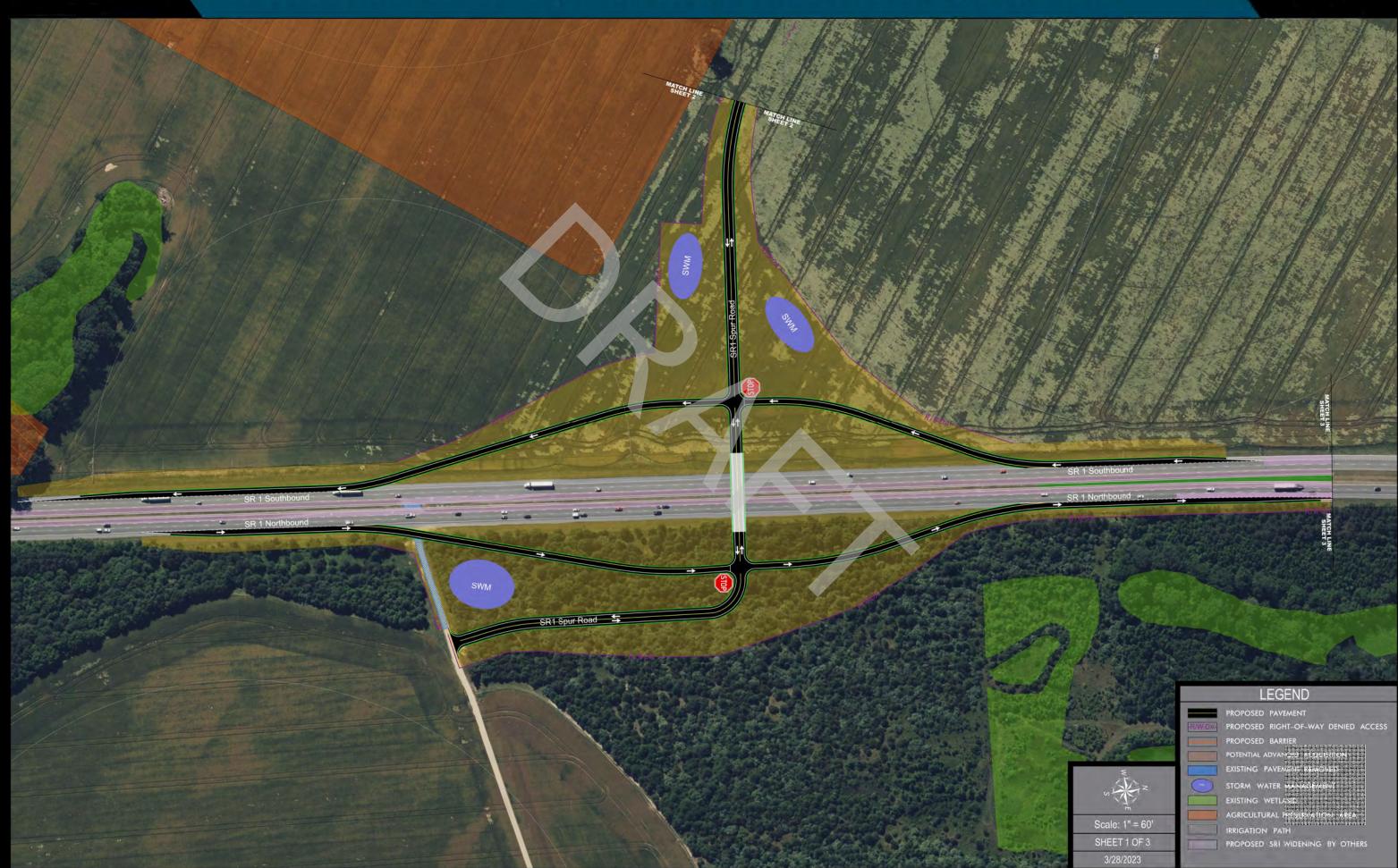


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	EXISTING WETLAND
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	PROPOSED SRI WIDENING BY OTHERS



ALTERNATIVE 3 - SPUR ROAD WITH DIAMOND INTERCHANGE

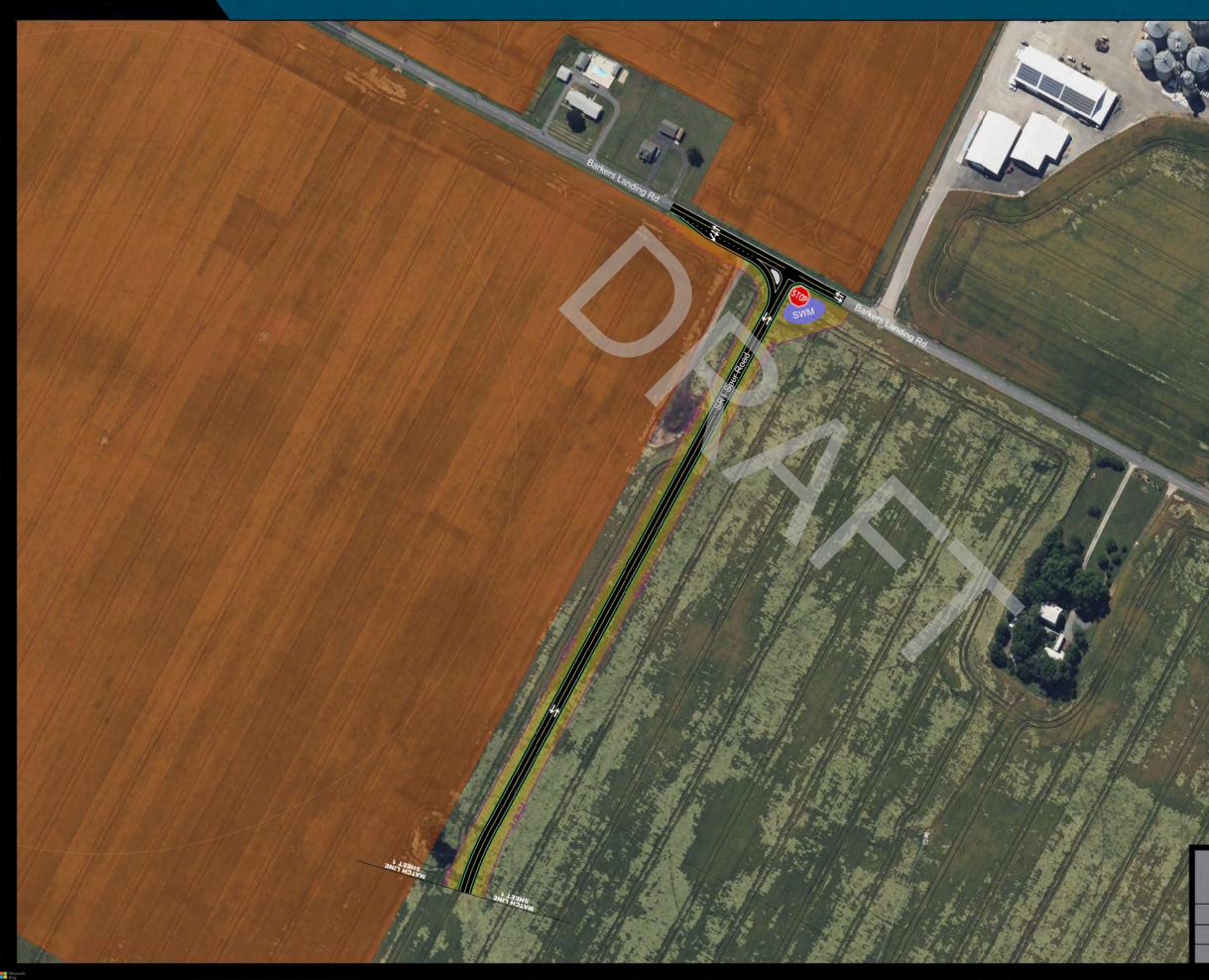








ALTERNATIVE 3 - SPUR ROAD WITH DIAMOND INTERCHANGE





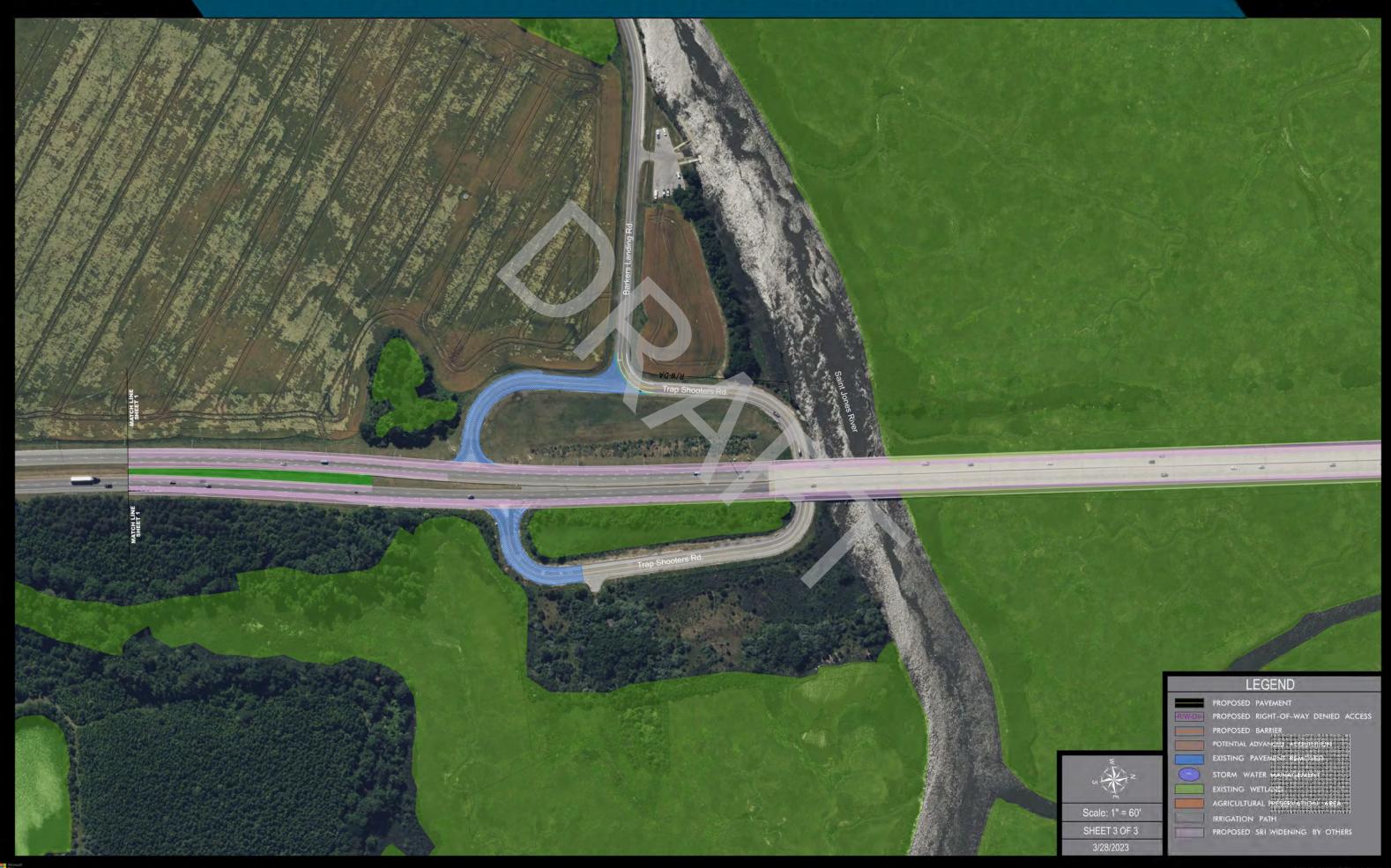


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ALTERNATIVE 3 - SPUR ROAD WITH DIAMOND INTERCHANGE

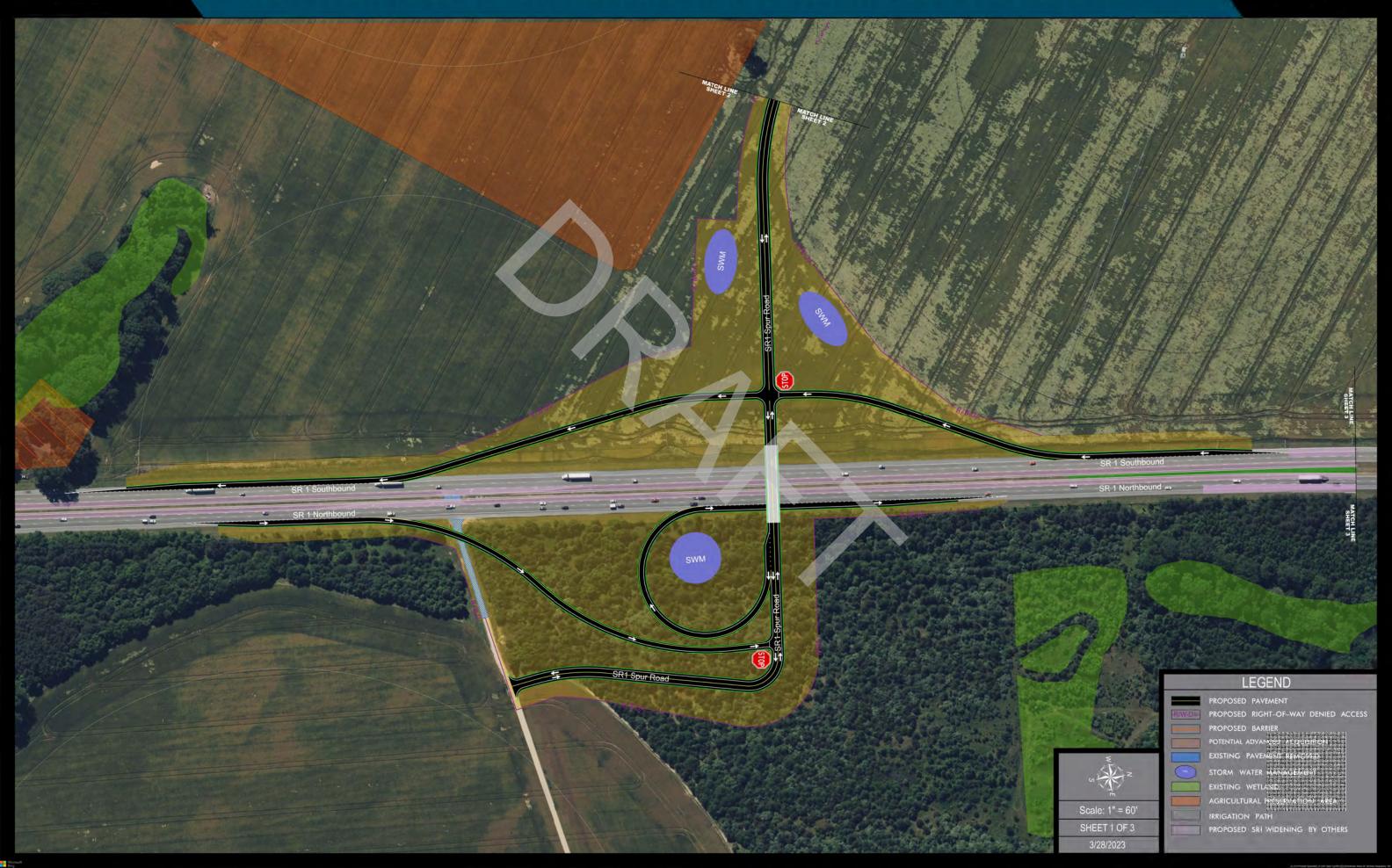








ALTERNATIVE 4 - SPUR ROAD WITH TRUMPET INTERCHANGE









ALTERNATIVE 4 - SPUR ROAD WITH TRUMPET INTERCHANGE





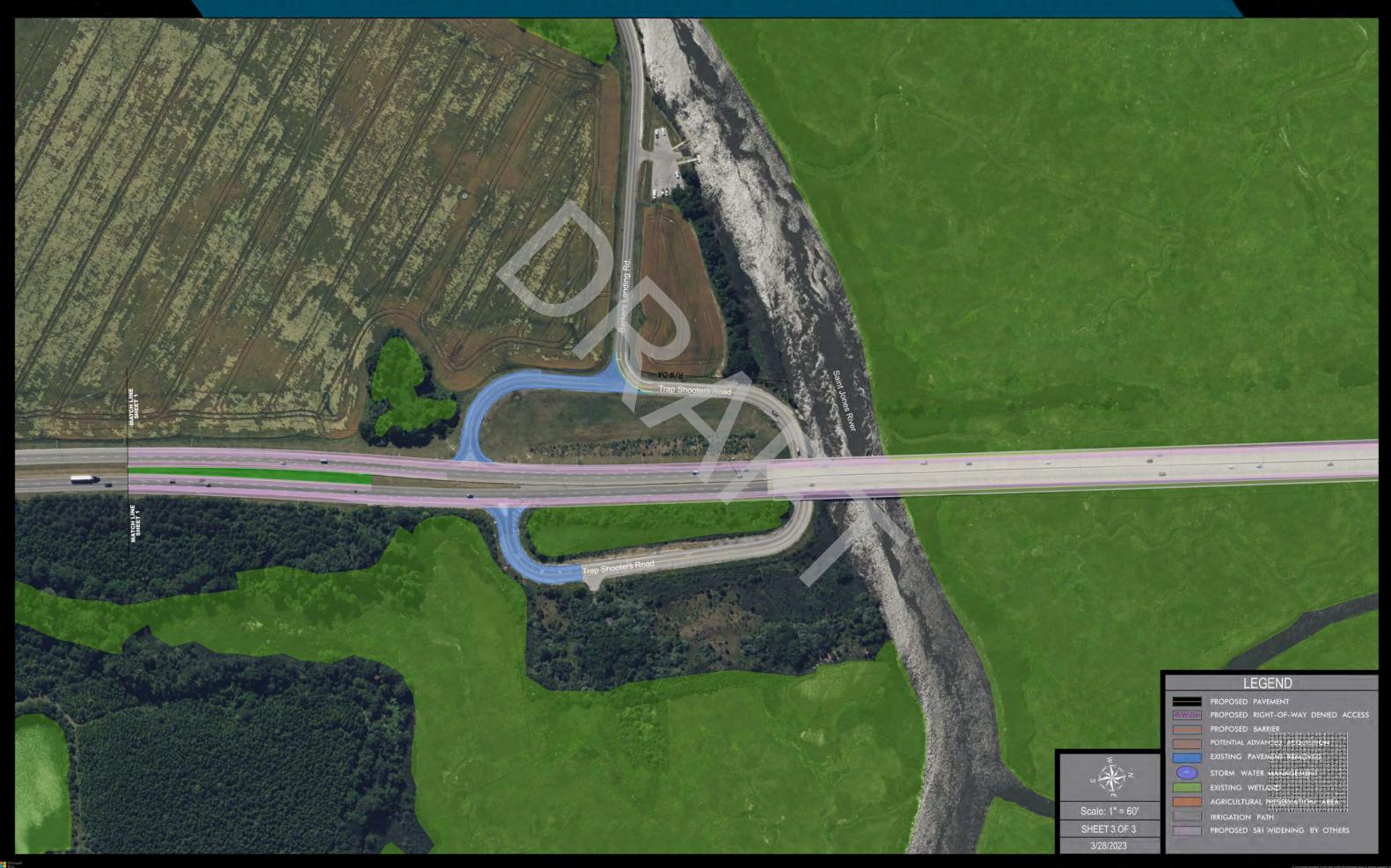








ALTERNATIVE 4 - SPUR ROAD WITH TRUMPET INTERCHANGE







Appendix F: Cost Estimates







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Cost Estimate Summary

Trap Shooters Road and SR1 Interchnage improvements - Alternative 1

ſ	Funded Amount (CTF	>):	Current Estimate	% Difference
Preliminary Engineering			\$2,248,360.00	
Right-of-Way			\$1,300,000.00	
Total Construction			\$13,877,220.10	
Contractor Items*	\$8,993,436.13		* From TrnsPort	
Const. Contingency	\$2,248,359.03	@	25.00%	
CE**	\$2,327,359.03	@	25.88%	
Traffic	\$50,000.00			
Utilities	\$150,000.00			
Planting	\$20,000.00			
Env. Performance	\$0.00			
QA/QC for HMA	\$7,982.10			
Asphalt Cost Adj	\$80,083.80			
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Total Need:	\$13,877,220.10			
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** CE costs consist of the f	ollowing:		\$4,000,00	
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-	Construction engineering services			
E&S Inspection services			\$63,000.00	
Pipe Video Inspe			\$0.00	
	search Insp. Services		\$15,000.00	
Misc. Construction	on Items		\$0.00	

Primavera Estimate Data

Preliminary Engineering	\$2,248,360.00
Right-of-Way	\$1,300,000.00
Construction	\$13,877,220.10
Contingency	\$2,336,424.93
CE	\$2,327,359.03
Traffic	\$50,000.00
Utilities	\$150,000.00

Trap Shooters Road and SR1 Interchnage improvements - Alternative 1					
	TBD Conceptual Cost Estimate 4/18/2023	3			
ITEM #	TITLE	UNIT	ESTIMATE COST	UNIT QUANTITY	TOTAL
201000	CLEARING AND GRUBBING	LS	\$150,000.00	1.00	\$150,000.00
202000	EXCAVATION AND EMBANKMENT	CY	\$40.00	45740.00	\$1,829,600.00
<u>202003</u>	UNDERCUT EXCAVATION	CY	\$35.00	2179.00	\$76,265.00
<u>204000</u>	TEST HOLE	CY	\$200.00	11.00	\$2,200.00
<u>209001</u>	BORROW, TYPE A	CY	\$30.00	11622.00	\$348,660.00
<u>209006</u>	BORROW, TYPE F	CY	\$25.00	1271.00	\$31,775.00
<u>301001</u> 302002	GABC DELAWARE NO. 3 STONE	CY TON	\$65.00 \$60.00	7818.00	\$508,170.00
401006	SUPERPAVE TYPE C, PG 70-22 (CARBONATE STONE)	TON	\$60.00	3778.00	\$6,420.00 \$528,920.00
401015	SUPERPAVE TYPE B, PG 70-22 (CARDONATE STONE)	TON	\$125.00	7669.00	\$958,625.00
401021	SUPERPAVE TYPE BCBC, PG 64-22	TON	\$100.00	11359.00	\$1,135,900.00
601032	REINFORCED CONCRETE PIPE, 15", CLASS IV	LF	\$70.00	200.00	\$14,000.00
601033	REINFORCED CONCRETE PIPE, 18", CLASS IV	LF	\$80.00	500.00	\$40,000.00
601035	REINFORCED CONCRETE PIPE, 24", CLASS IV	LF	\$100.00	840.00	\$84,000.00
<u>601144</u>	REINFORCED CONCRETE FLARED END SECTION, 24"	EACH	\$1,800.00	14.00	\$25,200.00
<u>602005</u>	DRAINAGE INLET, 48" X 48"	EACH	\$4,500.00	8.00	\$36,000.00
<u>701023</u>	I.PCC CURB AND GUTTER, TYPE 3-8	LF	\$36.00	1406.00	\$50,616.00
705001	PCC SIDEWALK, 4"	SF	\$11.00	0.00	\$0.00
<u>705002</u>	PCC SIDEWALK, 6"	SF	\$15.00	19737.00	\$296,055.00
705007 722015		SF LF	\$50.00	0.00	\$0.00
723015 762000	CONCRETE MEDIAN BARRIER, 42? F-SHAPE SAW CUTTING, BITUMINOUS CONCRETE	LF	\$200.00 \$2.50	1743.00 0.00	\$348,600.00 \$0.00
762001	SAW CUTTING, BITOMINOUS CONCRETE SAW CUTTING, CONCRETE, FULL DEPTH	LF	\$2.50	5114.00	\$25,570.00
817002	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	SF	\$15.00	62.00	\$930.00
817013	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	LF	\$0.80	27807.00	\$22,245.60
905001	SILT FENCE	LF	\$1.50	6498.00	\$9,747.00
905004	INLET SEDIMENT CONTROL, DRAINAGE INLET	EACH	\$150.00	8.00	\$1,200.00
908004	TOPSOIL, 6" DEPTH	SY	\$15.00	27323.00	\$409,845.00
<u>908014</u>	PERMANENT GRASS SEEDING, DRY GROUND	SY	\$1.00	27323.00	\$27,323.00
<u>908015</u>	PERMANENT GRASS SEEDING, STORMWATER	SY	\$1.50	27323.00	\$40,984.50
<u>908017</u>	TEMPORARY GRASS SEEDING	SY	\$0.75	86068.00	\$64,551.00
<u>908023</u>	STABILIZED CONSTRUCTION ENTRANCE	SY	\$45.00	477.00	\$21,465.00
<u>908024</u>	STABILIZED CONSTRUCTION ENTRANCE, TOPDRESSING	TON	\$78.00	40.00	\$3,120.00
850003 999999	LUMINAIRE (HPS), 150 WATTS	EACH	\$13,000.00	36.00	\$468,000.00
<u>9999999</u>	BRIDGE CONSTRUCTION STORMWATER MANAGEMENT POND LUMP SUM	LS LS	\$0.00 \$100,000.00	0.00 3.00	\$0.00
999999	MAINTENANCE OF TRAFFIC	LS	\$500,000.00	1.00	\$500,000.00
000000	Subtotal		\$300,000.00	1.00	\$8,365,987.10
					\$0,000,007.10
763000	Initial Expense (5%)	L.S.	\$418,299.36	1	\$418,299.36
	Construction Engineering (2.5%)	L.S.	\$209,149.68	1	\$209,149.68
					,
	TOTAL BASE FOR PROJECT				\$8,993,436.13
	CONSTRUCTION CONTINGENCY	25%	\$2,248,359.03	1	\$2,248,359.03
	TRAFFIC (FROM TRAFFIC STATEMENT)	L.S.	\$50,000.00	1	\$50,000.00
	UTILITY	L.S.	\$150,000.00	1	\$150,000.00
	PLANTING	L.S.	\$20,000.00	1	\$20,000.00
ļ	QA/QC for HMA	L.S.	\$7,982.10	1	\$7,982.10
		L.S.	\$80,083.80	1	\$80,083.80
	CONSTRUCTION ENGINEERING - (INSPECTION, CE, ETC)	L.S.	\$2,327,359.03	1	\$2,327,359.03
					¢40.077.000.10
	TOTAL CONSTRUCTION COST		0000 0 10 0		\$13,877,220.10
		L.S.	\$899,340.00	1	\$899,340.00
	PRELIMINARY ENGINEERING (DESIGN) ROW COSTS	L.S. SF	\$1,349,020.00	1	\$1,349,020.00 \$1,300,000.00
	TOTAL BASE CONSTRUCTION COST	35	\$1,298,637.50		\$17,425,580.10
					÷11,420,000.10

Cost Estimate Summary

Trap Shooters Road and SR1 Interchnage improvements - Alternative 2

	Funded Amount (CTI	<u>):</u>	Current Estimate	% Difference
Preliminary Engineering	X		\$3,348,610.00	
Right-of-Way			\$1,400,000.00	
Total Construction			\$20,487,951.43	
Contractor Items*	\$13,394,441.95		* From TrnsPort	
Const. Contingency	\$3,348,610.49	@	25.00%	
CE**	\$3,439,610.49	@	25.68%	
Traffic	\$50,000.00			
Utilities	\$150,000.00			
Planting	\$20,000.00			
Env. Performance	\$0.00			
QA/QC for HMA	\$7,730.10			
Asphalt Cost Adj	\$77,558.40			
		=		
Total Need:	\$20,487,951.43			
** CE costs consist of the	following [.]			
Advertisement	i e ne ni ngi		\$1,000.00	
Construction ins	pection services		\$2,009,166.29	
	gineering services		\$1,339,444.20	
E&S Inspection			\$70,000.00	
•	Pipe Video Inspection Services			
• •	esearch Insp. Services		\$20,000.00	
Misc. Construction	•		\$0.00	

Primavera Estimate Data

Preliminary Engineering	\$3,348,610.00
Right-of-Way	\$1,400,000.00
Construction	\$20,487,951.43
Contingency	\$3,433,898.99
CE	\$3,439,610.49
Traffic	\$50,000.00
Utilities	\$150,000.00

	TBD				
Conceptual Cost Estimate 4/18/2023					
FEM #	TITLE	UNIT	ESTIMATE COST	UNIT QUANTITY	TOTAL
01000	CLEARING AND GRUBBING	LS	\$150,000.00	1.00	\$150,000
02000	EXCAVATION AND EMBANKMENT	CY	\$40.00	48438.00	\$1,937,520
02003	UNDERCUT EXCAVATION	CY	\$35.00	2307.00	\$80,745
04000	TEST HOLE	CY	\$200.00	11.00	\$2,200
09001	BORROW, TYPE A	CY	\$30.00	11255.00	\$337,650
<u>09006</u> 01001	BORROW, TYPE F	CY	\$25.00	128.00	\$3,200
02002	GABC DELAWARE NO. 3 STONE	CY TON	\$65.00 \$60.00	7585.00 107.00	\$493,025 \$6,420
01006	SUPERPAVE TYPE C, PG 70-22 (CARBONATE STONE)	TON	\$140.00	3659.00	\$512,260
01000	SUPERPAVE TYPE C, PG 70-22 (CARBONATE STONE) SUPERPAVE TYPE B, PG 70-22	TON	\$140.00	7427.00	\$928,375
01021	SUPERPAVE TYPE BCBC, PG 64-22	TON	\$123.00	11000.00	\$1,100,000
01032	REINFORCED CONCRETE PIPE, 15", CLASS IV	LF	\$70.00	200.00	\$1,100,000
01033	REINFORCED CONCRETE PIPE, 13, CLASS IV	LF	\$80.00	500.00	\$40,000
01035	REINFORCED CONCRETE PIPE, 18, CLASS IV	LF	\$100.00	840.00	\$84,000
01144	REINFORCED CONCRETE FLARED END SECTION, 24"	EACH	\$1,800.00	14.00	\$25,200
02005	DRAINAGE INLET, 48" X 48"	EACH	\$4,500.00	8.00	\$36,00
01023	I.PCC CURB AND GUTTER, TYPE 3-8	LF	\$36.00	1406.00	\$50,61
05001	PCC SIDEWALK, 4"	SF	\$11.00	0.00	\$
05002	PCC SIDEWALK, 6"	SF	\$15.00	19737.00	\$296,05
05007	DETECTABLE WARNING SURFACE	SF	\$50.00	0.00	\$
23015	CONCRETE MEDIAN BARRIER, 42? F-SHAPE	LF	\$200.00	1743.00	\$348,60
62000	SAW CUTTING, BITUMINOUS CONCRETE	LF	\$2.50	0.00	\$
62001	SAW CUTTING, CONCRETE, FULL DEPTH	LF	\$5.00	5114.00	\$25,57
7002	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	SF	\$15.00	62.00	\$93
7013	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	LF	\$0.80	27705.00	\$22,16
05001	SILT FENCE	LF	\$1.50	6463.00	\$9,69
05004	INLET SEDIMENT CONTROL, DRAINAGE INLET	EACH	\$150.00	8.00	\$1,20
08004	TOPSOIL, 6" DEPTH	SY	\$15.00	32401.00	\$486,01
8014	PERMANENT GRASS SEEDING, DRY GROUND	SY	\$1.00	32401.00	\$32,40
8015	PERMANENT GRASS SEEDING, STORMWATER	SY	\$1.50	5315.00	\$7,97
8017	TEMPORARY GRASS SEEDING	SY	\$0.75	102064.00	\$76,54
08023	STABILIZED CONSTRUCTION ENTRANCE	SY	\$45.00	477.00	\$21,46
08024	STABILIZED CONSTRUCTION ENTRANCE, TOPDRESSING	TON	\$78.00	40.00	\$3,12
50003	LUMINAIRE (HPS), 150 WATTS	EACH	\$13,000.00	44.00	\$572,00
99999	LANDSCAPING LUMP SUM	LS	\$75,000.00	1.00	\$75,00
9999	BRIDGE CONSTRUCTION	SF	\$375.00	10880.00	\$4,080,00
99999	STORMWATER MANAGEMENT POND LUMP SUM	LS	\$100,000.00	3.00	\$300,00
9999	MAINTENANCE OF TRAFFIC	L.S.	\$300,000.00	1	\$300,00
	Subtotal				\$12,459,94
763000	Initial Expense (5%)	L.S.	\$622,997.30	1	\$622,99
763501	Construction Engineering (2.5%)	L.S.	\$311,498.65	1	\$311,49
	TOTAL BASE FOR PROJECT				\$13,394,44
	CONSTRUCTION CONTINGENCY	25%	\$3,348,610.49	1	\$3,348,6
	TRAFFIC (FROM TRAFFIC STATEMENT)	L.S.	\$50,000.00	1	\$50,00
	UTILITY	L.S.	\$150,000.00	1	\$150,00
	PLANTING	L.S.	\$20,000.00	1	\$20,00
	QA/QC for HMA	L.S.	\$7,730.10	1	\$7,73
	Asphalt Cost Adj	L.S.	\$77,558.40	1	\$77,5
	CONSTRUCTION ENGINEERING - (INSPECTION, CE, ETC)	L.S.	\$3,439,610.49	1	\$3,439,6
	TOTAL CONSTRUCTION COST				\$20,487,95
	PROJECT DEVELOPMENT	L.S.	\$1,339,440.00	1	\$1,339,44
	PROJECT DEVELOPMENT PRELIMINARY ENGINEERING (DESIGN)	L.S.	\$2,009,170.00	1	\$1,339,44
	ROW COSTS	L.S. SF	\$1,384,927.50	1	\$2,009,1

Trap Shooters Road and SR1 Interchnage improvements - Alternative 2

Cost Estimate Summary

Trap Shooters Road and SR1 Interchnage improvements - Alternative 3

]	Funded Amount (CTF		Current Estimate	% Difference
Preliminary Engineering	, , , , , , , , , , , , , , , , , , ,		\$4,541,790.00	
Right-of-Way			\$2,300,000.00	
Total Construction			\$27,697,481.48	
Contractor Items*	\$18,167,157.45		* From TrnsPort	
Const. Contingency	\$4,541,789.36	@	25.00%	
CE**	\$4,690,539.36	@	25.82%	
Traffic	\$50,000.00			
Utilities	\$150,000.00			
Planting	\$20,000.00			
Env. Performance	\$0.00			
QA/QC for HMA	\$7,069.30			
Asphalt Cost Adj	\$70,926.00			
Total Need:	\$27,697,481.48			
** CE costs consist of the	following:			
Advertisement			\$1,000.00	
Construction ins			\$2,725,073.62	
	gineering services		\$1,816,715.75	
E&S Inspection services			\$127,750.00	
Pipe Video Inspe			\$0.00	
	esearch Insp. Services		\$20,000.00	
Misc. Construction Items			\$0.00	

Primavera Estimate Data

Preliminary Engineering	\$4,541,790.00
Right-of-Way	\$2,300,000.00
Construction	\$27,697,481.48
Contingency	\$4,619,784.66
CE	\$4,690,539.36
Traffic	\$50,000.00
Utilities	\$150,000.00

	TBD						
Conceptual Cost Estimate 4/18/2023							
ITEM #	TITLE	UNIT	ESTIMATE COST	UNIT QUANTITY	TOTAL		
201000	CLEARING AND GRUBBING	LS	\$75,000.00	1.00	\$75,000.		
202000	EXCAVATION AND EMBANKMENT	CY	\$40.00	76562.00	\$3,062,480		
202003	UNDERCUT EXCAVATION	CY	\$35.00	3646.00	\$127,610		
204000	TEST HOLE	CY	\$200.00	11.00	\$2,200		
209001 209006	BORROW, TYPE A BORROW, TYPE F	CY CY	\$30.00 \$20.00	10293.00 260325.00	\$308,790 \$5,206,500		
301001	GABC	CY	\$20.00	6554.00	\$5,206,500 \$426,010		
302002	DELAWARE NO. 3 STONE	TON	\$60.00	107.00	\$6,420		
401006	SUPERPAVE TYPE C, PG 70-22 (CARBONATE STONE)	TON	\$140.00	3346.00	\$468,440		
401015	SUPERPAVE TYPE B, PG 70-22	TON	\$125.00	6792.00	\$849,000		
401021	SUPERPAVE TYPE BCBC, PG 64-22	TON	\$100.00	10060.00	\$1,006,000		
601032	REINFORCED CONCRETE PIPE, 15", CLASS IV	LF	\$70.00	300.00	\$21,000		
601033	REINFORCED CONCRETE PIPE, 18", CLASS IV	LF	\$80.00	300.00	\$24,000		
601035	REINFORCED CONCRETE PIPE, 24", CLASS IV	LF	\$100.00	960.00	\$96,000		
601144	REINFORCED CONCRETE FLARED END SECTION, 24"	EACH	\$1,800.00	20.00	\$36,000		
602005	DRAINAGE INLET, 48" X 48"	EACH	\$4,500.00	10.00	\$45,000		
701023	I.PCC CURB AND GUTTER, TYPE 3-8	LF	\$36.00	89.00	\$3,204		
705001	PCC SIDEWALK, 4"	SF	\$11.00	0.00	\$0		
705002	PCC SIDEWALK, 6"	SF	\$15.00	341.00	\$5,115		
705007	DETECTABLE WARNING SURFACE	SF	\$50.00	0.00	\$0		
723015	CONCRETE MEDIAN BARRIER, 42? F-SHAPE	LF	\$200.00	0.00	\$0		
762000	SAW CUTTING, BITUMINOUS CONCRETE	LF	\$2.50	0.00	\$0		
762001	SAW CUTTING, CONCRETE, FULL DEPTH	LF	\$5.00	3936.00	\$19,680		
<u>817002</u>	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	SF	\$15.00	62.00	\$930		
<u>B17013</u>	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	LF	\$0.80	26027.00	\$20,821		
905001		LF	\$1.50	9328.00	\$13,992		
905004 908004		EACH	\$150.00	10.00	\$1,500		
908014	TOPSOIL, 6" DEPTH PERMANENT GRASS SEEDING, DRY GROUND	SY SY	\$15.00 \$1.00	77776.00 77776.00	\$1,166,640 \$77,776		
908015	PERMANENT GRASS SEEDING, STORMWATER	SY	\$1.50	5061.00	\$7,591		
908017	TEMPORARY GRASS SEEDING	SY	\$0.75	244995.00	\$183,746		
908023	STABILIZED CONSTRUCTION ENTRANCE	SY	\$45.00	477.00	\$21,465		
908024	STABILIZED CONSTRUCTION ENTRANCE, TOPDRESSING	TON	\$78.00	40.00	\$3,120		
850003	LUMINAIRE (HPS), 150 WATTS	EACH	\$13,000.00	53.00	\$689,000		
999999	LANDSCAPING LUMP SUM	LS	\$75,000.00	1.00	\$75,000		
999999	BRIDGE CONSTRUCTION	SF	\$325.00	6922.00	\$2,249,650		
999999	STORMWATER MANAGEMENT POND LUMP SUM	LS	\$350,000.00	1.00	\$350,000		
<u>999999</u>	MAINTENANCE OF TRAFFIC	L.S.	\$250,000.00	1	\$250,00		
	Subtotal				\$16,899,681		
763000	Initial Expense (5%)	L.S.	\$844,984.07	1	\$844,98		
763501	Construction Engineering (2.5%)	L.S.	\$422,492.03	1	\$422,493		
	TOTAL BASE FOR PROJECT				\$18,167,157		
		ĺ					
	CONSTRUCTION CONTINGENCY	25%	\$4,541,789.36	1	\$4,541,78		
	TRAFFIC (FROM TRAFFIC STATEMENT)	L.S.	\$50,000.00	1	\$50,00		
	UTILITY	L.S.	\$150,000.00	1	\$150,00		
	PLANTING	L.S.	\$20,000.00	1	\$20,00		
	QA/QC for HMA	L.S.	\$7,069.30	1	\$7,06		
	Asphalt Cost Adj	L.S.	\$70,926.00	1	\$70,92		
	CONSTRUCTION ENGINEERING - (INSPECTION, CE, ETC)	L.S.	\$4,690,539.36	1	\$4,690,53		
	TOTAL CONSTRUCTION COST				\$27,697,48		
	PROJECT DEVELOPMENT	L.S.	\$1,816,720.00	1	\$1,816,72		
	PRELIMINARY ENGINEERING (DESIGN)	L.S.	\$2,725,070.00	1	\$2,725,07		
	ROW COSTS	SF	\$2,298,230.00	1	\$2,300,000		
	TOTAL BASE CONSTRUCTION COST				\$34,539,271		

Trap Shooters Road and SR1 Interchnage improvements - Alternative 3

Cost Estimate Summary

Contract No.

TBD

Trap Shooters Road and SR1 Interchnage improvements - Alternative 4

	Funded Amount (CTP):		Current Estimate	% Difference	
Preliminary Engineering			\$4,107,700.00		
Right-of-Way			\$2,500,000.00		
Total Construction			\$25,097,374.25		
Contractor Items*	\$16,430,787.84		* From TrnsPort		
Const. Contingency	\$4,107,696.96	@	25.00%		
CE**	\$4,256,446.96	@	25.91%		
Traffic	\$50,000.00				
Utilities	\$150,000.00				
Planting	\$20,000.00				
Env. Performance	\$0.00				
QA/QC for HMA	\$7,472.50				
Asphalt Cost Adj	\$74,970.00				
, ,					
Total Need:	\$25,097,374.25				
	φ20,001,014.20				
** CE costs consist of the	following				
Advertisement			\$1,000.00		
			\$2,464,618.18		
Construction inspection services					
Construction engineering services			\$1,643,078.78		
E&S Inspection services			\$127,750.00		
Pipe Video Inspection Services			\$0.00		
Materials and Research Insp. Services			\$20,000.00		
Misc. Construction Items			\$0.00		

Primavera Estimate Data

Preliminary Engineering	\$4,107,700.00
Right-of-Way	\$2,500,000.00
Construction	\$25,097,374.25
Contingency	\$4,190,139.46
CE	\$4,256,446.96
Traffic	\$50,000.00
Utilities	\$150,000.00

	Trap Shooters Road and SR1 Interchnage improvements - Alternative 4							
	TBD							
	Conceptual Cost Estimate 4/18/202	3						
ITEM #	TITLE	UNIT	ESTIMATE COST	UNIT QUANTITY	TOTAL			
<u>201000</u>	CLEARING AND GRUBBING	LS	\$75,000.00	1.00	\$75,000.00			
<u>202000</u>	EXCAVATION AND EMBANKMENT	CY	\$40.00	80211.00	\$3,208,440.00			
<u>202003</u>	UNDERCUT EXCAVATION	CY	\$35.00	76391.00	\$2,673,685.00			
<u>204000</u>	TEST HOLE	CY	\$200.00	11.00	\$2,200.00			
<u>209001</u>	BORROW, TYPE A	CY	\$30.00	10881.00	\$326,430.00			
209006	BORROW, TYPE F	CY	\$20.00	27601.00	\$552,020.00			
<u>301001</u>		CY	\$65.00	6934.00	\$450,710.00			
<u>302002</u> 401006	DELAWARE NO. 3 STONE	TON	\$60.00	107.00	\$6,420.00			
401006	SUPERPAVE TYPE C, PG 70-22 (CARBONATE STONE)	TON	\$140.00	3537.00	\$495,180.00			
401015	SUPERPAVE TYPE B, PG 70-22 SUPERPAVE TYPE BCBC, PG 64-22	TON TON	\$125.00 \$100.00	7179.00 10634.00	\$897,375.00 \$1,063,400.00			
601032	REINFORCED CONCRETE PIPE, 15", CLASS IV	LF	\$70.00	300.00	\$21,000.00			
601033	REINFORCED CONCRETE PIPE, 18", CLASS IV	LF	\$80.00	300.00	\$24,000.00			
601035	REINFORCED CONCRETE PIPE, 18, CLASS IV	LF	\$100.00	960.00	\$96,000.00			
601144	REINFORCED CONCRETE FLARED END SECTION, 24"	EACH	\$1,800.00	20.00	\$36,000.00			
602005	DRAINAGE INLET, 48" X 48"	EACH	\$4,500.00	10.00	\$45,000.00			
701023	I.PCC CURB AND GUTTER, TYPE 3-8	LF	\$36.00	89.00	\$3,204.00			
705001	PCC SIDEWALK, 4"	SF	\$11.00	0.00	\$0.00			
705002	PCC SIDEWALK, 6"	SF	\$15.00	341.00	\$5,115.00			
<u>705007</u>	DETECTABLE WARNING SURFACE	SF	\$50.00	0.00	\$0.00			
<u>723015</u>	CONCRETE MEDIAN BARRIER, 42? F-SHAPE	LF	\$200.00	0.00	\$0.00			
<u>762000</u>	SAW CUTTING, BITUMINOUS CONCRETE	LF	\$2.50	0.00	\$0.00			
<u>762001</u>	SAW CUTTING, CONCRETE, FULL DEPTH	LF	\$5.00	4486.00	\$22,430.00			
<u>817002</u>	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	SF	\$15.00	62.00	\$930.00			
<u>817013</u>	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	LF	\$0.80	27361.00	\$21,888.80			
<u>905001</u>	SILT FENCE	LF	\$1.50	9789.00	\$14,683.50			
<u>905004</u>	INLET SEDIMENT CONTROL, DRAINAGE INLET	EACH	\$150.00	10.00	\$1,500.00			
<u>908004</u>		SY	\$15.00	81984.00	\$1,229,760.00			
<u>908014</u> 908015	PERMANENT GRASS SEEDING, DRY GROUND PERMANENT GRASS SEEDING, STORMWATER	SY SY	\$1.00 \$1.50	81984.00 4784.00	\$81,984.00 \$7,176.00			
908013	TEMPORARY GRASS SEEDING, STORMWATER	SY	\$1.50	258250.00	\$193,687.50			
908023	STABILIZED CONSTRUCTION ENTRANCE	SY	\$45.00	477.00	\$21,465.00			
908024	STABILIZED CONSTRUCTION ENTRANCE, TOPDRESSING	TON	\$78.00	40.00	\$3,120.00			
850003	LUMINAIRE (HPS), 150 WATTS	EACH	\$13,000.00	60.00	\$780,000.00			
999999	LANDSCAPING LUMP SUM	LS	\$75,000.00	1.00	\$75,000.00			
999999	BRIDGE CONSTRUCTION	SF	\$325.00	6922.00	\$2,249,650.00			
999999	STORMWATER MANAGEMENT POND LUMP SUM	LS	\$350,000.00	1.00	\$350,000.00			
999999	MAINTENANCE OF TRAFFIC	L.S.	\$250,000.00	1	\$250,000.00			
	Subtotal				\$15,284,453.80			
763000	Initial Expense (5%)	L.S.	\$764,222.69	1	\$764,222.69			
763501	Construction Engineering (2.5%)	L.S.	\$382,111.35	1	\$382,111.35			
	TOTAL BASE FOR PROJECT				\$16,430,787.84			
	CONSTRUCTION CONTINGENCY	25%	\$4,107,696.96	1	\$4,107,696.96			
	TRAFFIC (FROM TRAFFIC STATEMENT)	L.S.	\$50,000.00	1	\$50,000.00			
	UTILITY	L.S.	\$150,000.00	1	\$150,000.00			
	PLANTING	L.S.	\$20,000.00	1	\$20,000.00			
	QA/QC for HMA	L.S.	\$7,472.50	1	\$7,472.50			
	Asphalt Cost Adj	L.S.	\$74,970.00	1	\$74,970.00			
	CONSTRUCTION ENGINEERING - (INSPECTION, CE, ETC)	L.S.	\$4,256,446.96	1	\$4,256,446.96			
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	TOTAL CONSTRUCTION COST				\$25,097,374.25			
	PROJECT DEVELOPMENT	L.S.	\$1,643,080.00	1	\$1,643,080.00			
L	PRELIMINARY ENGINEERING (DESIGN)	L.S.	\$2,464,620.00	1	\$2,464,620.00			
	ROW COSTS	SF	\$2,424,430.00	1	\$2,500,000.00			
	TOTAL BASE CONSTRUCTION COST				\$31,705,074.25			