Exhibit B to accompany Newark TID Agreement

Service Standards for Newark TID

These standards describe the standards to which DelDOT will work in developing transportation improvement projects that are to be built as part of the Newark TID. They in no way obligate DelDOT or the City to make specific improvements. They describe the form and function that improvements are to have if improvements are to be made.

I. Inside Participant Boundary

A. Travel Time and Intersection Delay Standards

1. To account for local, including school year, variations in traffic, DelDOT shall adjust weekday traffic counts to approximate annual average volumes.

2. DelDOT may further adjust specific volumes to account for errors in the counted volumes where such errors become apparent and for instances where it is apparent that traffic has increased since the counts were done. Traffic counts obtained within the last three calendar years shall be used for all TID traffic analyses.

3. The same standards for all roads in the study area shall be assumed.

4. Use of the procedures in the most recent edition of the Highway Capacity Manual and applicability only to the Automobile Mode are assumed except as specified in this document.

   Control delay is the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed.

   Arterial Level of Service Analysis using Synchro Traffic Impact Analysis or best practices shall be the basis of Travel Time standards. Intersection Level of Service Analysis using Synchro Traffic Impact Analysis or best practices shall be the basis of intersection delay standards.

5. The Travel Time Service Standard is that a maximum increase of 5% in the total travel time per segment is acceptable. The segments are as specified in section A.8. below.

6. Maximum intersection delay standards are as follows:

   a. Overall average intersection control delay for Weekday (Monday through Friday) Morning and Evening Peak Hours at signalized

intersections: Maximum of 80 seconds. Delay for specific approaches and movements may be higher.

b. Overall average intersection control delay for Weekday (Monday through Friday) Morning and Evening Peak Hours at roundabout and all-way stop-controlled intersections: Maximum of 50 seconds. Delay for specific approaches and movements may be higher.

c. Intersection control delay for Weekday (Monday through Friday) Morning and Evening Peak Hours at two-way stop-controlled intersections: Maximum of 50 seconds for left turns from the major street. Delay for minor street approaches and movements may be higher.

7. In the following specific locations, DelDOT and the City agree that improvements outside the existing right-of-way will not be required, regardless of delay and queue lengths:

   a. None at present

8. Facilities to be analyzed for the Travel Time standard shall include the following road segments:

   a. SR 72/Library Ave/SR 2 Capitol Trail from SR 4 to Possum Park Rd;
   b. SR 896 from Welsh Tract Rd to Cleveland Ave;
   c. SR 4 from Elkton Rd to Marrows Rd;
   d. SR 273/Main St/Nottingham Rd from Marrows Rd to Casho Mill Rd;
   e. Elkton Rd from Otts Chapel Rd to Amstel Ave.

9. Facilities to be analyzed for the intersection delay standard shall include all at-grade intersections of one or more State-maintained roads with:
   a. Other State-maintained roads;
   b. Rail lines
   c. City-maintained streets, excluding alleys;
   d. Commercial or institutional driveways served by traffic signals.

10. The intersection delay standard shall be used to identify needed improvements first. Then the travel time standard shall be evaluated and additional improvements identified if needed to meet it.

11. For intersection delay only, intersections that exceed the delay standard under existing conditions shall have improvements done first, not funded through the TID, to reduce delay to the standard.

B. Geometric Standards

1. Use of posted speed limits is assumed.

2. The DelDOT Functional Classification Map, applicable DelDOT design standards, and DelDOT's Complete Streets Policy are assumed, for the identification and design of improvements on State-maintained roads.

3. With specific regard to typical sections on State-maintained roads, the following minimum widths are required:

   a. 10-foot through lanes;
   b. 10-foot turning lanes (12-foot for two-way left turn lanes, 15-foot for a right turn lane if a 5-foot bicycle lane is included);
   c. 5-foot shoulders on local roads;
   d. 8-foot shoulders on collector and minor arterial roads; and
   e. 10-foot shoulders on principal arterial roads.

4. City of Newark regulations, requirements, and standards shall be used for all City maintained roadways.

C. Access and intersection control

1. DelDOT's Development Coordination Manual shall apply to access on State-maintained roads. Subdivision streets within the City limits will be built to City standards and for private or municipal maintenance.

2. On State-maintained roads roundabouts shall be considered first as a means of intersection control in accordance with DelDOT Design Guidance Memorandum Number 1-26, incorporated here by reference. This consideration shall be part of a larger intersection control evaluation. In the assessment of the proper intersection control several factors are to be considered, including but not limited to, safety, capacity, and right-of-way need and property impacts.

3. Proposed changes to intersection control shall be based on evaluation of crash data and designed in accordance with the Delaware Manual on Uniform Traffic Control Devices and other criteria as may be adopted by DelDOT for that purpose.

D. Fixed Route Transit

Existing DART First State, UNICITY, and University of Delaware bus service is assumed to continue. Addition of new stops and the amenities required at each stop shall be at the discretion of the respective transit providers.

The recommendations in the 2019 Newark-Area Transit Study shall be considered in the identification of TID improvements. Capital transit improvements are eligible for TID participation.

E. Aesthetic Standards

Plain bituminous pavement with Portland cement concrete curbs and sidewalks, galvanized steel signal poles and streetlight heads, grass or concrete medians and grass or bituminous-paved shoulders are assumed.

The same fancy street signs used in the DelDOT 2020 Main Street project shall be used along _____roads.

F. Drainage

Where new road construction is proposed to address otherwise substandard conditions, adequate drainage shall be provided as part of that construction. DelDOT drainage standards shall apply to State-Maintained roads and City of Newark standards shall apply to City roads.

G. Pedestrian and Bicycle Facilities

1. The City's Bike Plan shall be referenced when making design decisions related to bike facilities.

2. Existing and proposed pedestrian crossing treatments (at intersections and/or mid-block) should be evaluated and designed using national and local research. Preferred design is to incorporate a median refuge island to create a two-stage crossing.

II. Outside Participant Boundary but within Facilities Boundary – Same as inside.

Exhibit C to accompany Henlopen TID Agreement

Exhibit C Land Use and Transportation Plan

Figure 1: 2045 Land Use Map

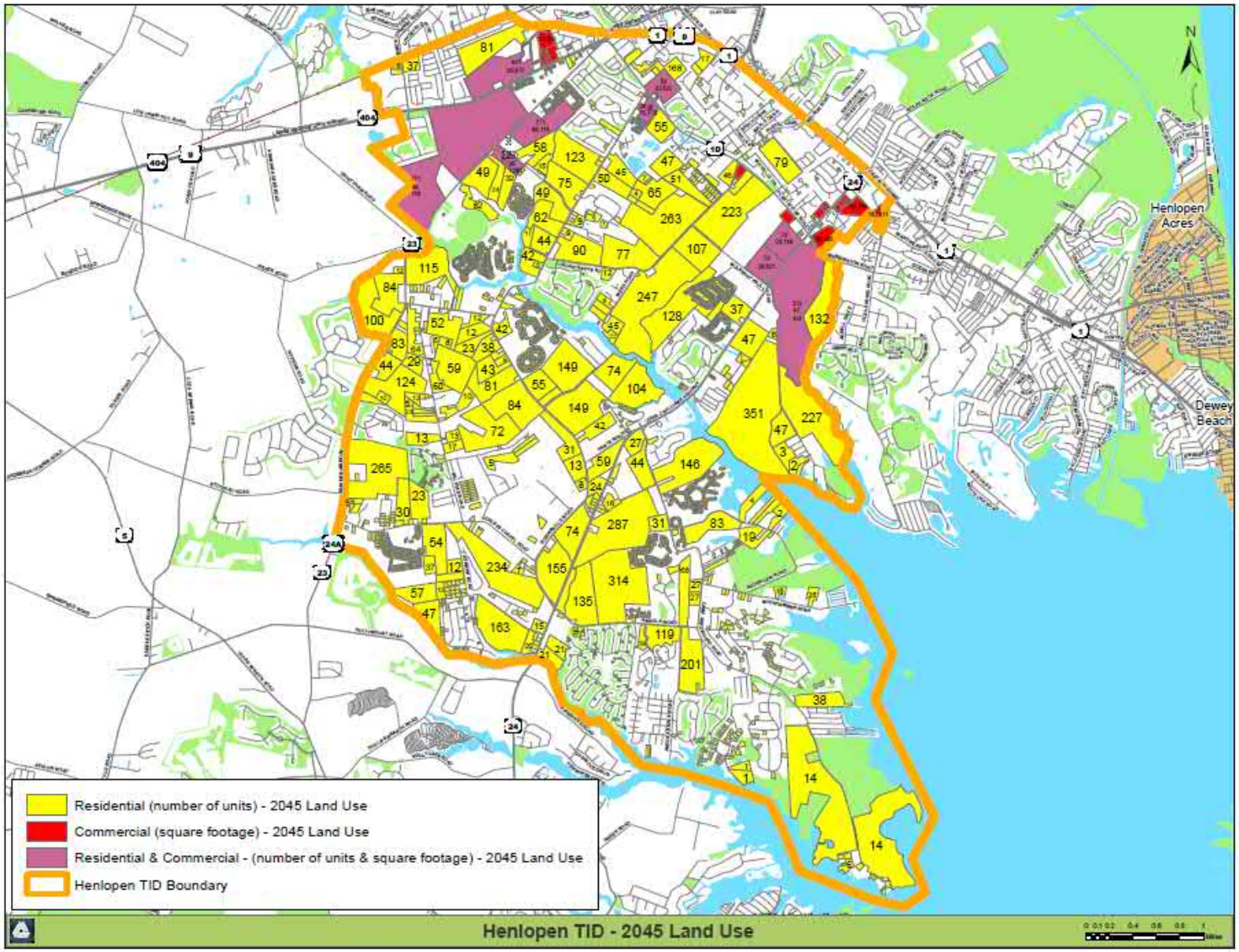


Exhibit C Land Use and Transportation Plan

Figure 2: Transportation Improvements

Projected Development Outlook

Planning Area "A"
PL: **517** Residential Units + 147 hotel rooms; 33,700 sf commercial
ST: **874** Residential Units; 24,000 sf commercial
LT: **258** Residential Units; 84,000 sf commercial

Total: 1648 Residential Units; 141,700 sf commercial; 147 unit hotel

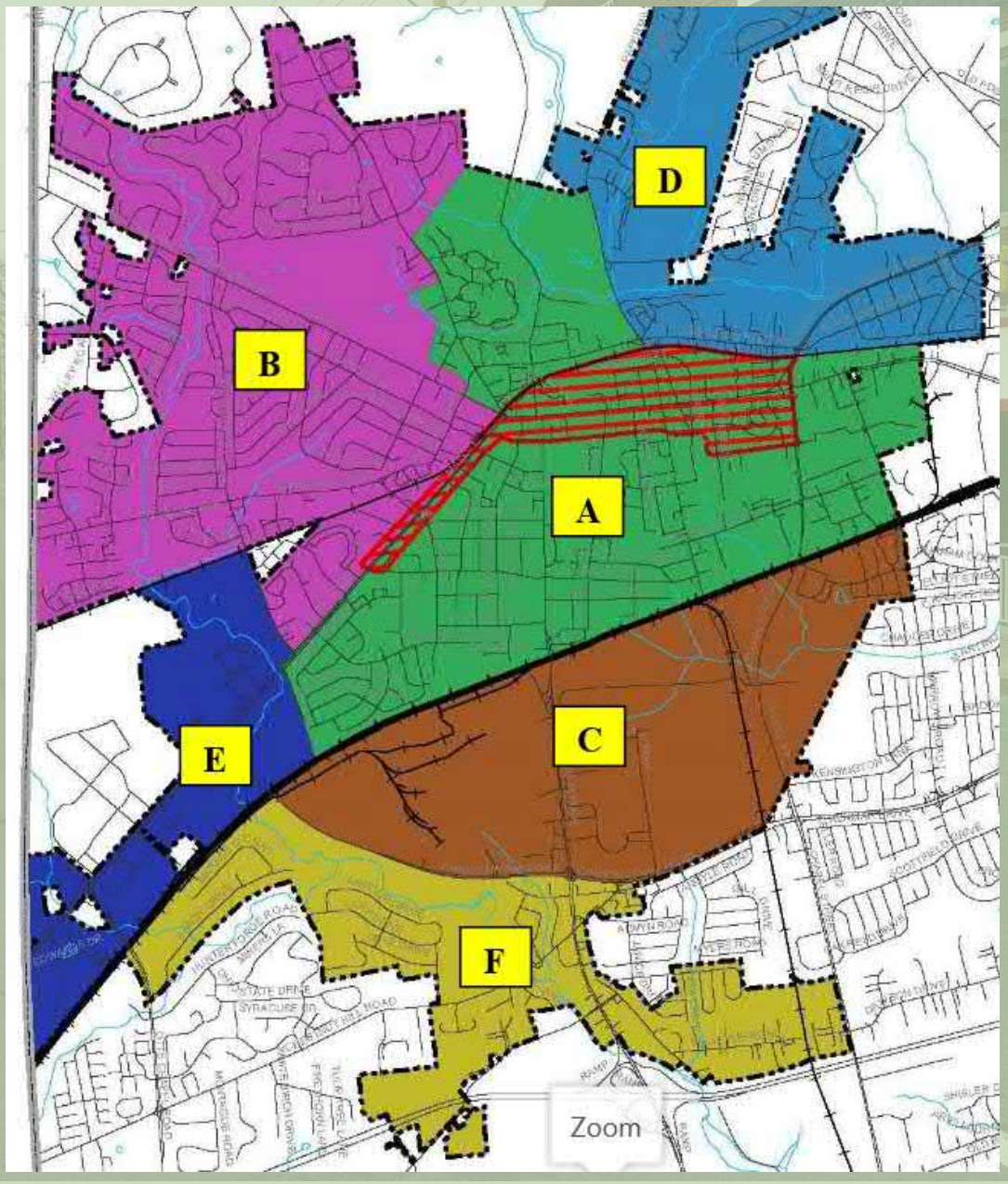
Planning Area "B"
PL: **91** Residential Units + **112** assisted living units
ST: **425** Residential Units; **8000** sf Commercial
LT: **349** Residential Units;

Total: 977 Residential Units; and 8000 sf commercial

Planning Area "C"
PL: **462,710** sf Commercial
ST: **1,000,000** sf Commercial
LT: **994,000** sf Commercial

Total: **2,456,710** sf Commercial

Key
PL: Currently Planned
ST: Short-Term Projection (by 2030)
LT: Long-Term Projection (2030-2045)



Planning Area "D"
PL: 9 Residential Units
ST: 25 Residential Units
LT: 67 Residential Units

Total: **101** Residential Units

Planning Area "E"
PL: 48 Residential Units; 22,836 sf Commercial
ST: 25 Residential Units; 25,000 sf Commercial
LT: 99 Residential Units;

Total: **181** Residential Units; **47,836** sf Commercial

Planning Area "F"
PL: 48,400 sf Commercial
ST: 30,000 sf Commercial
LT: 160,000 sf Commercial

Total: 238,400 sf Commercial

TID Development Hotspots

Newark Country Club: RS Zoning
271 Net Units: Single-Family

Hillside/Barksdale Rds: RM/AC Zoning. Approved:
91 Net Units: Multi-Family
112 Net Units: Seniors Living

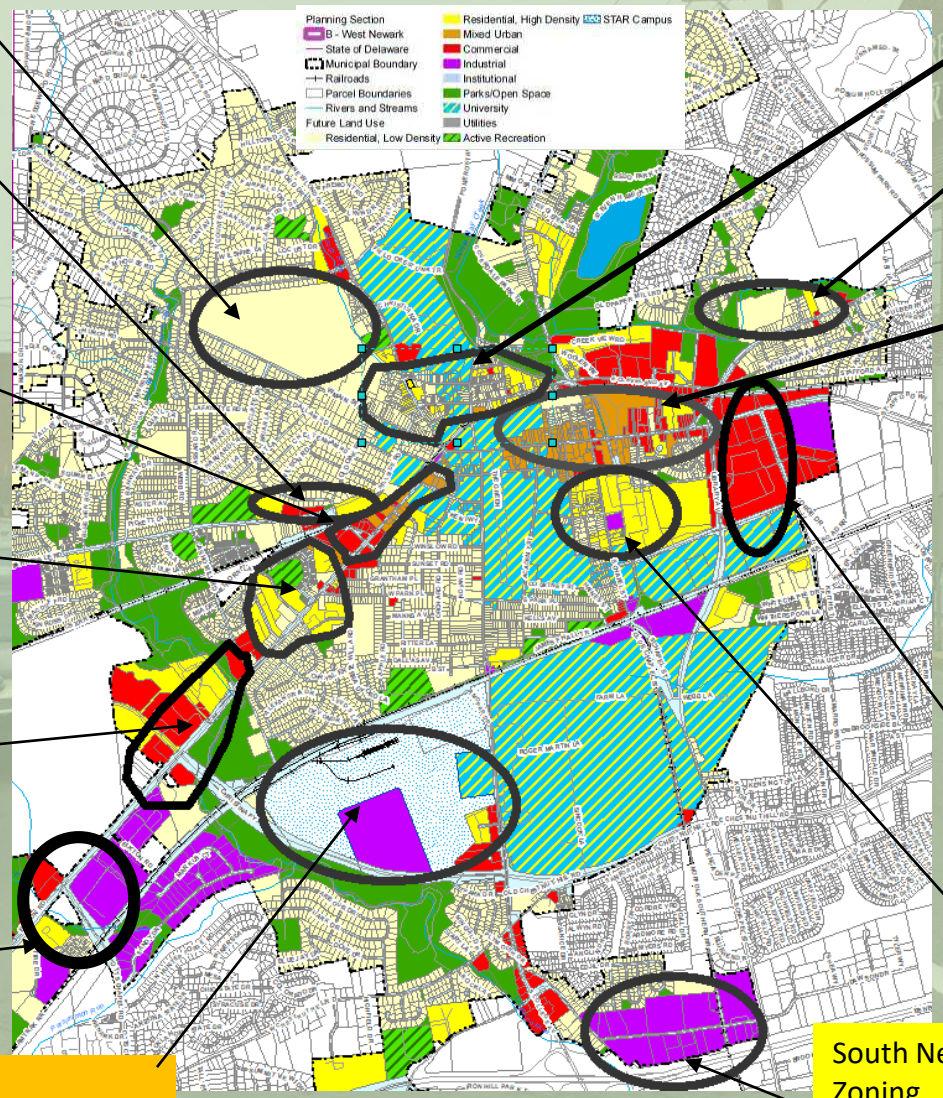
South Main/City Hall: BB Zoning
134 Net Units
11,000 net s.f: Commercial

South Main St/Thorne Lane: RA Zoning
450 Net Units: Multi-Family

South Main Street (West) Mix Zoning:
150 Net Units: Multi-Family
26 Net Units: Single-Family
25,000 s.f Commercial

DE/MD State Line
Mix Zoning
70,900 s.f. Industrial/Office
24 Net Units: Single-Family

STAR Campus: STC Zoning
Existing: 543,290 s.f. office
Pipeline: 500,000 + s.f. office
Projected Total Build Out: 1,543,200 sf



New London Road/Cleveland Ave & Areas North. RM Zoning
142 Net Units: Multi-Family

Capital Trail – RS – RR Zoning
89 Net Units: Single Family

Downtown: BB Zoning
<u>Pipeline/ST Projections</u>
249 Net Units: Multi-Family
147 Room Hotel
60,900 s.f Commercial

<u>Projections LT:</u>
855 Net Units: Mult-Family (2BR)
64,000 s.f. Commercial

College Square Shopping Center
305 Net Units: Multi-Family
50,000 s.f Industrial/Office

South Chapel Area: RA & RM Zoning
509 Multi-Family Units

South Newark: BC and MI Zoning
180,000 sf Industrial/Office
70,000 sf Commercial

NEWARK DELAWARE
Committed to Service Excellence

AECOM

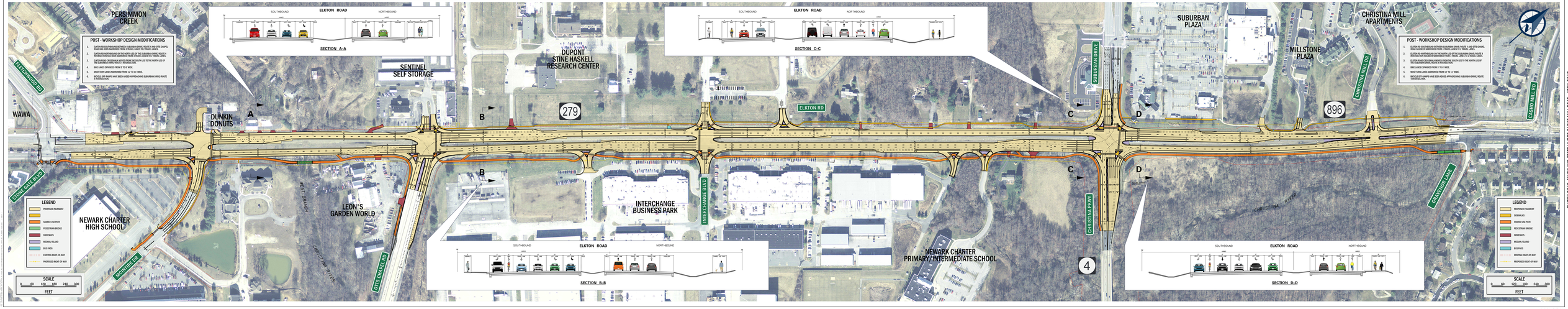
Exhibit C TID-CTP

Table 1: Henlopen TID Capital Transportation Program

Segment Number	Road Name	Cost Estimate
1	Minos Conaway Road	$5,519,250
3	US Route 9	$19,825,593
13	SR 23, Indian Mission Road to Kendale Road	$11,469,065
14	SR 23, Kendale Road to Plantation Road	$22,410,565
15	Kendale Road	$3,292,808
16	Wil King Road	$9,543,170
17	Conleys Chapel Road	$4,931,755
18	Dorman Road	$6,816,425
20	SR 24, Hollylake Road to Camp Arrowhead Road	$19,973,998
21	SR 24, Camp Arrowhead Road to Plantation Road	$21,812,370
23	Robinsonville Road, SR24 to Kendale Road	$18,247,953
24	Robinsonville Road, Kendale Road to Plantation Road	$14,852,680
26	Plantation Road	$20,819,863
27	Warrington Road (with Roundabout)	$4,022,175
28	Shady Road	$3,455,025
29	Postal Lane	$4,584,498
30	Old Landing Road	$6,503,570
31	Cedar Grove Road	$9,738,320
33	Mulberry Knoll Road	$11,536,483
33A	Mulberry Knoll Road Extension, Cedar Grove Road to US9	$9,989,178
34	Airport Road (Existing Alignment), Old Landing Road to SR1	$5,127,890
	Airport Road Extension (Alternative B), SR24 to Old Landing Road	$6,377,228
35	Miller Road	$1,555,798
36	Angola Road	$4,077,605
38	Jolyns Way	$4,058,945
39	Harts Road (Shortened)	$847,810
40	Webbs Landing Road	$1,753,613
41	Camp Arrowhead Road	$10,376,953
42	Waterview Road	$3,471,338
43	New Connector Road 1, Mulberry Knoll Road to Plantation Road	$3,769,295
44	New Connector Road 2, Cedar Grove Road to New Connector Road 1	$2,510,433
45	Airport Road Extension, SR 24 to Postal Lan	$4,615,160
46	Nassau Commons Boulevard	$5,705,898
Total		**$283,592,710**

ELKTON ROAD, MARYLAND STATE LINE TO CASHO MILL ROAD

DELAWARE DEPARTMENT OF TRANSPORTATION

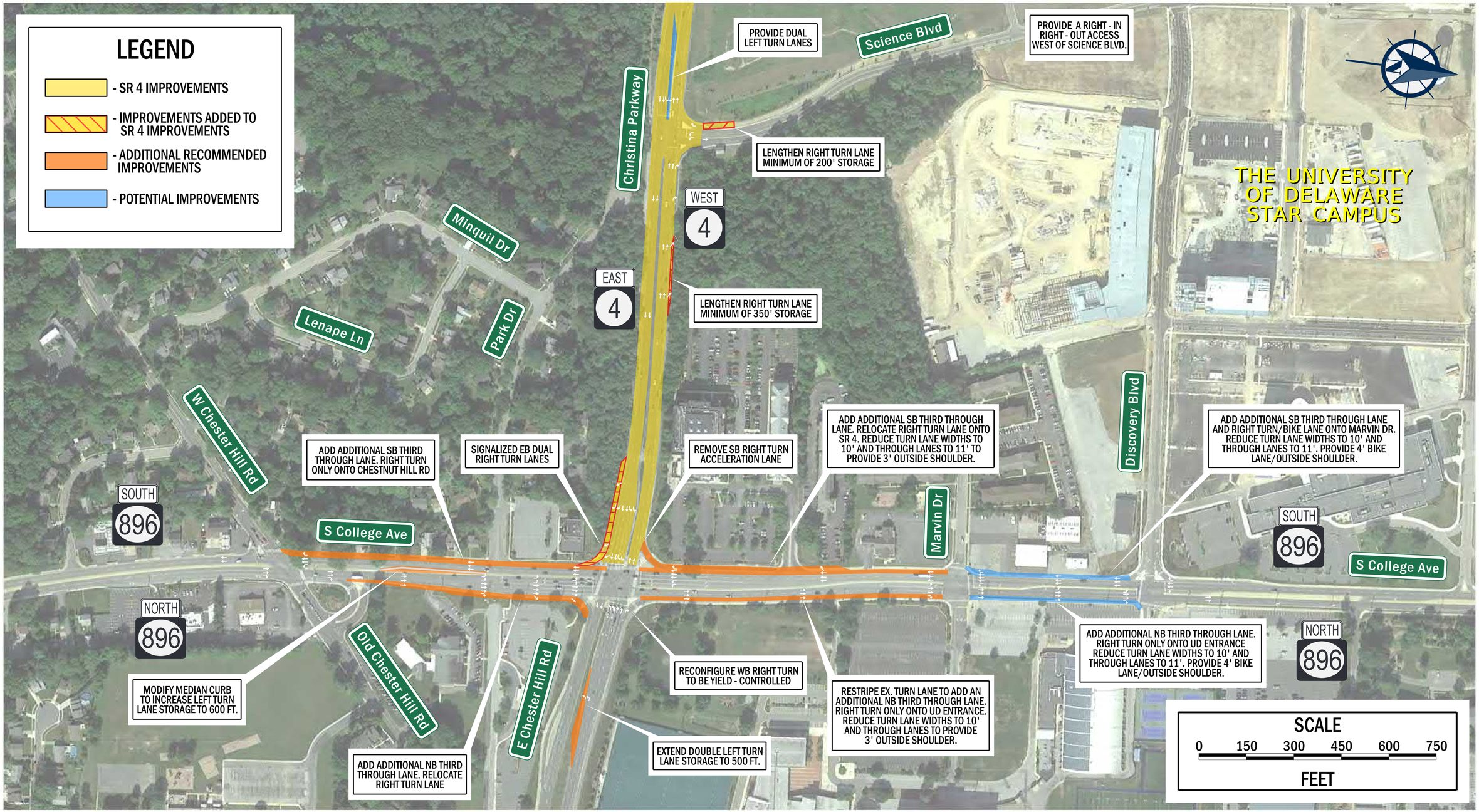


ELKTON ROAD, MARYLAND STATE LINE TO CASHO MILL ROAD - APRIL 2017

APRIL 2017

SR 4 & SR 896 INTERSECTION

IMPROVEMENTS



SR 4 & SR 896 INTERSECTION - IMPROVEMENTS - AUGUST 2020

AUGUST 2020

					Existing Conditions - Level of Service (Revised, Signal Splits Optimized)						Short-Term Future Scenario (with Improvements, Signal Splits Optimized)						Future Conditions - Level of Service (Signal Splits Optimized)					
					AM			PM			AM			PM			AM			PM		
Int #	Intersection Name	In/Out Participant Boundary	Control Type	Signal Permit #	Int. LOS	Delay (sec)	Approach LOS	Int. LOS	Delay (sec)	Approach LOS	Int. LOS	Delay (sec)	Approach LOS	Int. LOS	Delay (sec)	Approach LOS	Int. LOS	Delay (sec)	Approach LOS	Int. LOS	Delay (sec)	Approach LOS
1	SR 896/South College Ave & Welsh Tract Rd	Out	Signal	N434T	D	44.7	EB-F; WB-E; NB-C; SB-C	D	37.6	EB-F; WB-F; NB-C; SB-C	E	59.2	EB-F; WB-F; NB-D; SB-D	E	63.1	EB-F; WB-F; NB-C; SB-D	E	59.2	EB-F; WB-F; NB-D; SB-D	D	52.8	EB-F; WB-F; NB-C; SB-D
2	SR 896/South College Ave & Chestnut Hill Rd	Out	Signal	N435T	C[1]	26.0	NB-A; SB-C; NE-D; SW-E	D[1]	36.4	NB-B; SB-D; NE-D; SW-E	D[1]	42.9	NB-C; SB-D; NE-E; SW-E	C[1]	26.5	NB-B; SB-B; NE-D; SW-E	D[1]	37.2	NB-C; SB-C; NE-E; SW-E	D[1]	43.2	NB-C; SB-D; NE-D; SW-E
3	SR 896/South College Ave & SR 4/Christina Pkwy	Out	Signal	N436T	D	48.3	EB-E; WB-D; NB-D; SB-D	E	60.6	EB-E; WB-E; NB-D; SB-E	D	47.8	EB-D; WB-D; NB-D; SB-D	E	64.8	EB-F; WB-E; NB-D; SB-E	D	48.6	EB-E; WB-E; NB-D; SB-D	E	68.8	EB-E; WB-E; NB-E; SB-E
4	SR 896/South College Ave & Marvin Dr	Out	Signal	N467T	A[1]	6.6	EB-D; WB-C; NB-A; SB-A	B[1]	11.5	EB-A; WB-D; NB-A; SB-B	A[1]	4.7	EB-D; WB-C; NB-A; SB-A	B[1]	16.9	EB-A; WB-E; NB-B; SB-B	A[1]	3.8	EB-D; WB-C; NB-A; SB-A	A[1]	9.0	EB-A; WB-E; NB-A; SB-A
5	SR 896/South College Ave & Discovery Blvd	Out	Signal	N016P	A	2.3	EB-E; WB-E; NB-A; SB-A	A	7.6	EB-F; WB-E; NB-A; SB-A	A	3.0	EB-E; WB-E; NB-A; SB-A	B	10.0	EB-E; WB-F; NB-A; SB-A	B	10.0	EB-E; WB-E; NB-A; SB-C	B	10.2	EB-E; WB-F; NB-A; SB-A
6	SR 896/South College Ave & Healthy Way	Out	TWSC				EB-B (10.3)			EB-B (14.6)			EB-B (11.7)			EB-D (25.2)			EB-B (11.5)			EB-D (27.2)
7	SR 896/South College Ave & Inspiration Blvd	Out	Signal	N015P	A	5.6	EB-F; WB-E; NB-A; SB-A	C	22.2	EB-F; WB-F; NB-A; SB-B	B	18.3	EB-F; WB-E; NB-B; SB-A	C	32.7	EB-F; WB-F; NB-A; SB-B	B	15.7	EB-F; WB-E; NB-A; SB-B	D	53.6	EB-F; WB-F; NB-B; SB-C
8	SR 896/South College Ave & W. Park Place	In	Signal	N438T	C	32.7	EB-C; WB-C; NB-D; SB-C	D	37.1	EB-D; WB-C; NB-D; SB-D	E	60.8	EB-D; WB-D; NB-F; SB-D	D	47.0	EB-D; WB-D; NB-E; SB-C	D	53.2	EB-D; WB-D; NB-F; SB-D	E	78.3	EB-D; WB-E; NB-F; SB-D
9	SR 896/South College Ave & Kent Way	In	Signal	N018P	A[1]	7.8	NB-A; SB-A	B[1]	10.3	NB-A; SB-B	A[1]	8.1	NB-A; SB-A	B[1]	11.2	NB-B; SB-B	A[1]	8.6	NB-A; SB-A	B[1]	11.5	NB-B; SB-B
10	SR 896/South College Ave & Amstel Ave	In	Signal	N448T	A	0.5	EB-A; NB-A; SB-A	A	0.9	EB-A; NB-A; SB-A	A	0.5	EB-A; NB-A; SB-A	A	1.1	EB-A; NB-A; SB-A	A	0.5	EB-A; NB-A; SB-A	A	1.2	EB-A; NB-A; SB-A
11	SR 896/South College Ave & Delaware Ave	In	Signal	N428T	C[1]	22.2	EB-B; NB-D; SB-B	C[1]	24.9	EB-B; NB-D; SB-B	C[1]	24.3	EB-B; NB-D; SB-B	C[1]	32.1	EB-C; NB-E; SB-B	C[1]	23.4	EB-B; NB-D; SB-A	C[1]	33.6	EB-C; NB-E; SB-A
12	East Main St & SR 896/South College Ave	In	Signal	N416T	B[1,2]	17.5	WB-B; NB-C	C[1,2]	23.1	WB-C; NB-C	B[1,2]	17.9	WB-B; NB-C	C[1,2]	26.4	WB-C; NB-C	B[1,2]	19.1	WB-B; NB-C	C[1,2]	25.4	WB-B; NB-C
13	East Main St & North College Ave	In	Signal	N416T	B[1]	11.9	WB-A; SB-D	B[1]	11.5	WB-A; SB-E	B[1]	13.2	WB-A; SB-D	B[1]	11.7	WB-A; SB-E	B[1]	14.5	WB-A; SB-D	B[1]	11.0	WB-A; SB-E
14	North College Ave & Cleveland Ave	In	Signal	N433T	B[1]	11	EB-B; WB-A; NB-E; SB-E	B[1]	18.9	EB-B; WB-A; NB-F; SB-E	B[1]	15.0	EB-B; WB-A; NB-E; SB-E	C[1]	24.9	EB-C; WB-A; NB-E; SB-D	B[1]	17.2	EB-C; WB-A; NB-E; SB-E	C[1]	25.1	EB-C; WB-A; NB-E; SB-D
15	North College Ave & Ray St	In	AWSC		A	7.4	WB-A; NB-A; SB-A	A	7.6	WB-A; NB-A; SB-A	A	7.4	WB-A; NB-A; SB-A	A	7.6	WB-A; NB-A; SB-A	A	7.4	WB-A; NB-A; SB-A	A	7.6	WB-A; NB-A; SB-A
16	SR 4/Christina Pkwy & Science Blvd	Out	Signal	N441T	A	4.5	EB-A; WB-A; SB-D	A	8.5	EB-A; WB-A; SB-D	A	8.4	EB-A; WB-A; SB-D	B	16.2	EB-A; WB-B; SB-D	A	8.9	EB-A; WB-A; SB-D	B	16.3	EB-A; WB-B; SB-D
17	SR 2/Elkton Rd & Otts Chapel Rd	Out	Signal	N181	C	28.0	SE-E; NW-D; NE-C; SW-A	D	36.5	SE-E; NW-E; NE-C; SW-C	B	17.2	SE-E; NW-D; NE-B; SW-A	C	34.6	SE-E; NW-D; NE-C; SW-C	D	39.6	SE-E; NW-F; NE-C; SW-A	D	41.1	SE-E; NW-E; NE-C; SW-C
18	SR 2/Elkton Rd & Interchange Blvd	Out	Signal	N017P	A	2.4	SE-E; NW-E; NE-A; SW-A	C	20.1	SE-E; NW-E; NE-B; SW-B	A	2.2	SE-E; NW-E; NE-A; SW-A	B	17.5	SE-E; NW-E; NE-B; SW-B	A	3.9	SE-E; NW-E; NE-A; SW-A	C	21.6	SE-E; NW-F; NE-B; SW-B
19	SR 2/Elkton Rd & SR 4/Christina Pkwy	Out	Signal	N153	C	33.7	SE-E; NW-E; NE-B; SW-C	F	104.1	SE-E; NW-F; NE-F; SW-D	E	56.2	SE-F; NW-E; NE-B; SW-E	D	50.3	SE-F; NW-E; NE-B; SW-C	D	53.5	SE-F; NW-F; NE-A; SW-E	E	65.7	SE-F; NW-F; NE-B; SW-C
20	SR 2/Elkton Rd & Casho Mill Rd	In	Signal	N639	C[1]	24.8	SE-C; NE-C; SW-B	C[1]	21.5	SE-B; NE-C; SW-C	D[1]	35.9	SE-C; NE-C; SW-D	C[1]	24.7	SE-B; NE-C; SW-C	C[1]	28.0	SE-D; NE-C; SW-B	C[1]	23.5	SE-B; NE-C; SW-C
21	SR 2/Elkton Rd & Chrysler Ave	In	TWSC				SE-A (0.0); NW-B (11.7)			SE-A (0.0); NW-B (12.1)			SE-A (0.0); NW-B (12.5)			SE-A (0.0); NW-B (12.8)			SE-A (0.0); NW-B (12.5)			SE-A (0.0); NW-B (12.6)
22	SR 2/Elkton Rd & Short Ln/Thorn Ln	In	Signal	N411T	A	8.6	SE-D; NW-E; NE-A; SW-A	B	13.5	SE-E; NW-E; NE-B; SW-B	B	14.6	SE-D; NW-E; NE-A; SW-B	B	14.4	SE-E; NW-E; NE-B; SW-B	A	9.5	SE-D; NW-E; NE-A; SW-A	B	14.3	SE-E; NW-E; NE-B; SW-B
23	SR 2/Elkton Rd & Park Place	In	Signal	N413T	A	4.2	WB-E; NE-A; SW-A	B	18.2	WB-E; NE-A; SW-B	A	4.0	WB-E; NE-A; SW-A	B	18.4	WB-E; NE-A; SW-B	A	7.6	WB-E; NE-A; SW-B	B	10.7	WB-E; NE-A; SW-A
24	SR 2/Elkton Rd & Veterans Ln	In	Signal	N563T	A	3.4	SE-E; NE-A; SW-A	B	10.1	SB-E; NE-A; SW-A	A	3.4	SE-E; NE-A; SW-A	A	6.8	SE-E; NE-A; SW-A	A	2.9	SE-E; NE-A; SW-A	B	13.2	SE-E; NE-B; SW-A
25	SR 2/Elkton Rd & Apple Rd	In	Signal	N414T	C	21.8	SE-D; NW-E; NE-A; SW-B	C	34.3	SE-E; NW-E; NE-B; SW-C	C	22.9	SE-D; NW-E; NE-A; SW-B	D	37.0	SE-E; NW-E; NE-B; SW-C	C	22.9	SE-D; NW-E; NE-A; SW-B	D	35.3	SE-E; NW-E; NE-B; SW-C
26	SR 2/Elkton Rd & Amstel Ave	In	Signal	N415T	A[1]	2.5	WB-C; NE-A; SW-A	A[1]	7.1	WB-C; NE-A; SW-A	A[1]	2.5	WB-C; NE-A; SW-A	A[1]	7.0	WB-D; NE-A; SW-A	A[1]	2.5	WB-C; NE-A; SW-A	A[1]	7.0	WB-D; NE-A; SW-A
27	Barksdale Rd & Country Hills Dr	Out	TWSC				NB-A (9.6); SB-B (12.3)			NB-A (9.7); SB-B (14.6)			NB-A (9.8); SB-B (13.0)			NB-A (9.9); SB-C (15.4)			NB-A (9.8); SB-B (13.0)			NB-A (9.9); SB-C (15.4)
28	Casho Mill Rd & Barksdale Rd	In	Signal	N442T	C	27.9	EB-D; WB-C; NB-B; SB-C	C	30.3	EB-C; WB-D; NB-C; SB-C	C	31.8	EB-D; WB-C; NB-B; SB-C	C	32.4	EB-D; WB-D; NB-C; SB-C	C	31.8	EB-D; WB-C; NB-B; SB-C	C	32.2	EB-D; WB-D; NB-C; SB-C
29	Apple Rd & Barksdale Rd/Hillside Rd	In	Signal	N663T	B	15.9	EB-C; WB-B; NB-C	C	21.5	EB-C; WB-B; NB-C	B	15.3	EB-C; WB-B; NB-C	C	21.8	EB-C; WB-B; NB-C	B	16.1	EB-C; WB-B; NB-C	C	21.7	EB-C; WB-B; NB-C
30	West Main St & Hillside Rd	In	Signal	N427T	D	42.4	EB-C; WB-D; NB-D; SB-D	D	46.1	EB-D; WB-D; NB-D; SB-D	D	44.4	EB-C; WB-D; NB-E; SB-D	D	47.9	EB-D; WB-D; NB-D; SB-D	D	44.4	EB-C; WB-D; NB-E; SB-D	D	47.3	EB-D; WB-D; NB-D; SB-D
31	Casho Mill Rd & Church Rd	In	AWSC		B	10.4	EB-A; WB-A; NB-A; SB-B	C	15.4	EB-A; WB-A; NB-C; SB-A	B	13.3	EB-A; WB-A; NB-A; SB-C	D	29.7	EB-A; WB-A; NB-E; SB-B	B	13.3	EB-A; WB-A; NB-A; SB-C	C	19.9	EB-A; WB-A; NB-C; SB-B
32	West Main St & Casho Mill Rd	In	Signal	N426T	B	18.5	EB-B; WB-A; NB-C; SB-D	C	24.2	EB-C; WB-C; NB-B; SB-B	C	20.8	EB-B; WB-A; NB-C; SB-C	C	26.5	EB-D; WB-C; NB-B; SB-B	C	20.4	EB-B; WB-A; NB-C; SB-D	C	26.6	EB-D; WB-C; NB-B; SB-B
33	Nottingham Rd & N Church Rd	Out	TWSC				NB-C (16.6)			NB-C (17.7)			NB-C (19.0)			NB-C (19.7)			NB-C (19.0)			NB-C (19.7)
34	Nottingham Rd & Wedgewood Rd	Out	TWSC				SB-D (27.0); NE-C (17.0)			SB-D (27.4); NE-C (17.8)			SB-E (42.0); NE-C (19.3)			SB-E (35.0); NE-C (20.0)			SB-E (42.4); NE-C (19.3)			SB-E (35.0); NE-C (19.9)
35	New London Rd & Hillside Rd/W. Cleveland Ave	In	Signal	N439T	C	31.5	SE-NA; NW-B; NE-C; SW-D	C	30.5	SE-NA; NW-B; NE-C; SW-D	C	32.9	SE-NA; NW-B; NE-D; SW-D	C	33.4	SE-NA; NW-B; NE-C; SW-D	C	33.3	SE-NA; NW-B; NE-C; SW-D	C	33.2	SE-NA; NW-B; NE-C; SW-D
36	New London Rd & Country Club Dr/Freemont Rd	Out	Signal	N440T	B	12.3	EB-D; WB-D; NB-A; SB-A	B	17.6	EB-D; WB-D; NB-B; SB-B	B	11.9	EB-D; WB-D; NB-A; SB-A	B	17.3	EB-D; WB-D; NB-B; SB-B	B	11.9	EB-D; WB-D; NB-A; SB-A	B	17.3	EB-D; WB-D; NB-B; SB-B
37	New London Rd & Wedgewood Rd	Out	TWSC				EB-C (18.0); WB-C (16.6)			EB-E (42.0); WB-C (19.1)			EB-C (22.0); WB-C (19.3)			EB-F (63.2); WB-C (21.9)			EB-C (22.0); WB-C (19.3)			EB-F (63.2); WB-C (21.9)
38	New London Rd & Hopkins Bridge Rd	Out	TWSC				WB-C (17.3)			WB-E (37.6)			WB-C (20.6)			WB-F (58.9)			WB-C (20.6)			WB-F (58.9)
39	Paper Mill Rd & Possum Park Rd/Thompson Sta Rd	Out	Signal	N362	D	42.4	EB-E; WB-D; NE-D; SW-D	D	48.4	EB-E; WB-E; NB-D; SB-D	D	54.5	EB-E; WB-E; NE-D; SW-D	E	56.3	EB-E; WB-F; NE-D; SW-D	E	63.0	EB-E; WB-D; NE-D; SW-F	E	60.7	EB-F; WB-F; NE-D; SW-D
40	Paper Mill Rd & Louviers Dr	Out	Signal	N003P	B	12.7	EB-E; WB-E; NE-A; SW-B	C	27.6	EB-E; WB-E; NB-C; SB-B	C	31.7	EB-E; WB-E; NE-C; SW-C	C	31.8	EB-E; WB-E; NE-C; SW-C	C	31.5	EB-E; WB-E; NE-C; SW-C	C	31.0	EB-E; WB-E; NE-C; SW-C
41	Paper Mill Rd & Winterthur Ln	Out	Signal	N657	B	10.6	EB-C; WB-C; NB-B; SB-B	B	12.6	EB-C; WB-C; NB-B; SB-B	B	14.4	EB-C; WB-C; NB-B; SB-B	B	15.5	EB-C; WB-C; NB-B; SB-B	B	14.4	EB-C; WB-C; NB-B; SB-B	B	15.4	EB-C; WB-C; NB-B; SB-B
42	Paper Mill Rd & Old Paper Mill Rd	Out	Signal	N603T	B	16.2	EB-C; WB-D; NB-B; SB-B	B	11.8	EB-D; WB-D; NB-A; SB-B	B	15.6	EB-C; WB-D; NB-B; SB-B	B	12.8	EB-D; WB-D; NB-A; SB-B	C	20.1	EB-C; WB-E; NB-B; SB-B	B	12.8	EB-D; WB-D; NB-A; SB-B
43	North Chapel St & Cleveland Ave	In	Signal	N432T	C[3]	29.6	EB-C; WB-C; NB-D; SB-D	D[3]	54.1	EB-D; WB-E; NB-D; SB-E	D[3]	36.9	EB-C; WB-C; NB-D; SB-D	E[3]	75.5	EB-E; WB-F; NB-E; SB-E	D[3]	35.8	EB-C; WB-C; NB-D; SB-D	E[3]	76.7	EB-E; WB-F; NB-E; SB-F
44	Capitol Trail & Possum Park Rd	Out	Signal	N166	D	35.3	EB-C; WB-C; NB-E; SB-D	D	46.1	EB-D; WB-D; NB-F; SB-E	D	37.9	EB-C; WB-D; NB-E; SB-E	D	51.8	EB-D; WB-D; NB-F; SB-E	D	37.9	EB-C; WB-D; NB-E; SB-E	D	51.6	EB-D; WB-D; NB-F; SB-E
45	Capitol Trail & Anna Way	In	Signal	N511T	A	3.5	EB-A; WB-A; NB-C	A	3.7	EB-A; WB-A; NB-E	A	3.8	EB-A; WB-A; NB-C	A	4.0	EB-A; WB-A; NB-E	A	3.8	EB-A; WB-A; NB-C	A	4.0	EB-A; WB-A; NB-E
46	Capitol Trail & Cleveland Ave/Woodlawn Ave	In	Signal	N422T	F	154.7	EB-F; WB-E; NB-E; SB-E	F	187.2	EB-F; WB-F; NB-E; SB-E	F	198.8	EB-F; WB-E; NB-F; SB-F	F	203.9	EB-F; WB-F; NB-F; SB-F	F	199.7	EB-F; WB-E; NB-F; SB-F	F	204.1	EB-F; WB-F; NB-E; SB-F
47	East Main St & Library Ave	In	Signal	N423T	C[1]	24.8	WB-C; NB-B; SB-C	D[1]	38.7	WB-D; NB-C; SB-D	C[1]	27.7	WB-C; NB-C; SB-C	D[1]	37.1	WB-D; NB-C; SB-D	C[1]	29.4	WB-D; NB-C; SB-C	D[1]	37.5	WB-D; NB-C; SB-D
48	SR 273/Newark Christiana Rd & Marrows Rd	In	Signal	N247	D	36.1	EB-D; WB-C; NB-D; SB-A	D	37.8	EB-C; WB-C; NB-E; SB-E	C	34.6	EB-C; WB-C; NB-E; SB-A	D	42.6	EB-C; WB-C; NB-F; SB-E	D	39.1	EB-D; WB-C; NB-E; SB-A	D	41.8	EB-C; WB-C; NB-F; SB-E
49	Marrows Rd & John Campbell Rd	In	Signal	N653P	A	5.3	EB-D; WB-D; NB-A; SB-A	B	13.1	EB-D; WB-D; NB-A; SB-B	A	5.3	EB-D; WB-D; NB-A; SB-A	B	13.0	EB-D; WB-D; NB-A; SB-B	A	5.3	EB-D; WB-D; NB-A; SB-A	B	17.5	EB-D; WB-D; NB-B; SB-B
50	Marrows Rd & Wyoming Rd/Old Forge Rd	In	Signal	N059P	B	10.6	EB-D; WB-D; NB-A; SB-A	B	13.3	EB-D; WB-D; NB-B; SB-A	B	12.5	EB-D; WB-D; NB-A; SB-A	C	20.8	EB-D; WB-D; NB-B; SB-B	B	11.9	EB-D; WB-D; NB-A; SB-A	C	23.9	EB-D; WB-D; NB-B; SB-C
51	Marrows Rd & Whitechapel Dr/Kimberton Dr	Out	Signal	N487	B	11.3	EB-C; WB-C; NB-A; SB-A	B	10.0	EB-D; WB-D; NB-A; SB-A	B	11.7	EB-C; WB-C; NB-A; SB-A	B	10.1	EB-D; WB-D; NB-A; SB-A	B	11.6	EB-C; WB-C; NB-A; SB-A	B	10.1	EB-D; WB-D; NB-A; SB-A
52	Marrows Rd & Brookside Blvd	Out	Signal	N189	A	7.7	EB-C; WB-C; NB-A; SB-A	A	7.0	EB-C; WB-D; NB-A; SB-A	A	7.9	EB-C; WB-C; NB-A; SB-A	A	7.1	EB-C; WB-D; NB-A; SB-A	A	7.8	EB-C; WB-C; NB-A; SB-A	A	7.1	EB-C; WB-D; NB-A; SB-A
53	Marrows Rd & Kensington Ln	Out	TWSC				EB-B (14.7); WB-B (13.2)			EB-D (29.9); WB-F (60.1)			EB-B (14.9); WB-B (13.4)			EB-D (30.6); WB-F (71.4)			EB-B (14.9); WB-B (13.4)			EB-D (30.9); WB-F (68.8)
54	SR 4/Chestnut Hill Rd & Marrows Rd	Out	Signal	N255	C	24.8	EB-B; WB-B; NB-D; SB-D	D	40.6	EB-C; WB-C; NB-E; SB-E	C	25.0	EB-B; WB-B; NB-D; SB-D	D	44.5	EB-C; WB-C; NB-E; SB-F	C	25.0	EB-B; WB-B; NB-D; SB-D	D	42.3	EB-C; WB-C; NB-E; SB-E
55	SR 72/Library Ave & SR 4/Chestnut Hill Rd	Out	Signal	N346	D	41.6	EB-D; WB-D; NB-D; SB-D	E	69.8	EB-E; WB-E; NB-E; SB-E	D	46.5	EB-D; WB-D; NB-D; SB-D	F	90.2	EB-F; WB-F; NB-F; SB-F	D	46.6	EB-D; WB-D; NB-D; SB-D	F	89.8	EB-F; WB-F; NB-F; SB-F
56	SR 72/Library Ave & Kensington Ln	Out	TWSC				WB-D (27.7)			WB-E (36.0)			WB-E (47.8)			WB-E (47.6)			WB-E (47.8)			WB-E (46.5)

57	SR 72/Library Ave & Wyoming Rd	In	Signal	N425T	C	24.3	EB-D; WB-D; NB-B; SB-B	D	45.5	EB-E; **WB-F**; NB-C; SB-C	C	27.5	EB-E; WB-D; NB-C; SB-B	E	64.4	**EB-F**; **WB-F**; NB-D; SB-E	C	23.5	EB-E; WB-D; NB-C; SB-A	D	47.9	**EB-F**; **WB-F**; NB-C; SB-B
58	SR 72/Library Ave & Delaware Ave	In	Signal	N424T	B	10.9	EB-D; WB-NA; NB-A; SB-A	C	32.8	EB-E; WB-NA; NB-D; SB-B	A	8.2	EB-D; WB-NA; NB-A; SB-A	C	34.4	EB-E; WB-NA; NB-D; SB-B	B	10.3	EB-D; WB-NA; NB-A; SB-A	B	18.7	EB-E; WB-NA; NB-A; SB-B
59	East Main St & South Chapel St	In	Signal	N418T	B	19.6	WB-C; NB-A; SB-C	C	28.4	WB-C; NB-C; SB-C	C	23.6	WB-C; NB-A; SB-C	C	27.1	WB-C; NB-C; SB-C	C	24.0	WB-C; NB-A; SB-C	C	21.9	WB-C; NB-A; SB-C
60	Delaware Ave & South Chapel St	In	Signal	N430T	C	25.1	EB-C; NB-C; SB-C	C	28.6	EB-C; NB-C; SB-C	B	19.7	EB-C; NB-C; SB-A	C	22.9	EB-C; NB-C; SB-A	C	22.9	EB-C; NB-C; SB-B	C	22.9	EB-C; NB-C; SB-A
61	Delaware Ave & Tyre Ave	In	Signal	N431T	C	23.4	EB-B; NB-C; SB-D	B	15.8	EB-A; NB-D; SB-D	C	26.0	EB-B; NB-C; SB-D	B	15.8	EB-A; NB-D; SB-D	C	25.8	EB-B; NB-C; SB-D	B	15.8	EB-A; NB-D; SB-D
62	South Chapel St & Wyoming Rd	In	AWSC		B	14.6	EB-B; WB-B; NB-B; SB-C	E	43.1	EB-B; WB-D; NB-C; **SB-F**	C	21.5	EB-B; WB-D; NB-B; SB-C	**F**	56.8	EB-C; WB-E; NB-D; **SB-F**	C	20.2	EB-B; WB-C; NB-B; SB-D	**F**	52.9	EB-B; WB-E; NB-D; **SB-F**
63	East Main St & Academy St	In	Signal	N417T	B[1]	10.3	WB-A; NB-E; SB-NA	B[1]	18.8	WB-A; NB-E; SB-D	A[1]	8.4	WB-A; NB-E; SB-NA	C[1]	21.6	WB-B; NB-E; SB-D	A[1]	7.0	WB-A; NB-D; SB-NA	B[1]	17.5	WB-B; NB-D; SB-D
64	Delaware Ave & Academy St	In	Signal	N429T	C	29.8	EB-C; NB-D; SB-D	C	34.6	EB-C; NB-D; SB-D	C	31.0	EB-C; NB-C; SB-C	D	35.1	EB-C; NB-D; SB-D	C	31.4	EB-C; NB-D; SB-D	D	35.8	EB-C; NB-D; SB-D

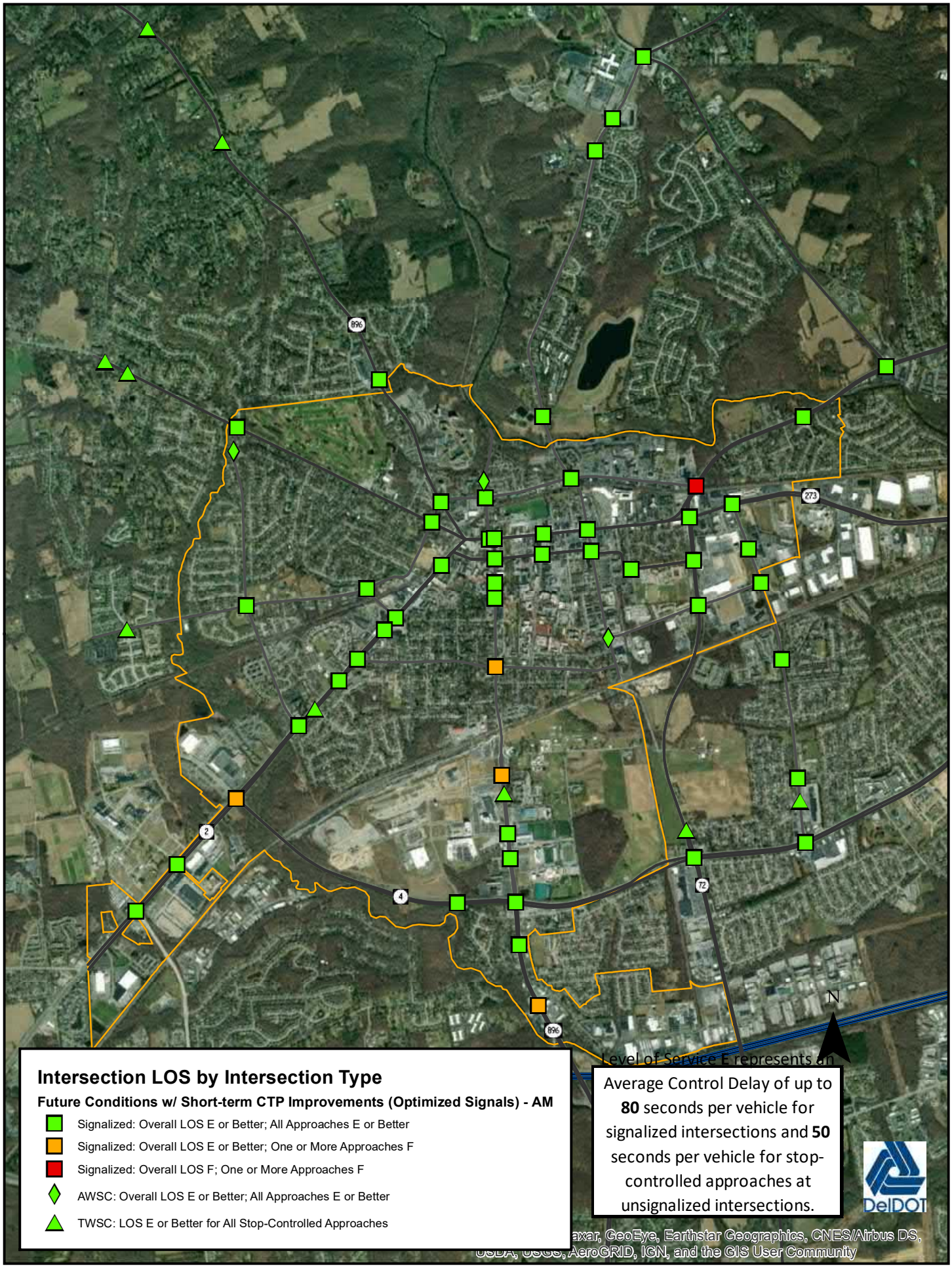
In:	36	Signal: 52
Out:	28	Unsig: 12
Total:	64	64

Delaware Ave & Haines St
E. Main St & Haines St

Overall intersection and approach LOS values of F and excessive delay values are shown in RED.
1 - Synchro native methodology used due to restrictions in HCM6 and HCM2010 methodologies for U-turns, exclusive pedestrian phases, unconventional phasing or clustered signal configurations.
2 - Peak Hour Factor and Heavy Vehicle % defaults used due to no specific data available.
3 - Fifth intersection approach (no volumes) removed to match signal timing plan; HCM6 used.

Overall intersection and approach LOS values of F and excessive delay values are shown in RED.
1 - Synchro native methodology used due to restrictions in HCM6 and HCM2010 methodologies for U-turns, exclusive pedestrian phases, unconventional phasing or clustered signal configurations.
2 - Peak Hour Factor and Heavy Vehicle % defaults used due to no specific data available.
3 - Fifth intersection approach (no volumes) removed to match signal timing plan; HCM6 used.

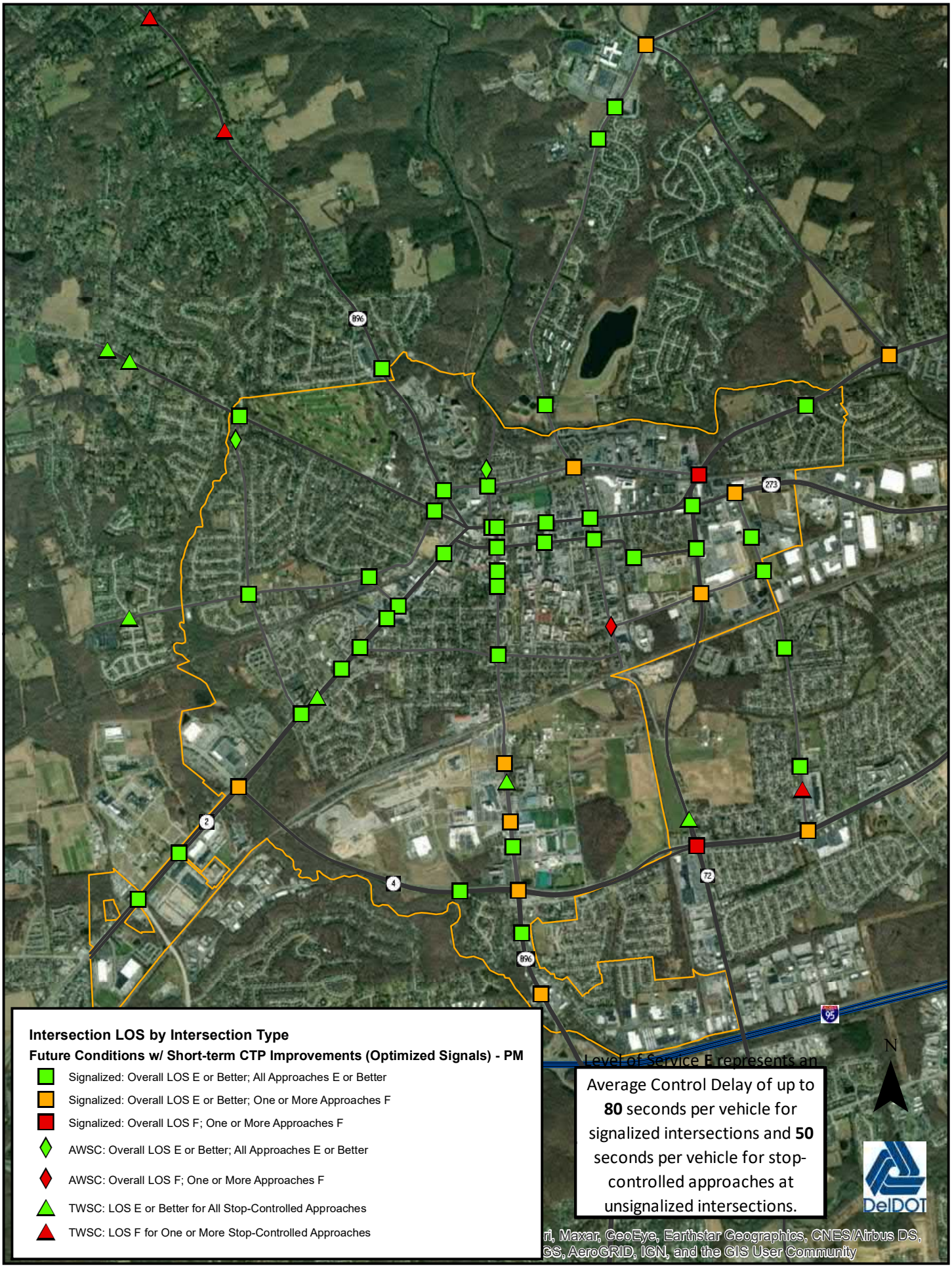
Overall intersection and approach LOS values of F and excessive delay values are shown in RED.
1 - Synchro native methodology used due to restrictions in HCM6 and HCM2010 methodologies for U-turns, exclusive pedestrian phases, unconventional phasing or clustered signal configurations.
2 - Peak Hour Factor and Heavy Vehicle % defaults used due to no specific data available.
3 - Fifth intersection approach (no volumes) removed to match signal timing plan; HCM6 used.



Intersection LOS by Intersection Type

Future Conditions w/ Short-term CTP Improvements (Optimized Signals) - AM

- Signalized: Overall LOS E or Better; All Approaches E or Better
- Signalized: Overall LOS E or Better; One or More Approaches F
- Signalized: Overall LOS F; One or More Approaches F
- AWSC: Overall LOS E or Better; All Approaches E or Better
- TWSC: LOS E or Better for All Stop-Controlled Approaches


Intersection LOS by Intersection Type
Future Conditions w/ Short-term CTP Improvements (Optimized Signals) - PM
Signalized: Overall LOS E or Better; All Approaches E or Better
Signalized: Overall LOS E or Better; One or More Approaches F
Signalized: Overall LOS F; One or More Approaches F
AWSC: Overall LOS E or Better; All Approaches E or Better
AWSC: Overall LOS F; One or More Approaches F
TWSC: LOS E or Better for All Stop-Controlled Approaches
TWSC: LOS F for One or More Stop-Controlled Approaches
Level of Service E represents an Average Control Delay of up to 80 seconds per vehicle for signalized intersections and 50 seconds per vehicle for stop-controlled approaches at unsignalized intersections.
N
DelDOT
ri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS,
GS, AeroGRID, IGN, and the GIS User Community

Arterial 1 - SR 72/Library Ave/SR 2 Capitol Trail from SR 4 to Possum Park Rd

Arterial 1 NB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	111.8	6.49			26.3	C
Future	135.6	6.88			24.8	C
EC-to-Future Change	**23.8**	**0.40**	**6.1%**	**Y**	**-1.5**	**No Change**
ST Imp Future	149.3	7.11			24.0	C
EC-to-STI Future Change	**37.5**	**0.62**	**9.6%**	**Y**	**-2.3**	**No Change**

Arterial 1 SB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	168.2	7.43			23.0	C
Future	182.9	7.67			22.2	C
EC-to-Future Change	**14.7**	**0.24**	**3.3%**	**N**	**-0.80**	**No Change**
ST Imp Future	209.6	8.12			21.0	D
EC-to-STI Future Change	**41.4**	**0.69**	**9.3%**	**Y**	**-2.0**	**-1**

Arterial 1 NB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	174.5	7.53			22.6	C
Future	194.0	7.86			21.7	D
EC-to-Future Change	**19.5**	**0.32**	**4.3%**	**N**	**-0.90**	**-1**
ST Imp Future	193.4	7.85			21.7	D
EC-to-STI Future Change	**35.1**	**0.32**	**4.2%**	**N**	**-0.9**	**-1**

Arterial 1 SB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	241.9	8.65			19.7	D
Future	292.6	9.50			17.9	D
EC-to-Future Change	**50.7**	**0.85**	**9.8%**	**Y**	**-1.80**	**No Change**
ST Imp Future	335.6	10.22			16.7	E
EC-to-STI Future Change	**93.7**	**1.56**	**18.0%**	**Y**	**-3.0**	**-1**

Arterial 2 - SR 896 from Welsh Tract Rd to Cleveland Ave

Arterial 2 NB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	239.2	9.82			13.8	C
Future	330.9	11.35			11.9	D
EC-to-Future Change	**91.7**	**1.53**	**15.6%**	**Y**	**-1.90**	**-1**
ST Imp Future	329.7	11.33			12.0	D
EC-to-STI Future Change	**90.5**	**1.51**	**15.4%**	**Y**	**-1.8**	**-1**

Arterial 2 SB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	213.5	10.31			14.4	C
Future	262.9	11.13			13.3	C
EC-to-Future Change	**49.4**	**0.82**	**8.0%**	**Y**	**-1.10**	**No Change**
ST Imp Future	254.4	10.99			13.5	C
EC-to-STI Future Change	**40.9**	**0.68**	**6.6%**	**Y**	**-0.9**	**No Change**

Arterial 2 NB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	300.3	10.84			12.5	D

Arterial 2 SB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	237.9	10.72			13.8	C

Future	415.8	12.77			10.6	D	Future	349.7	12.58			11.8	D
EC-to-Future Change	**115.5**	**1.93**	**17.8%**	**Y**	**-1.90**	**No Change**	**EC-to-Future Change**	**111.8**	**1.86**	**17.4%**	**Y**	**-2.00**	**-1**
ST Imp Future	361.0	11.85			11.4	D	ST Imp Future	279.8	11.42			13.0	D
EC-to-STI Future Change	**60.7**	**1.01**	**9.3%**	**Y**	**-1.1**	**No Change**	**EC-to-STI Future Change**	**41.9**	**0.70**	**6.5%**	**Y**	**-0.8**	**-1**

Arterial 3 - SR 4 from Elkton Rd to Marrows Rd

Arterial 3 EB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS	**Arterial 3 WB AM**	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	107.0	5.20			31.3	C	EC	117.1	5.36			30.3	C
Future	92.6	4.96			32.8	C	Future	130.7	5.59			29.1	C
EC-to-Future Change	**-14.4**	**-0.24**	**-4.6%**	**N**	**1.50**	**No Change**	**EC-to-Future Change**	**13.6**	**0.23**	**4.2%**	**N**	**-1.2**	**No Change**
ST Imp Future	109.7	5.24			31.1	C	ST Imp Future	137.1	5.70			28.6	C
EC-to-STI Future Change	**2.7**	**0.05**	**0.9%**	**N**	**-0.2**	**No Change**	**EC-to-STI Future Change**	**20.0**	**0.33**	**6.2%**	**Y**	**-1.7**	**No Change**

Arterial 3 EB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS	**Arterial 3 WB PM**	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	142.0	5.78			28.2	C	EC	138.8	5.73			28.4	C
Future	143.1	5.80			28.1	C	Future	186.1	6.51			25.0	D
EC-to-Future Change	**1.1**	**0.02**	**0.3%**	**N**	**-0.10**	**No Change**	**EC-to-Future Change**	**47.3**	**0.79**	**13.7%**	**Y**	**-3.40**	**-1**
ST Imp Future	140.9	5.76			28.3	C	ST Imp Future	208.6	6.89			23.6	D
EC-to-STI Future Change	**-1.1**	**-0.02**	**-0.3%**	**N**	**0.1**	**No Change**	**EC-to-STI Future Change**	**69.8**	**1.16**	**20.3%**	**Y**	**-4.8**	**-1**

Arterial 4 - SR 273/Main St/Nottingham Rd from Marrows Rd to Casho Mill Rd

Arterial 4 EB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS	**Arterial 4 WB AM**	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	194.7	8.88			18.5	C	EC	143.5	7.91			17.2	D
Future	196.7	8.92			18.4	C	Future	144.3	7.92			17.2	D
EC-to-Future Change	**2.0**	**0.03**	**0.4%**	**N**	**-0.10**	**No Change**	**EC-to-Future Change**	**0.8**	**0.01**	**0.2%**	**N**	**0.00**	**No Change**
ST Imp Future	207.2	9.09			18.1	C	ST Imp Future	151.2	8.19			17.0	D

EC-to-STI Future Change	**12.5**	**0.21**	**2.3%**	**N**	**-0.4**	**No Change**	**EC-to-STI Future Change**	**7.7**	**0.28**	**3.6%**	**N**	**-0.2**	**No Change**

Arterial 4 EB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS	**Arterial 4 WB PM**	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	225.2	9.39			17.5	D	EC	180.7	8.53			16.0	D
Future	243.0	9.69			17.0	D	Future	194.2	8.75			15.6	D
EC-to-Future Change	**17.8**	**0.30**	**3.2%**	**N**	**-0.50**	**No Change**	**EC-to-Future Change**	**13.5**	**0.23**	**2.7%**	**N**	**-0.40**	**No Change**
ST Imp Future	207.2	9.09			18.1	C	ST Imp Future	151.2	8.19			17.0	D
EC-to-STI Future Change	**-18.0**	**-0.30**	**-3.2%**	**N**	**0.6**	**+1**	**EC-to-STI Future Change**	**-29.5**	**-0.34**	**-3.9%**	**N**	**1.0**	**No Change**

Arterial 5 - Elkton Rd from Otts Chapel Rd to Amstel Ave

Arterial 5 NE AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS	**Arterial 5 SW AM**	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	74.9	4.81			25.1	C	EC	104.8	5.35			22.5	C
Future	67.2	4.68			25.7	C	Future	81.1	4.95			24.3	C
EC-to-Future Change	**-7.7**	**-0.13**	**-2.7%**	**N**	**0.60**	**No Change**	**EC-to-Future Change**	**-23.7**	**-0.40**	**-7.4%**	**N**	**1.80**	**No Change**
ST Imp Future	86.6	5.01			24.0	C	ST Imp Future	123.0	5.65			21.2	D
EC-to-STI Future Change	**11.7**	**0.19**	**4.0%**	**N**	**-1.1**	**No Change**	**EC-to-STI Future Change**	**18.2**	**0.30**	**5.6%**	**Y**	**-1.3**	**-1**

Arterial 5 NE PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS	**Arterial 5 SW PM**	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Above 5% TT Change Y/N	Arterial Speed (mph)	Arterial LOS
EC	136.1	5.83			20.7	D	EC	159.6	6.27			19.2	D
Future	127.6	5.69			21.2	D	Future	149.0	6.09			19.8	D
EC-to-Future Change	**-8.5**	**-0.14**	**-2.4%**	**N**	**0.50**	**No Change**	**EC-to-Future Change**	**-10.6**	**-0.18**	**-2.8%**	**N**	**0.60**	**No Change**
ST Imp Future	119.3	5.55			21.6	D	ST Imp Future	158.5	6.25			19.2	D
EC-to-STI Future Change	**-16.8**	**-0.28**	**-4.8%**	**N**	**0.9**	**No Change**	**EC-to-STI Future Change**	**-1.1**	**-0.02**	**-0.3%**	**N**	**0.0**	**No Change**

Arterial Level of Service: Arterial 1 - SR 72/Library Ave/SR 2 Capitol Trail from SR 4 to Possum Park Rd

NB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Wyoming Rd	II	1.23	45	98.7	119.0	1.98	108.6	1.81	-0.17	127.0	2.12	0.13	A	A	none	B	-1	-8.7%	No	6.7%	Yes
College Square Shop. Ctr/Del. Ave	II	0.21	35	26.6	34.6	0.58	49.5	0.83	0.25	40.1	0.67	0.09	C	E	-2	D	-1	43.1%	Yes	15.9%	Yes
SR 273/Main St	II	0.20	35	24.6	44.6	0.74	53.8	0.90	0.15	44.6	0.74	0.00	E	E	none	E	none	20.6%	Yes	0.0%	No
Woodlawn Ave/E. Cleveland Ave	II	0.15	35	19.2	59.4	0.99	70.2	1.17	0.18	82.9	1.38	0.39	F	F	none	F	none	18.2%	Yes	39.6%	Yes
Anna Way	II	0.60	35	61.8	65.5	1.09	65.8	1.10	0.01	66.9	1.12	0.02	B	B	none	B	none	0.5%	No	2.1%	No
Possum Park Rd	II	0.45	35	46.4	66.0	1.10	65.0	1.08	-0.02	65.1	1.09	-0.02	C	C	none	C	none	-1.5%	No	-1.4%	No
Total:	**II**	**2.84**		**277.3**	**389.1**	**6.49**	**412.9**	**6.88**	**0.40**	**426.6**	**7.11**	**0.62**	**C**	**C**	**none**	**C**	**none**	**6.1%**	**Yes**	**9.6%**	**Yes**

SB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Anna Way	II	0.45	35	46.4	48.1	0.80	48.4	0.81	0.01	49.2	0.82	0.02	B	B	none	B	none	0.6%	No	2.3%	No
E. Cleveland Ave/Woodlawn Ave	II	0.60	35	61.8	123.8	2.06	173.7	2.90	0.83	162.2	2.70	0.64	D	E	-1	E	-1	40.3%	Yes	31.0%	Yes
Main St/SR 273	II	0.15	35	19.2	52.5	0.88	43.7	0.73	-0.15	52.0	0.87	-0.01	F	F	none	F	none	-16.8%	No	-1.0%	No
Del. Ave/College Square Shop. Ctr	II	0.20	35	24.6	28.6	0.48	26.1	0.44	-0.04	54.7	0.91	0.44	C	C	none	F	-3	-8.7%	No	91.3%	Yes
Wyoming Rd	II	0.21	35	26.6	62.1	1.04	41.3	0.69	-0.35	43.5	0.73	-0.31	F	D	+2	D	+2	-33.5%	No	-30.0%	No
SR 4	II	1.23	45	98.7	130.4	2.17	127.0	2.12	-0.06	125.3	2.09	-0.09	B	B	none	A	+1	-2.6%	No	-3.9%	No
Total:	**II**	**2.84**		**277.3**	**445.5**	**7.43**	**460.2**	**7.67**	**0.24**	**486.9**	**8.12**	**0.69**	**C**	**C**	**none**	**D**	**-1**	**3.3%**	**No**	**9.3%**	**Yes**

NB PM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Wyoming Rd	II	1.23	45	98.7	130.4	2.17	136.9	2.28	0.11	136.5	2.28	0.10	B	B	none	B	none	5.0%	No	4.7%	No
College Square Shop. Ctr/Del. Ave	II	0.21	35	26.6	56.7	0.95	60.7	1.01	0.07	55.0	0.92	-0.03	E	F	-1	E	none	7.1%	Yes	-3.0%	No
SR 273/Main St	II	0.20	35	24.6	57.2	0.95	60.6	1.01	0.06	61.5	1.03	0.07	F	F	none	F	none	5.9%	Yes	7.5%	Yes

Woodlawn Ave/E. Cleveland Ave	II	0.15	35	19.2	68.8	1.15	75.1	1.25	0.11	81.0	1.35	0.20	F	F	none	F	none	9.2%	Yes	17.7%	Yes
Anna Way	II	0.60	35	61.8	66.7	1.11	67.4	1.12	0.01	67.4	1.12	0.01	B	B	none	B	none	1.0%	No	1.0%	No
Possum Park Rd	II	0.45	35	46.4	72.0	1.20	70.6	1.18	-0.02	69.3	1.16	-0.04	C	C	none	C	none	-1.9%	No	-3.7%	No
Total:	**II**	**2.84**		**277.3**	**451.8**	**7.53**	**471.3**	**7.86**	**0.32**	**470.7**	**7.85**	**0.32**	**C**	**D**	**-1**	**D**	**-1**	**4.3%**	**No**	**4.2%**	**No**

SB PM | **SB PM**

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Anna Way	II	0.45	35	46.4	46.7	0.78	47.1	0.79	0.01	46.8	0.78	0.00	B	B	none	B	none	0.9%	No	0.2%	No
E. Cleveland Ave/Woodlawn Ave	II	0.60	35	61.8	138.3	2.31	166.8	2.78	0.48	166.1	2.77	0.46	E	F	-1	E	none	20.6%	Yes	20.1%	Yes
Main St/SR 273	II	0.15	35	19.2	61.0	1.02	56.8	0.95	-0.07	53.4	0.89	-0.13	F	F	none	F	none	-6.9%	No	-12.5%	No
Del. Ave/College Square Shop. Ctr	II	0.20	35	24.6	32.0	0.53	32.7	0.55	0.01	32.4	0.54	0.01	C	D	-1	D	-1	2.2%	No	1.2%	No
Wyoming Rd	II	0.21	35	26.6	66.9	1.12	54.9	0.92	-0.20	102.6	1.71	0.60	F	E	+1	F	none	-17.9%	No	53.4%	Yes
SR 4	II	1.23	45	98.7	174.3	2.91	211.6	3.53	0.62	211.6	3.53	0.62	C	D	-1	D	-1	21.4%	Yes	21.4%	Yes
Total:	**II**	**2.84**		**277.3**	**519.2**	**8.65**	**569.9**	**9.50**	**0.85**	**612.9**	**10.22**	**1.56**	**D**	**D**	**none**	**E**	**-1**	**9.8%**	**Yes**	**18.0%**	**Yes**

Arterial Level of Service: Arterial 2 - SR 896 from Welsh Tract Rd to Cleveland Ave

NB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Chestnut Hill Rd	III	0.25	35	29.8	36.8	0.61	54.1	0.90	0.29	56.3	0.94	0.33	B	D	-2	D	-2	47.0%	Yes	53.0%	Yes
SR 4	III	0.19	35	22.5	42.5	0.71	52.6	0.88	0.17	42.3	0.71	0.00	D	E	-1	D	none	23.8%	Yes	-0.5%	No
UD Fieldhouse Ent 1	IV	0.17	35	23.9	31.7	0.53	27.7	0.46	-0.07	28.6	0.48	-0.05	B	B	none	B	none	-12.6%	No	-9.8%	No
UD Fieldhouse Ent 2	IV	0.11	35	18.1	19.1	0.32	20.7	0.35	0.03	23.4	0.39	0.07	B	B	none	C	-1	8.4%	Yes	22.5%	Yes
UD Ag Campus Ent	IV	0.27	35	32.9	41.6	0.69	41.4	0.69	0.00	46.0	0.77	0.07	B	B	none	B	none	-0.5%	No	10.6%	Yes
East Park Pl	IV	0.50	26	76.1	117.7	1.96	166.2	2.77	0.81	186.7	3.11	1.15	C	D	-1	D	-1	41.2%	Yes	58.6%	Yes
Kent Way	IV	0.31	25	47.5	55.3	0.92	56.1	0.94	0.01	55.6	0.93	0.01	B	B	none	B	none	1.4%	No	0.5%	No
Amstel Ave	IV	0.07	25	18.7	23.8	0.40	24.1	0.40	0.01	24.1	0.40	0.01	D	D	none	D	none	1.3%	No	1.3%	No
Delaware Ave	IV	0.11	25	23.9	77.9	1.30	77.9	1.30	0.00	77.9	1.30	0.00	F	F	none	F	none	0.0%	No	0.0%	No
Main St	IV	0.09	25	20.3	47.6	0.79	44.7	0.75	-0.05	43.1	0.72	-0.08	F	E	+1	E	+1	-6.1%	No	-9.5%	No
N. College Ave	IV	0.02	25	6.4	6.9	0.12	7.1	0.12	0.00	7.2	0.12	0.01	D	D	none	D	none	2.9%	No	4.3%	No
E. Cleveland Ave	IV	0.17	25	30.1	88.5	1.48	108.5	1.81	0.33	88.7	1.48	0.00	F	F	none	F	none	22.6%	Yes	0.2%	No
Total:	**IV***	**2.26**		**350.2**	**589.4**	**9.82**	**681.1**	**11.35**	**1.53**	**679.9**	**11.33**	**1.51**	**C***	**D***	**-1**	**D***	**-1**	**15.6%**	**Yes**	**15.4%**	**Yes**

SB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Nottingham Rd/W. Main St	IV	0.10	25	22.7	59.1	0.99	63.8	1.06	-0.45	66.0	1.10	0.12	F	F	none	F	none	-45.9%	No	11.7%	Yes
W. Main St to Elkton Rd to Delaware Ave**	IV	0.20	25	46.0	46.0	0.77	46.0	0.77	0.00	46.0	0.77	0.00	C	C	none	C	none	0.0%	No	0.0%	No
Orchard Rd	IV	0.10	25	22.7	36.8	0.61	36.9	0.62	0.00	36.9	0.62	0.00	D	D	none	D	none	0.3%	No	0.3%	No
S. College Ave	IV	0.09	25	20.3	32.9	0.55	35.9	0.60	0.08	35.9	0.60	0.05	D	D	none	D	none	14.3%	Yes	9.1%	Yes
Amstel Ave	IV	0.11	25	23.9	29.1	0.49	29.2	0.49	-0.05	29.2	0.49	0.00	C	C	none	C	none	-11.0%	No	0.3%	No
Kent Way	IV	0.07	25	18.7	25.4	0.42	25.8	0.43	-0.02	25.5	0.43	0.00	D	D	none	D	none	-5.1%	No	0.4%	No
West Park Pl	IV	0.31	25	47.5	78.2	1.30	83.8	1.40	0.19	85.2	1.42	0.12	C	C	none	C	none	14.3%	Yes	9.0%	Yes
Inspiration Blvd	IV	0.50	25	76.1	80.6	1.34	89.4	1.49	0.11	85.9	1.43	0.09	B	B	none	B	none	8.2%	Yes	6.6%	Yes
Discovery Blvd	IV	0.27	35	32.9	38.6	0.64	42.4	0.71	0.09	40.0	0.67	0.02	A	B	-1	B	-1	14.2%	Yes	3.6%	No
Marvin Dr	IV	0.11	35	18.1	23.3	0.39	23.0	0.38	-0.11	19.7	0.33	-0.06	C	C	none	B	+1	-29.2%	No	-15.5%	No
SR 4	IV	0.17	35	23.9	66.8	1.11	72.9	1.22	0.18	67.7	1.13	0.02	D	E	-1	D	none	16.5%	Yes	1.3%	No
Chestnut Hill Rd	III	0.19	35	22.5	44.8	0.75	61.1	1.02	0.36	65.5	1.09	0.35	D	E	-1	E	-1	48.7%	Yes	46.2%	Yes
Welsh Tract Rd	III	0.25	35	29.8	57.0	0.95	57.8	0.96	0.07	56.0	0.93	-0.02	D	D	none	D	none	7.7%	Yes	-1.8%	No
Total:	**IV***	**2.47**		**405.1**	**618.6**	**10.31**	**668.0**	**11.13**	**0.45**	**659.5**	**10.99**	**0.68**	**C***	**C***	**none**	**C***	**none**	**4.3%**	**No**	**6.6%**	**Yes**

NB PM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Chestnut Hill Rd	III	0.25	35	29.8	47.7	0.80	52.7	0.88	0.08	43.1	0.72	-0.08	C	D	-1	C	none	10.5%	Yes	-9.6%	No
SR 4	III	0.19	35	22.5	62.4	1.04	56.8	0.95	-0.09	71.0	1.18	0.14	E	E	none	F	-1	-9.0%	No	13.8%	Yes
UD Fieldhouse Ent 1	III	0.17	35	23.9	30.3	0.51	28.0	0.47	-0.04	33.5	0.56	0.05	B	B	none	C	-1	-7.6%	No	10.6%	Yes
UD Fieldhouse Ent 2	III	0.11	35	18.1	21.2	0.35	26.5	0.44	0.09	37.4	0.62	0.27	C	C	none	D	-1	25.0%	Yes	76.4%	Yes
UD Ag Campus Ent	III	0.27	35	32.9	60.5	1.01	65.2	1.09	0.08	62.7	1.05	0.04	C	C	none	C	none	7.8%	Yes	3.6%	No
East Park Pl	III	0.50	26	76.1	110.3	1.84	206.3	3.44	1.60	136.7	2.28	0.44	C	E	-2	C	none	87.0%	Yes	23.9%	Yes
Kent Way	III	0.31	25	47.5	55.6	0.93	58.2	0.97	0.04	57.5	0.96	0.03	B	B	none	B	none	4.7%	No	3.4%	No
Amstel Ave	III	0.07	25	18.7	31.2	0.52	32.0	0.53	0.01	31.9	0.53	0.01	E	E	none	E	none	2.6%	No	2.2%	No
Delaware Ave	III	0.11	25	23.9	83.3	1.39	85.8	1.43	0.04	84.9	1.42	0.03	F	F	none	F	none	3.0%	No	1.9%	No
Main St	IV	0.09	25	20.3	47.8	0.80	53.0	0.88	0.09	44.9	0.75	-0.05	F	F	none	E	+1	10.9%	Yes	-6.1%	No
N. College Ave	IV	0.02	25	6.4	7.0	0.12	7.3	0.12	0.00	7.6	0.13	0.01	D	D	none	D	none	4.3%	No	8.6%	Yes
E. Cleveland Ave	IV	0.17	25	30.1	93.2	1.55	94.2	1.57	0.02	100.0	1.67	0.11	F	F	none	F	none	1.1%	No	7.3%	Yes
Total:	**IV***	**2.26**		**350.2**	**650.5**	**10.84**	**766.0**	**12.77**	**1.93**	**711.2**	**11.85**	**1.01**	**D***	**D***	**none**	**D***	**none**	**17.8%**	**Yes**	**9.3%**	**Yes**

SB PM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Nottingham Rd/W. Main St	IV	0.10	25	22.7	58.7	0.98	59.7	1.00	0.02	59.6	0.99	0.02	F	F	none	F	none	1.7%	No	1.5%	No
W. Main St to Elkton Rd to Delaware Ave**	IV	0.20	25	46.0	46.0	0.77	46.0	0.77	0.00	46.0	0.77	0.00	C	C	none	C	none	0.0%	No	0.0%	No
Orchard Rd	IV	0.10	25	22.7	39.6	0.66	39.6	0.66	0.00	39.6	0.66	0.00	D	D	none	D	none	0.0%	No	0.0%	No
S. College Ave	IV	0.09	25	20.3	34.9	0.58	44.1	0.74	0.15	42.3	0.71	0.12	D	E	-1	E	-1	26.4%	Yes	21.2%	Yes
Amstel Ave	IV	0.11	25	23.9	35.7	0.60	33.3	0.56	-0.04	33.8	0.56	-0.03	D	D	none	D	none	-6.7%	No	-5.3%	No
Kent Way	IV	0.07	25	18.7	27.6	0.46	27.8	0.46	0.00	27.8	0.46	0.00	D	D	none	D	none	0.7%	No	0.7%	No
West Park Pl	IV	0.31	25	47.5	92.1	1.54	91.5	1.53	-0.01	79.7	1.33	-0.21	D	D	none	C	+1	-0.7%	No	-13.5%	No
Inspiration Blvd	IV	0.50	25	76.1	91.4	1.52	102.5	1.71	0.19	94.1	1.57	0.04	B	C	-1	B	none	12.1%	Yes	3.0%	No
Discovery Blvd	IV	0.27	35	32.9	45.3	0.76	52.3	0.87	0.12	55.4	0.92	0.17	B	C	-1	C	-1	15.5%	Yes	22.3%	Yes
Marvin Dr	IV	0.11	35	18.1	23.3	0.39	26.2	0.44	0.05	25.2	0.42	0.03	C	C	none	C	none	12.4%	Yes	8.2%	Yes
SR 4	IV	0.17	35	23.9	58.3	0.97	106.9	1.78	0.81	64.2	1.07	0.10	D	F	-2	D	none	83.4%	Yes	10.1%	Yes
Chestnut Hill Rd	III	0.19	35	22.5	41.3	0.69	47.7	0.80	0.11	38.0	0.63	-0.05	D	D	none	D	none	15.5%	Yes	-8.0%	No
Welsh Tract Rd	III	0.25	35	29.8	48.8	0.81	77.2	1.29	0.47	79.2	1.32	0.51	C	E	-2	E	-2	58.2%	Yes	62.3%	Yes
Total:	**IV***	**2.47**		**405.1**	**643.0**	**10.72**	**754.8**	**12.58**	**1.86**	**684.9**	**11.42**	**0.70**	**C***	**D***	**-1**	**D***	**-1**	**17.4%**	**Yes**	**6.5%**	**Yes**

* Data totals in red are derived from manual calculations due to separate Synchro outputs being combined or the addition of manually calculated data for one or more segments.

** Running Time, Travel Time, Arterial Speed and Arterial LOS for this combination of segments are not calculated in Synchro due to no signal controls and a free left turn. Running Time, Arterial Speed and Arterial LOS are based on the segment lengths in Synchro and then d

Arterial Level of Service: Arterial 3 - SR 4 from Elkton Rd to Marrows Rd

EB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Science Blvd	I	1.07	50	77.2	78.4	1.31	79.4	1.32	0.02	79.3	1.32	0.01	A	A	none	A	none	1.3%	No	1.1%	No
SR 896/S. College Ave	I	0.29	50	27.4	75.8	1.26	66.4	1.11	-0.16	72.6	1.21	-0.05	F	F	none	F	none	-12.4%	No	-4.2%	No
SR 72	I	0.86	50	61.7	100.2	1.67	100.6	1.68	0.01	100.6	1.68	0.01	C	C	none	C	none	0.4%	No	0.4%	No
Marrows Rd	I	0.49	50	38.4	57.3	0.96	50.9	0.85	-0.11	61.9	1.03	0.08	C	B	+1	C	none	-11.2%	No	8.0%	Yes
Total:	**I**	**2.71**		**204.7**	**311.7**	**5.20**	**297.3**	**4.96**	**-0.24**	**314.4**	**5.24**	**0.05**	**C**	**C**	**none**	**C**	**none**	**-4.6%**	**No**	**0.9%**	**No**

WB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
SR 72	I	0.49	50	38.4	71.6	1.19	82.2	1.37	0.18	81.1	1.35	0.16	D	D	none	D	none	14.8%	Yes	13.3%	Yes
S. College Ave/SR 896	I	0.86	50	61.7	106.0	1.77	105.3	1.76	-0.01	112.2	1.87	0.10	C	C	none	C	none	-0.7%	No	5.8%	Yes
Science Blvd	I	0.29	50	27.4	33.6	0.56	39.9	0.67	0.11	37.2	0.62	0.06	C	D	-1	C	none	18.8%	Yes	10.7%	Yes
Elkton Rd	I	1.07	50	77.2	110.6	1.84	108	1.80	-0.04	111.3	1.86	0.01	B	B	none	B	none	-2.4%	No	0.6%	No
Total:	**I**	**2.71**		**204.7**	**321.8**	**5.36**	**335.4**	**5.59**	**0.23**	**341.8**	**5.70**	**0.33**	**C**	**C**	**none**	**C**	**none**	**4.2%**	**No**	**6.2%**	**Yes**

EB PM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Science Blvd	I	1.07	50	77.2	81.1	1.35	81.8	1.36	0.01	84.6	1.41	0.06	A	A	none	A	none	0.9%	No	4.3%	No
SR 896/S. College Ave	I	0.29	50	27.4	94.0	1.57	99.9	1.67	0.10	95.6	1.59	0.03	F	F	none	F	none	6.3%	Yes	1.7%	No
SR 72	I	0.86	50	61.7	116.6	1.94	116.3	1.94	0.00	116.3	1.94	0.00	D	D	none	D	none	-0.3%	No	-0.3%	No
Marrows Rd	I	0.49	50	38.4	55.0	0.92	49.7	0.83	-0.09	49.0	0.82	-0.10	C	B	+1	B	+1	-9.6%	No	-10.9%	No
Total:	**I**	**2.71**		**204.7**	**346.7**	**5.78**	**347.7**	**5.80**	**0.02**	**345.5**	**5.76**	**-0.02**	**C**	**C**	**none**	**C**	**none**	**0.3%**	**No**	**-0.3%**	**No**

WB PM																		WB PM			
Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
SR 72	I	0.49	50	38.4	89.7	1.50	118.8	1.98	0.49	120.6	2.01	0.52	E	F	none	F	-1	32.4%	Yes	34.4%	Yes
S. College Ave/SR 896	I	0.86	50	61.7	114.4	1.91	124.0	2.07	0.16	120.9	2.02	0.11	D	D	none	D	none	8.4%	Yes	5.7%	Yes
Science Blvd	I	0.29	50	27.4	35.5	0.59	42.7	0.71	0.12	44.7	0.75	0.15	C	D	-1	D	-1	20.3%	Yes	25.9%	Yes
Elkton Rd	I	1.07	50	77.2	103.9	1.73	105.2	1.75	0.02	127.0	2.12	0.39	B	B	none	C	-1	1.3%	No	22.2%	Yes
Total:	**I**	**2.71**		**204.7**	**343.5**	**5.73**	**390.7**	**6.51**	**0.79**	**413.2**	**6.89**	**1.16**	**C**	**D**	**-1**	**D**	**-1**	**13.7%**	**Yes**	**20.3%**	**Yes**

Arterial Level of Service: Arterial 4 - SR 273/Main St/Nottingham Rd from Marrows Rd to Casho Mill Rd

EB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**EB AM**			
																							% Change in TT EC - FC	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Hillside Rd	I	0.98	28	47.6	79.7	1.33	82.4	1.37	0.05	82.4	1.37	0.05	44.3	42.9	1.4	42.9	-1.4	A	A	none	A	none	3.4%	No	3.4%	No
W. Main St to Elkton Rd to Delaware Ave**	IV	0.20	25	46.0	46.0	0.77	46.0	0.77	0.00	46.0	0.77	0.00	15.7	15.7	0.0	15.7	0.0	C	C	none	C	none	0.0%	No	0.0%	No
Orchard Rd	III	0.10	25	22.7	36.8	0.61	36.9	0.62	0.00	36.9	0.62	0.00	10.1	10.1	0.0	10.1	0.0	E	E	none	D	+1	0.3%	No	0.3%	No
S. College Ave NB SB	III	0.09	25	20.3	32.9	0.55	35.9	0.60	0.05	35.9	0.60	0.05	10.1	9.3	0.8	9.3	-0.8	E	F	-1	D	+1	9.1%	Yes	9.1%	Yes
Academy Street	III	0.22	25	36.5	46.8	0.78	46.0	0.77	-0.01	46.7	0.78	0.00	17.0	17.3	0.3	17.0	0.0	D	D	none	D	none	-1.7%	No	-0.2%	No
Chapel Street	III	0.22	25	36.9	53.4	0.89	54.5	0.91	0.02	55.7	0.93	0.04	15.1	14.8	0.3	14.5	-0.6	D	D	none	D	none	2.1%	No	4.3%	No
Tyre Ave	III	0.23	25	35.7	63.8	1.06	49.6	0.83	-0.24	52.3	0.87	-0.19	13.2	16.9	3.7	16.1	2.9	E	D	+1	D	+1	-22.3%	No	-18.0%	No
SR 72 Library Ave	III	0.29	25	44.0	94.9	1.58	94.6	1.58	-0.01	94.7	1.58	0.00	10.9	11.0	0.1	10.9	0.0	E	E	none	E	none	-0.3%	No	-0.2%	No
SR 273/Main St	III	0.20	35	23.6	43.6	0.73	52.8	0.88	0.15	43.8	0.73	0.00	16.2	13.4	2.8	16.2	0.0	D	E	-1	D	none	21.1%	Yes	0.5%	No
Marrows Rd	III	0.21	35	25.0	35.1	0.59	36.3	0.61	0.02	51.1	0.85	0.27	21.3	20.7	0.6	14.7	-6.6	C	C	none	D	-1	3.4%	No	45.6%	Yes
Total:	**III***	**2.74**		**338.3**	**533.0**	**8.88**	**535.0**	**8.92**	**0.03**	**545.5**	**9.09**	**0.21**	**18.5***	**18.4***	**0.1**	**18.1***	**-0.4**	**C***	**C***	**none**	**C***	**none**	**0.4%**	**No**	**2.3%**	**No**

WB AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**WB AM**			
																							% Change in TT EC - FC	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
SR 2 Capitol Trail	III	0.21	35	25.0	69.8	1.16	71.0	1.18	0.02	71.8	1.20	0.03	10.7	10.6	0.1	10.4	-0.3	E	E	none	D	+1	1.7%	No	2.9%	No
Tyre Ave	IV	0.28	25	42.8	46.0	0.77	45.6	0.76	-0.01	45.6	0.76	-0.01	21.9	22.1	0.2	22.1	0.2	B	B	none	B	none	-0.9%	No	-0.9%	No
Chapel Street	IV	0.18	25	30.2	54.7	0.91	59.9	1.00	0.09	62.7	1.05	0.13	12.0	11.0	1.0	10.5	-1.5	D	D	none	D	none	9.5%	Yes	14.6%	Yes
Academy St	IV	0.10	25	22.2	24.9	0.42	24.4	0.41	-0.01	24.5	0.41	-0.01	14.6	14.9	0.3	14.8	0.2	C	C	none	C	none	-2.0%	No	-1.6%	No
S. College Ave	IV	0.22	25	36.6	47.7	0.80	54.3	0.91	0.11	49.4	0.82	0.03	16.8	14.7	2.1	16.2	-0.6	C	C	none	C	none	13.8%	Yes	3.6%	No
N. College Ave	IV	0.02	25	6.4	6.9	0.12	7.1	0.12	0.00	7.2	0.12	0.01	12.6	12.3	0.3	12.1	-0.5	D	D	none	D	none	2.9%	No	4.3%	No
Hillside Rd	III	0.28	25	42.1	90.1	1.50	78.5	1.31	-0.19	95.7	1.60	0.09	11.0	12.6	1.6	10.4	-0.6	E	E	none	E	none	-12.9%	No	6.2%	Yes
Casho Mill Rd	III	0.98	28	125.5	134.2	2.24	134.3	2.24	0.00	134.4	2.24	0.00	26.3	26.3	0.0	26.3	0.0	B	B	none	B	none	0.1%	No	0.1%	No
Total:	**III***	**2.27**		**330.8**	**474.3**	**7.91**	**475.1**	**7.92**	**0.01**	**491.3**	**8.19**	**0.28**	**17.2***	**17.2***	**0.0**	**17.0***	**-0.2**	**D***	**D***	**none**	**D***	**none**	**0.2%**	**No**	**3.6%**	**No**

EB PM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**EB PM**			
																							% Change in TT EC - FC	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Hillside Rd	I	0.98	28	47.6	86.7	1.45	86.4	1.44	0.00	82.4	1.37	-0.07	40.7	40.9	0.2	42.9	2.2	B	B	none	A	+1	-0.3%	No	-5.0%	No
W. Main St to Elkton Rd to Delaware Ave**	IV	0.20	25	46.0	46.0	0.77	46.0	0.77	0.00	46.0	0.77	0.00	15.7	15.7	0.0	15.7	0.0	C	C	none	C	none	0.0%	No	0.0%	No
Orchard Rd	III	0.10	25	22.7	39.6	0.66	39.6	0.66	0.00	36.9	0.62	-0.05	9.4	9.4	0.0	10.1	0.7	F	F	none	D	+2	0.0%	No	-6.8%	No
S College Ave NB SB	III	0.09	25	20.3	34.9	0.58	44.1	0.74	0.15	35.9	0.60	0.02	9.5	7.5	-2.0	9.3	-0.2	F	F	none	D	+2	26.4%	Yes	2.9%	No
Academy Street	III	0.22	25	36.5	48.3	0.81	45.9	0.77	-0.04	46.7	0.78	-0.03	16.5	17.3	0.8	17.0	0.5	D	D	none	D	none	-5.0%	No	-3.3%	No
Chapel Street	III	0.22	25	36.9	52.7	0.88	53.3	0.89	0.01	55.7	0.93	0.05	15.3	15.1	-0.2	14.5	-0.8	D	D	none	D	none	1.1%	No	5.7%	Yes
Tyre Ave	III	0.23	25	35.7	39.1	0.65	41.0	0.68	0.03	52.3	0.87	0.22	21.5	20.5	-1.0	16.1	-5.4	C	C	none	D	-1	4.9%	No	33.8%	Yes
SR 72 Library Ave	III	0.29	25	44.0	107.6	1.79	112.4	1.87	0.08	94.7	1.58	-0.22	9.6	9.2	-0.4	10.9	1.3	F	F	none	E	+1	4.5%	No	-12.0%	No
SR 273/Main St	III	0.20	35	23.6	56.2	0.94	59.6	0.99	0.06	43.8	0.73	-0.21	12.6	11.9	-0.7	16.2	3.6	E	E	none	D	+1	6.0%	Yes	-22.1%	No
Marrows Rd	III	0.21	35	25.0	52.5	0.88	53.2	0.89	0.01	51.1	0.85	-0.02	14.3	14.2	-0.1	14.7	0.4	D	D	none	D	none	1.3%	No	-2.7%	No
Total:	**III***	**2.74**		**338.3**	**563.6**	**9.39**	**581.5**	**9.69**	**0.30**	**545.5**	**9.09**	**-0.30**	**17.5***	**17.0***	**-0.5**	**18.1***	**0.6**	**D***	**D***	**none**	**C***	**+1**	**3.2%**	**No**	**-3.2%**	**No**

WB PM																								WB PM			
Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
SR 2 Capitol Trail	III	0.21	35	25.0	72.1	1.20	70.5	1.18	-0.03	71.8	1.20	-0.01	10.4	10.7	0.3	10.4	0.0	E	E	none	D	+1	-2.2%	No	-0.4%	No
Tyre Ave	IV	0.28	25	42.8	47.5	0.79	46.8	0.78	-0.01	45.6	0.76	-0.03	21.2	21.5	0.3	22.1	0.9	B	B	none	B	none	-1.5%	No	-4.0%	No
Chapel Street	IV	0.18	25	30.2	58.2	0.97	61.0	1.02	0.05	62.7	1.05	0.08	11.3	10.8	-0.5	10.5	-0.8	D	D	none	D	none	4.8%	No	7.7%	Yes
Academy St	IV	0.10	25	22.2	31.3	0.52	32.6	0.54	0.02	24.5	0.41	-0.11	11.6	11.1	-0.5	14.8	3.2	D	D	none	C	+1	4.2%	No	-21.7%	No
S. College Ave	IV	0.22	25	36.6	57.4	0.96	56.6	0.94	-0.01	49.4	0.82	-0.13	13.9	14.1	0.2	16.2	2.3	C	C	none	C	none	-1.4%	No	-13.9%	No
N. College Ave	IV	0.02	25	6.4	7.0	0.12	7.3	0.12	0.00	7.2	0.12	0.00	12.5	12.0	-0.5	12.1	-0.4	D	D	none	D	none	4.3%	No	2.9%	No
Hillside Rd	III	0.28	25	42.1	83.9	1.40	90.8	1.51	0.12	95.7	1.60	0.20	11.8	10.9	-0.9	10.4	-1.4	E	E	none	E	none	8.2%	Yes	14.1%	Yes
Casho Mill Rd	III	0.98	28	125.5	154.1	2.57	159.6	2.66	0.09	134.4	2.24	-0.33	22.9	22.1	-0.8	26.3	3.4	C	C	none	B	+1	3.6%	No	-12.8%	No
Total:	**III***	**2.27**		**330.8**	**511.5**	**8.53**	**525.2**	**8.75**	**0.23**	**491.3**	**8.19**	**-0.34**	**16.0***	**15.6***	**-0.4**	**17.0***	**1.0**	**D***	**D***	**none**	**D***	**none**	**2.7%**	**No**	**-3.9%**	**No**

* Data totals in red are derived from manual calculations due to separate Synchro outputs being combined or the addition of manually calculated data for one or more segments.

** Running Time, Travel Time, Arterial Speed and Arterial LOS for this combination of segments are not calculated in Synchro due to no signal controls and a free left turn. Running Time, Arterial Speed and Arterial LOS are based on the segment lengths in Synchro and then derived from calculations and tables provided in the HCM 2000 manual.

Arterial Level of Service: Arterial 5 - Elkton Rd from Otts Chapel Rd to Amstel Ave

NE AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**NE AM**			
																							% Change in TT EC - FC	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Interchange Blvd	II	0.23	50	22.6	32.1	0.54	30.5	0.51	-0.03	34.8	0.58	0.04	25.3	26.7	1.4	23.4	-1.9	C	C	none	C	none	-5.0%	No	8.4%	Yes
SR 4 #3	II	0.38	50	32.7	61.7	1.03	62.5	1.04	0.01	55.6	0.93	-0.10	22.2	21.9	-0.3	24.6	2.4	C	D	-1	C	none	1.3%	No	-9.9%	No
Casho Mill Rd	II	0.43	40	40.5	52.8	0.88	50.8	0.85	-0.03	65.8	1.10	0.22	29.1	30.2	1.1	23.3	-5.8	B	B	none	C	-1	-3.8%	No	24.6%	Yes
Short Ln	II	0.27	40	29.9	33.8	0.56	34.5	0.58	0.01	33.7	0.56	0.00	29.0	28.4	-0.6	29.1	0.1	B	B	none	B	none	2.1%	No	-0.3%	No
W Park Place	II	0.13	40	14.6	16.3	0.27	17.5	0.29	0.02	16.3	0.27	0.00	28.0	26.1	-1.9	28.0	0.0	B	C	-1	B	none	7.4%	Yes	0.0%	No
Veterans Dr	II	0.18	30	23.0	23.7	0.40	23.2	0.39	-0.01	26.5	0.44	0.05	27.5	28.1	0.6	24.6	-2.9	C	B	+1	C	none	-2.1%	No	11.8%	Yes
Apple Rd	II	0.08	30	10.7	26.4	0.44	20.2	0.34	-0.10	25.8	0.43	-0.01	10.4	13.5	3.1	10.6	0.2	F	E	+1	F	none	-23.5%	No	-2.3%	No
Amstel Ave	II	0.31	28	39.9	42.0	0.70	41.7	0.70	0.00	41.8	0.70	0.00	26.9	27.0	0.1	26.9	0.0	C	C	none	C	none	-0.7%	No	-0.5%	No
Total:	**II**	**2.01**		**213.9**	**288.8**	**4.81**	**280.9**	**4.68**	**-0.13**	**300.3**	**5.01**	**0.19**	**25.1**	**25.7**	**0.6**	**24.0**	**-1.1**	**C**	**C**	**none**	**C**	**none**	**-2.7%**	**No**	**4.0%**	**No**

SW AM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**SW AM**			
																							% Change in TT EC - FC	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Apple Rd	II	0.31	28	39.9	67.7	1.13	69.1	1.15	0.02	68.7	1.15	0.02	16.7	16.3	-0.4	16.4	-0.3	E	E	none	E	none	2.1%	No	1.5%	No
Veterans Dr	II	0.08	30	10.7	11.5	0.19	11.9	0.20	0.01	11.8	0.20	0.01	23.8	23.0	-0.8	23.2	-0.6	C	C	none	C	none	3.5%	No	2.6%	No
W Park Place	II	0.18	30	23.0	25.3	0.42	28.6	0.48	0.06	26.6	0.44	0.02	25.8	22.8	-3.0	24.5	-1.3	C	C	none	C	none	13.0%	Yes	5.1%	Yes
Thorn Ln	II	0.13	30	17.0	21.7	0.36	22.1	0.37	0.01	19.2	0.32	-0.04	21.1	20.7	-0.4	23.8	2.7	D	D	none	C	+1	1.8%	No	-11.5%	No
Casho Mill Rd	II	0.27	40	29.9	67.5	1.13	44.1	0.74	-0.39	82.0	1.37	0.24	14.5	22.2	7.7	11.9	-2.6	E	C	+2	F	-1	-34.7%	No	21.5%	Yes
Suburban Plaza Dr	II	0.43	40	40.5	60.7	1.01	52.1	0.87	-0.14	63.2	1.05	0.04	25.3	29.5	4.2	24.3	-1.0	C	B	+1	C	none	-14.2%	No	4.1%	No
Interchange Blvd	II	0.38	50	32.7	34.7	0.58	36.8	0.61	0.03	34.5	0.58	0.00	39.5	37.2	-2.3	39.7	0.2	A	A	none	A	none	6.1%	Yes	-0.6%	No
Otts Chapel Rd	II	0.23	50	22.6	32.0	0.53	32.5	0.54	0.01	33.1	0.55	0.02	25.4	25.0	-0.4	24.6	-0.8	C	C	none	C	none	1.6%	No	3.4%	No
Total:	**II**	**2.01**		**216.3**	**321.1**	**5.35**	**297.2**	**4.95**	**-0.40**	**339.1**	**5.65**	**0.30**	**22.5**	**24.3**	**1.8**	**21.2**	**-1.3**	**C**	**C**	**none**	**D**	**-1**	**-7.4%**	**No**	**5.6%**	**Yes**

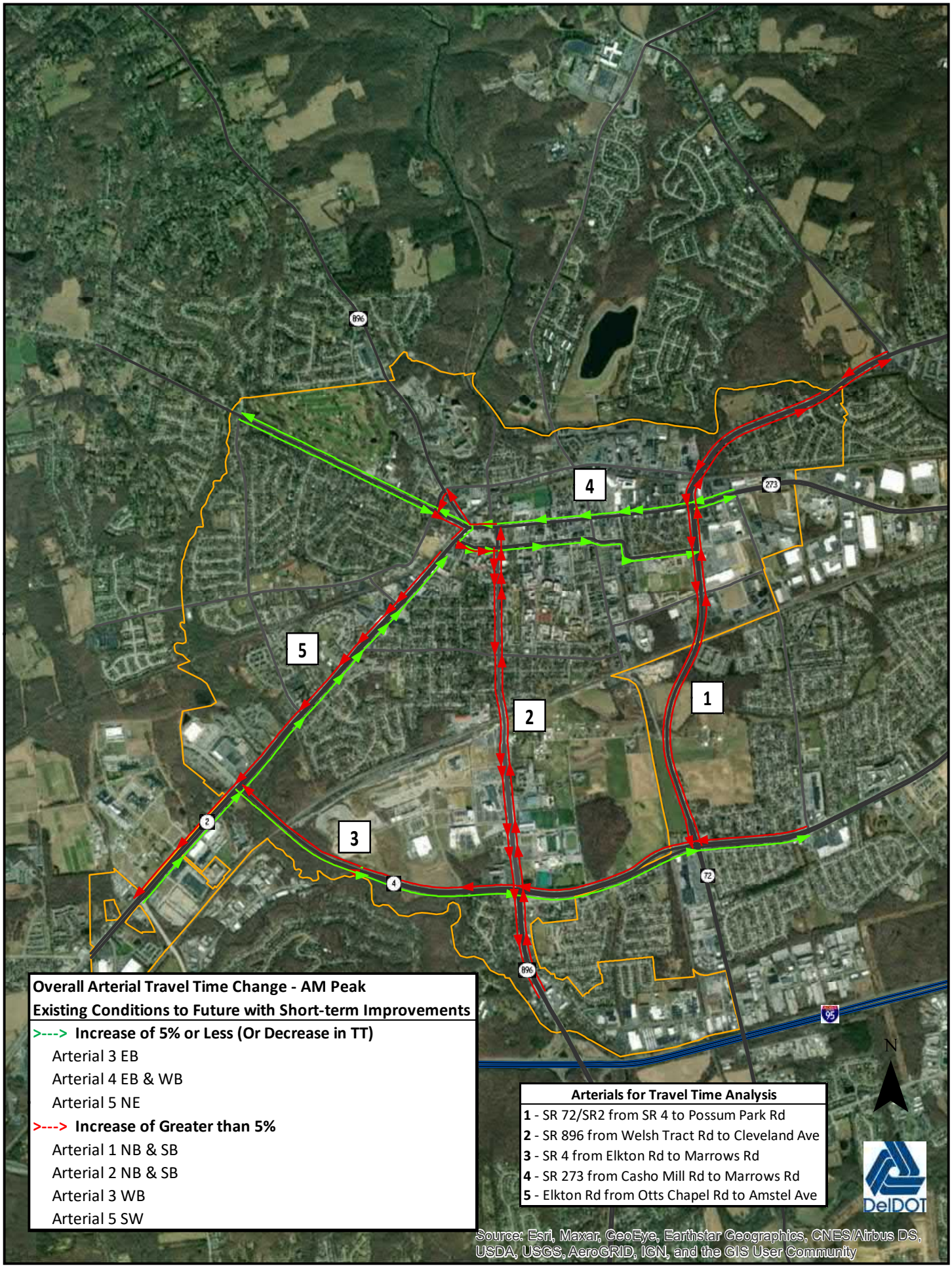
NE PM

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**NE PM**			
																							% Change in TT EC - FC	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Interchange Blvd	II	0.23	50	22.6	41.6	0.69	41.5	0.69	0.00	37.9	0.63	-0.06	19.6	19.6	0.0	21.5	1.9	D	D	none	D	none	-0.2%	No	-8.9%	No
SR 4 #3	II	0.38	50	32.7	89.4	1.49	84.0	1.40	-0.09	74.1	1.24	-0.26	15.3	16.3	1.0	18.5	3.2	E	E	none	D	+1	-6.0%	No	-17.1%	No
Casho Mill Rd	II	0.43	40	40.5	45.8	0.76	41.6	0.69	-0.07	46.7	0.78	0.02	33.5	36.9	3.4	32.9	-0.6	B	A	+1	B	none	-9.2%	No	2.0%	No
Short Ln	II	0.27	40	29.9	40.1	0.67	40.3	0.67	0.00	40.2	0.67	0.00	24.4	24.3	-0.1	24.4	0.0	C	C	none	C	none	0.5%	No	0.2%	No
W Park Place	II	0.13	40	14.6	28.7	0.48	29.5	0.49	0.01	29.4	0.49	0.01	15.9	15.5	-0.4	15.5	-0.4	E	E	none	E	none	2.8%	No	2.4%	No
Veterans Dr	II	0.18	30	23.0	32.0	0.53	32.6	0.54	0.01	32.9	0.55	0.02	20.4	20.0	-0.4	19.8	-0.6	D	D	none	D	none	1.9%	No	2.8%	No
Apple Rd	II	0.08	30	10.7	28.2	0.47	27.9	0.47	-0.01	27.9	0.47	-0.01	9.7	9.8	0.1	9.8	0.1	F	F	none	F	none	-1.1%	No	-1.1%	No

Amstel Ave	II	0.31	28	39.9	44.2	0.74	44.1	0.74	0.00	44.1	0.74	0.00	25.6	25.6	0.0	25.6	0.0	C	C	none	C	none	-0.2%	No	-0.2%	No
Total:	**II**	**2.01**		**213.9**	**350.0**	**5.83**	**341.5**	**5.69**	**-0.14**	**333.2**	**5.55**	**-0.28**	**20.7**	**21.2**	**0.5**	**21.6**	**0.9**	**D**	**D**	**none**	**D**	**none**	**-2.4%**	**No**	**-4.8%**	**No**

SW PM | **SW PM**

Cross Street	Arterial Class	Dist (mi)	Flow Speed (mph)	Running Time (sec)	Existing (Opt.) Travel Time (sec)	Existing (Opt.) Travel Time (min)	Future (Opt.) Travel Time (sec)	Future (Opt.) Travel Time (min)	EC - Future Travel Time **Change** (min)	STI Future (Opt.) Travel Time (sec)	STI Future (Opt.) Travel Time (min)	EC - STI Future Travel Time **Change** (min)	Existing (Opt.) Arterial Speed (mph)	Future (Opt.) Arterial Speed (mph)	EC - Future Arterial Speed **Change** (mph)	STI Future (Opt.) Arterial Speed (mph)	EC - STI Future Arterial Speed **Change** (mph)	Existing (Opt.) Arterial LOS	Future (Opt.) Arterial LOS	EC - Future Arterial LOS **Change**	STI Future (Opt.) Arterial LOS	EC - STI Future Arterial LOS **Change**	**% Change in TT EC - FC**	**+5% change Yes/No**	**% Change in TT EC - STI FC**	**+5% change Yes/No**
Apple Rd	II	0.31	28	39.9	76.4	1.27	77.2	1.29	0.01	77.6	1.29	0.02	14.8	14.6	-0.2	14.6	-0.2	E	E	none	E	none	1.0%	No	1.6%	No
Veterans Dr	II	0.08	30	10.7	13.5	0.23	13.6	0.23	0.00	13.7	0.23	0.00	20.3	20.1	-0.2	20.0	-0.3	D	D	none	D	none	0.7%	No	1.5%	No
W Park Place	II	0.18	30	23.0	28.8	0.48	28.6	0.48	0.00	28.5	0.48	-0.01	22.6	22.8	0.2	22.9	0.3	C	C	none	C	none	-0.7%	No	-1.0%	No
Thorn Ln	II	0.13	30	17.0	28.9	0.48	28.8	0.48	0.00	28.6	0.48	0.00	15.8	15.9	0.1	16.0	0.2	E	E	none	E	none	-0.3%	No	-1.0%	No
Casho Mill Rd	II	0.27	40	29.9	51.3	0.86	53.8	0.90	0.04	54.2	0.90	0.05	19.1	18.2	-0.9	18.1	-1.0	D	D	none	D	none	4.9%	No	5.7%	Yes
Suburban Plaza Dr	II	0.43	40	40.5	79.6	1.33	64.2	1.07	-0.26	73.1	1.22	-0.11	19.3	23.9	4.6	21.0	1.7	D	C	+1	D	none	-19.3%	No	-8.2%	No
Interchange Blvd	II	0.38	50	32.7	49.5	0.83	50.4	0.84	0.02	50.4	0.84	0.02	27.7	27.2	-0.5	27.2	-0.5	C	C	none	C	none	1.8%	No	1.8%	No
Otts Chapel Rd	II	0.23	50	22.6	47.9	0.80	48.7	0.81	0.01	48.7	0.81	0.01	17.0	16.7	-0.3	16.7	-0.3	E	E	none	E	none	1.7%	No	1.7%	No
Total:	**II**	**2.01**		**216.3**	**375.9**	**6.27**	**365.3**	**6.09**	**-0.18**	**374.8**	**6.25**	**-0.02**	**19.2**	**19.8**	**0.6**	**19.2**	**0.0**	**D**	**D**	**none**	**D**	**none**	**-2.8%**	**No**	**-0.3%**	**No**



Overall Arterial Travel Time Change - AM Peak
Existing Conditions to Future with Short-term Improvements

>---> Increase of 5% or Less (Or Decrease in TT)

- Arterial 3 EB
- Arterial 4 EB & WB
- Arterial 5 NE

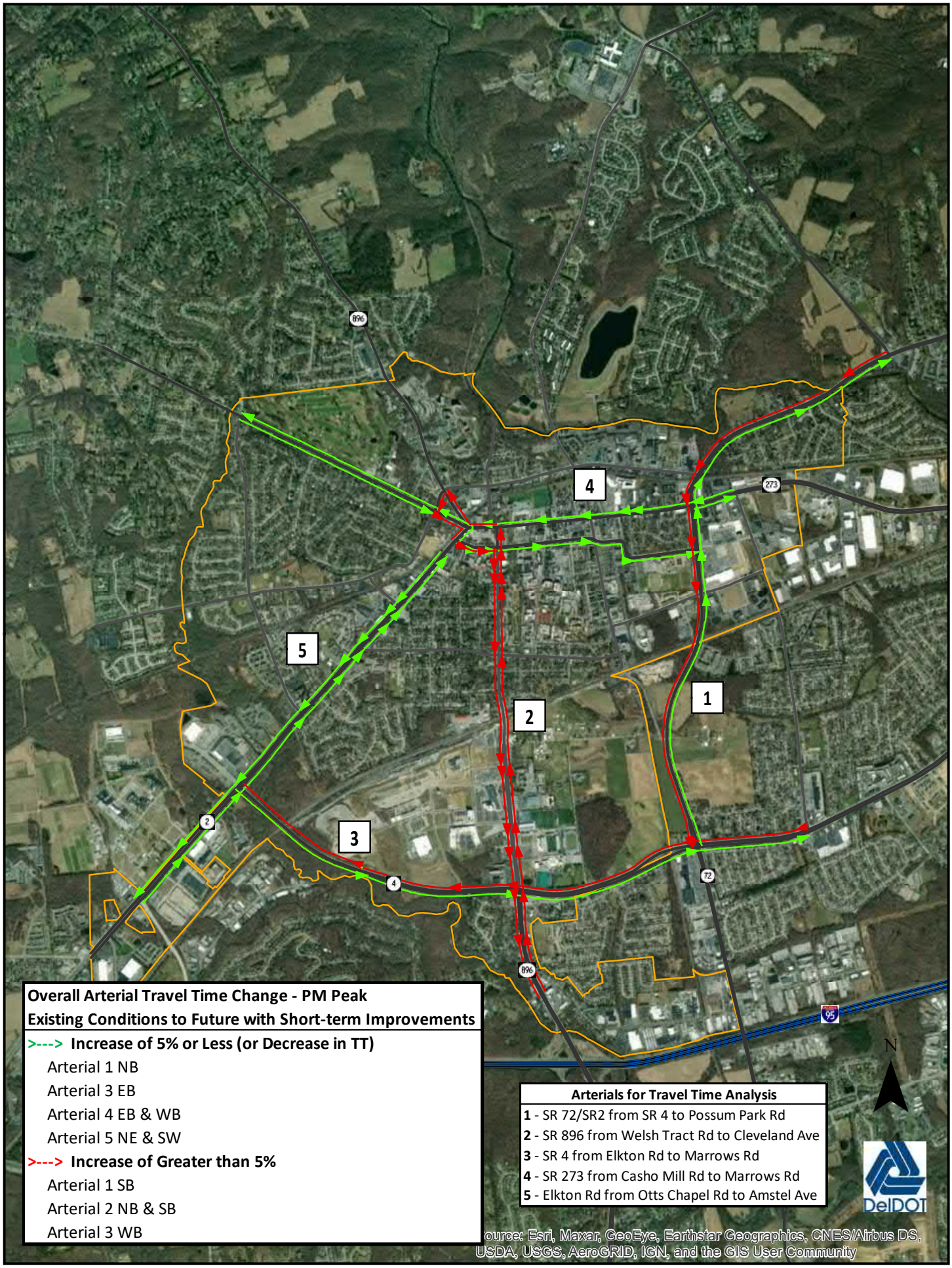
>---> Increase of Greater than 5%

- Arterial 1 NB & SB
- Arterial 2 NB & SB
- Arterial 3 WB
- Arterial 5 SW

Arterials for Travel Time Analysis

1 - SR 72/SR2 from SR 4 to Possum Park Rd
2 - SR 896 from Welsh Tract Rd to Cleveland Ave
3 - SR 4 from Elkton Rd to Marrows Rd
4 - SR 273 from Casho Mill Rd to Marrows Rd
5 - Elkton Rd from Otts Chapel Rd to Amstel Ave

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Overall Arterial Travel Time Change - PM Peak
Existing Conditions to Future with Short-term Improvements
>---> Increase of 5% or Less (or Decrease in TT)
Arterial 1 NB
Arterial 3 EB
Arterial 4 EB & WB
Arterial 5 NE & SW
>---> Increase of Greater than 5%
Arterial 1 SB
Arterial 2 NB & SB
Arterial 3 WB
Arterials for Travel Time Analysis
1 - SR 72/SR2 from SR 4 to Possum Park Rd
2 - SR 896 from Welsh Tract Rd to Cleveland Ave
3 - SR 4 from Elkton Rd to Marrows Rd
4 - SR 273 from Casho Mill Rd to Marrows Rd
5 - Elkton Rd from Otts Chapel Rd to Amstel Ave
1
2
3
4
5
896
273
72
2
4
95
N
DelDOT
ource: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Newark TID Transportation Improvement Ideas

Short-term improvements scenario

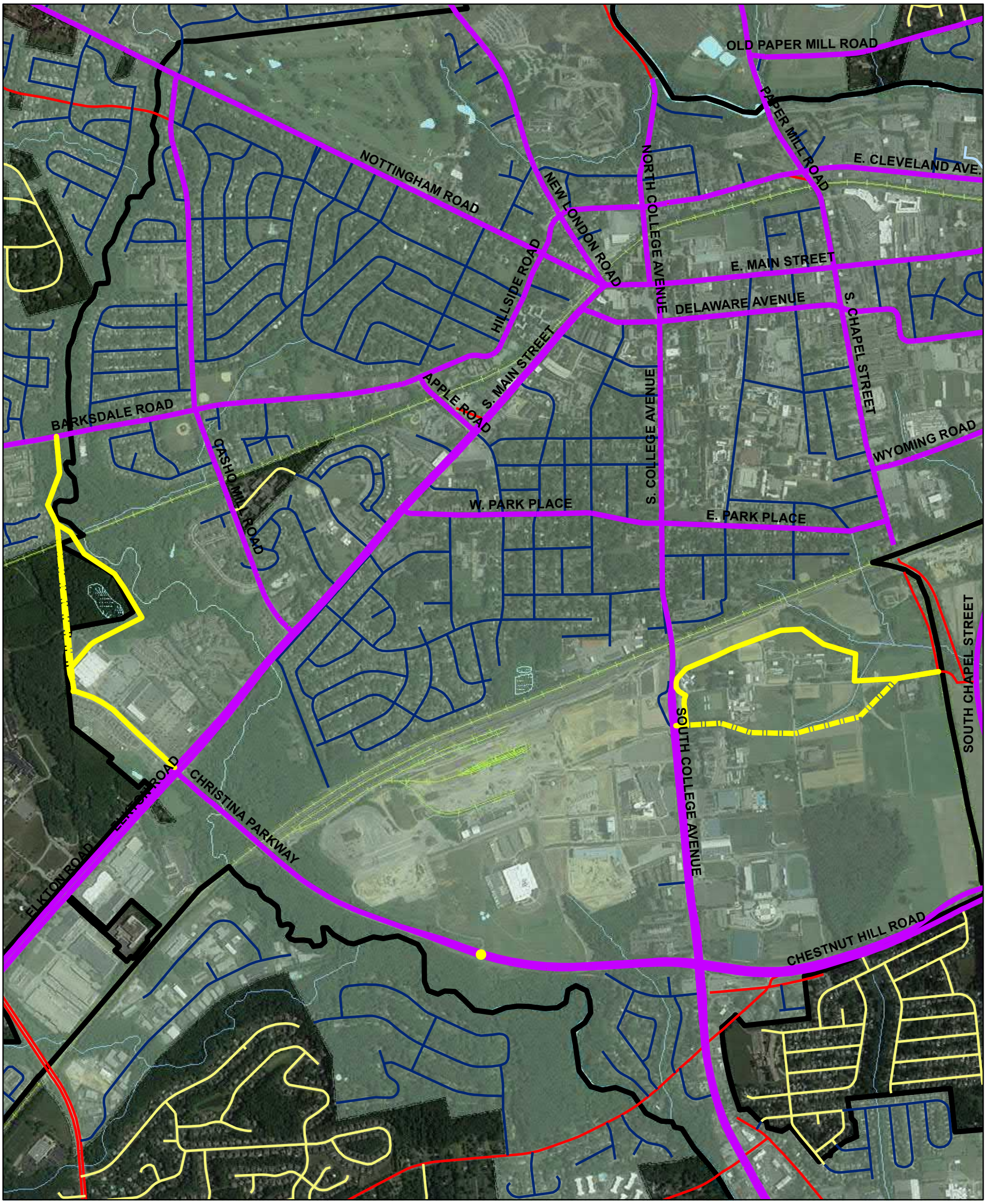
- **Elkton Rd improvements from Maryland line to Casho Mill Rd (under construction as of spring 2020):** Reconstruct concrete pavement and widen to provide a third eastbound through lane between Otts Chapel Road and SR 4. Provide for upgraded bicycle and pedestrian facilities, including a 10' wide multi-use path. (included in modeling but not TID-CTP)
- **SR 4, Elkton Road to SR 896, improvements (construction to start 2025):** Reconstruct concrete pavement and widen to provide two continuous lanes on SR 4 in both directions. Widen existing structures over Christina River and railroad. Improve shared-use path on south side so bike LTS is 1 or 2.
- **SR 896 improvements, between Old Chestnut Hill Rd. and Marvin Dr:** add additional NB and SB third through lanes; modify median curb to increase left turn lane storage to 600 ft at Old Chestnut Hill Rd. Upgrade existing curb ramps/pedestrian crossings at SR896 and SR4 intersection to shared-use path crossings. Replace sidewalk between SR4 and Marvin Dr. with shared-use path.

Long-term improvements scenario

- **S College Avenue and Welsh Tract Rd intersection:** Widen EB Welsh Tract Rd so right turn lane onto S College Avenue can be lengthened. Add a WB left turn lane and turn shared through and left to only a through lane. Lengthen SB left turn lane. Widen SR896 so that NB left turn lane can be lengthened.
- **S College Avenue and Inspiration Blvd./Mopar Drive intersection:** restripe NB S. College Avenue to add acceleration lane for WB right-turn from Mopar Drive.
- **S College Avenue and West Park Place intersection:** model NB approach with shared left and through instead of shared through and right. Alternatively, add NB right turn lane.
- **SR 2/Elkton Rd & SR 4/Christina Pkwy intersection:** Widen Suburban Plaza approach to add a second SB through lane.
- **Paper Mill Rd & Thompson Station Rd/Possum Park Rd intersection:** Extend WB left turn lane.
- **SR 273/Newark Christiana Rd & Marrows Rd intersection:** Extend NB right turn lane
- **SR 72/Library Ave & SR 4/Chestnut Hill Rd intersection (overall LOS F in PM):** Extend EB left turn lanes; Widen so that two SB through lanes extend back to Kensington Lane.
- **SR72/Library Ave & Wyoming Rd. intersection:** Extend EB left turn lane; widen to add a second WB through lane.
- **S Chapel St. and Wyoming Rd. intersection (overall LOS F in PM):** Widen to add SB right turn lane.
- **New roadway connection #1, from Suburban Plaza/SR4 north to Barksdale Rd.:** This is part of the previously known west connector. Other than Suburban Plaza, the rest of the roadway is proposed to run through parcels owned by the City of Newark. There is a stream corridor and trail, and wetlands, to avoid. Build with shared-use path on at least one side.
- **New roadway connection #2, from S. College Avenue to S. Chapel Street:** This is a proposed connection through the University of Delaware Agriculture campus. It proposes to use the

easternmost part of Farm Lane but then go around the campus buildings to minimize impacts to the campus. An additional east/west roadway connection will be needed to accommodate the 2045 land use and reduce delays on both SR4 and Park Place and Wyoming Road. Build with shared-use path on at least one side.

City of Newark TID
General Locations of Proposed New Roadway Connections



0.350.175 0 0.35 Miles

Map created 10/22/2020
Sarah C. Coakley, Principal Planner

Legend

- Newark_lower_speed_connections
- Newark_higher_speed_connections
- Newark_Transportation_Improvements_Intersections
- Newark_TID_segments
- State Road Maintained by State
- Suburban Road Maintained by State
- Municipal Road Maintained by State
- Municipal Road Maintained by Municipal Forces
- State Road Maintained by DRBA Forces
- State Road Maintained by Other Forces
- Municipal Road Maintained by Other Forces
- Suburban Road Maintained by Other Forces
- Newark_TID_boundary
- CityOfNewark_Boundary
- MajorRivers
- FlowLine
- Water
- Marsh
- Rail Lines

DelDOT Regional Systems Planning

N