

William Hilton Parkway Gateway Corridor Independent Review Advisory Committee Meeting

June 12th, 2024



Agenda

- ☐ Update on Project Progress
- ☐ Presentation of Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1 from Task 3)
- ☐ Questions

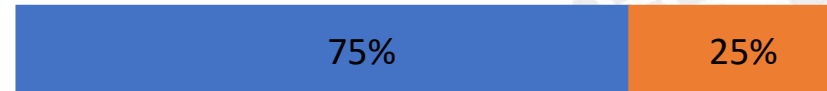
Update on Project Progress

(Key Tasks Completed & Continuing to Work on Since Last Meeting)

- ✓ Completed evaluations RE: impacts to Task 4 intersections (assuming implementation of Modified Alternative 1 from Task 3)
- ✓ Continue traffic analyses and modeling (Synchro/VISSIM) to determine proposed mitigation strategies for 2045 Build Year conditions at intersections downstream of CIP

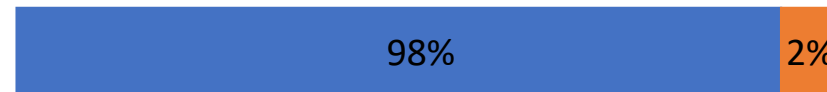
Update on Overall Project Progress (as of 6/10/24)

Overall ~75% Complete



- **Task #1: Project Initiation and Coordination**

- ~98% Complete



- Key Subtasks On-Going:

- Remaining scheduled meetings with Town staff

Update on Overall Project Progress (as of 6/10/24)

Task #2: Review of Travel Demand Model & Evaluation of 2023 Existing Operating Conditions (Entire Study Area)

- 100% Complete

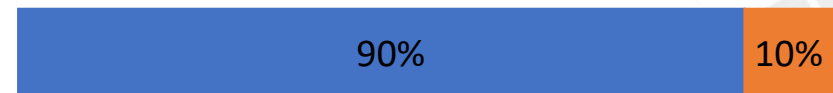


100%

Update on Overall Project Progress (as of 6/10/24)

- Task #3: Traffic Model and Operational Update – Modified Original Project Study Area

- ~90% Complete



- Key Subtasks Forthcoming:
 - Prepare for and present results of Final Summary of Findings Memo RE: Task #3 Alternatives Analysis to be presented to Town Council (6/17 & 6/18)

Update on Overall Project Progress (as of 6/10/24)

- Task #4: Traffic Model and Operational Update – Entire Project Study Area

- ~50% Complete



- Key Subtasks On-Going:

- Continue traffic analyses and modeling (Synchro/VISSIM) to determine proposed mitigation strategies for 2045 Build Year conditions at intersections downstream of CIP

- Key Subtasks Forthcoming:

- Prepare Draft Summary of Findings memo RE: Task 4 analyses (Task 4.4)
- Presentation of Task 4 findings to Town Council (date TBD) (Task 4.5)

Update on Overall Project Progress (as of 6/10/24)

- Task #5: Final Report
 - Will commence immediately following Task 4

Review Topics

- Independent Study Goals
- Reported Results Include the Following:
 - Level of Service (LOS) A - F
 - Delay (seconds)
 - 95th Percentile Queue Length (feet)
 - Specifies a queue that is typically exceeded only once or twice during the day
 - Maximum Queue Length (feet)
 - Lane Capacity

Level of Service	Control Delay per Vehicle (sec/veh)	
	Signalized	Unsignalized
A	≤ 10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Review Topics

- Traffic Volumes:
 - Hourly traffic volumes collected on March 22, 2023 were used for all scenarios
 - Corridor studies often reference the 30th highest day for traffic volumes to ensure that the volumes used in the analysis responsibly reflect peak conditions, while not over- or under-estimating the traffic volumes.
 - Historical traffic data was obtained from SCDOT from the most recent 365 days. Based on the data, it was determined that March 30, 2023 was the 30th highest day out of the year for traffic volumes. The counts collected on March 22, 2023 were adjusted to align with the estimated traffic volumes on March 30, 2023.
 - The volumes used in the study were provided during the Committee Meeting on March 27, 2024 as well as in the Corridor Alternatives Analysis Memorandum submitted on May 3, 2024. Excerpts are provided in the following slides.
- Stress Testing / Sensitivity Analysis
 - Per the scope of services, only the 2023 existing conditions and 2045 future year under one growth rate is to be evaluated. If the recommended improvements hold in 2045, then it is assumed that they would also work in the years 2025, 2030, 2035, and 2040 as those years would have lower traffic volumes than 2045.

2023 Existing Traffic Volumes



AM Peak Hour Volumes PM Peak Hour Volumes

<div>9</div> <div> <div> <div>212</div> <div>0</div> <div>45</div> </div> <div> <div>Squire Pope Rd</div> <div> <div>43</div> <div>1425</div> <div>2</div> </div> </div> </div>	<div> <div>US 278</div> <div> <div>156</div> <div>2620</div> <div>2</div> </div> </div>
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<div>10</div> <div> <div>76</div> </div>	<div> <div>Old Wildhorse Rd</div> <div> <div>20</div> <div>1394</div> </div> </div>
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<div>11</div> <div> <div> <div>12</div> <div>70</div> <div>127</div> </div> <div> <div>US 278</div> <div> <div>43</div> <div>2481</div> <div>146</div> </div> </div> </div>	<div> <div>Spanish Wells Rd</div> <div> <div>56</div> <div>1281</div> <div>71</div> </div> </div>
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<div>12</div> <div> <div> <div>92</div> <div>179</div> <div>212</div> </div> <div> <div>US 278</div> <div> <div>154</div> <div>1527</div> <div>6</div> </div> </div> </div>	<div> <div>Gumtree Rd</div> <div> <div>189</div> <div>775</div> <div>193</div> </div> </div>
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<div>9</div> <div> <div> <div>341</div> <div>2</div> <div>41</div> </div> <div> <div>Squire Pope Rd</div> <div> <div>57</div> <div>2687</div> <div>2</div> </div> </div> </div>	<div> <div>US 278</div> <div> <div>222</div> <div>1992</div> <div>29</div> </div> </div>
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<div>10</div> <div> <div>10</div> </div>	<div> <div>Old Wildhorse Rd</div> <div> <div>64</div> <div>2736</div> </div> </div>
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<div>11</div> <div> <div> <div>33</div> <div>78</div> <div>62</div> </div> <div> <div>US 278</div> <div> <div>51</div> <div>1869</div> <div>115</div> </div> </div> </div>	<div> <div>Spanish Wells Rd</div> <div> <div>84</div> <div>2508</div> <div>31</div> </div> </div>
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<div>12</div> <div> <div> <div>107</div> <div>183</div> <div>242</div> </div> <div> <div>US 278</div> <div> <div>125</div> <div>1065</div> <div>23</div> </div> </div> </div>	<div> <div>Gumtree Rd</div> <div> <div>326</div> <div>1542</div> <div>195</div> </div> </div>
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2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



AM Peak Hour Volumes PM Peak Hour Volumes

9	<div><div>240 ↓</div><div>0 ↓</div><div>51 ↓</div><div>Squire Pope Rd</div></div> <div><div>49 ↑</div><div>1612 ↑</div><div>2 ↑</div><div>Rd</div></div>
US 278	<div><div>176 →</div><div>2963 →</div><div>2 ↓</div></div> <div><div>2 ←</div><div>0 ←</div><div>6 ←</div></div>

9	<div><div>386 ↓</div><div>2 ↓</div><div>46 ↓</div><div>Squire Pope Rd</div></div> <div><div>64 ↑</div><div>3039 ↑</div><div>2 ↑</div><div>Rd</div></div>
US 278	<div><div>251 →</div><div>2253 →</div><div>33 ↓</div></div> <div><div>2 ←</div><div>28 ←</div><div>2 ←</div></div>

10	<div><div>86 ←</div></div> <div><div>23 ↑</div><div>1577 ↑</div><div>Old Wild Horse Rd</div></div>
US 278	<div><div>3020 →</div></div> <div></div>

10	<div><div>11 ←</div></div> <div><div>73 ↑</div><div>3094 ↑</div><div>Old Wild Horse Rd</div></div>
US 278	<div><div>2301 →</div></div> <div></div>

11	<div><div>14 ↓</div><div>79 ↓</div><div>144 ↓</div><div>Spanish Wells Rd</div></div> <div><div>63 ↑</div><div>1449 ↑</div><div>80 ↑</div><div>Rd</div></div>
US 278	<div><div>49 →</div><div>2806 →</div><div>165 ↓</div></div> <div><div>137 ←</div><div>49 ←</div><div>137 ←</div></div>

11	<div><div>37 ↓</div><div>88 ↓</div><div>70 ↓</div><div>Spanish Wells Rd</div></div> <div><div>95 ↑</div><div>2837 ↑</div><div>35 ↑</div><div>Rd</div></div>
US 278	<div><div>58 →</div><div>2113 →</div><div>130 ↓</div></div> <div><div>293 ←</div><div>53 ←</div><div>68 ←</div></div>

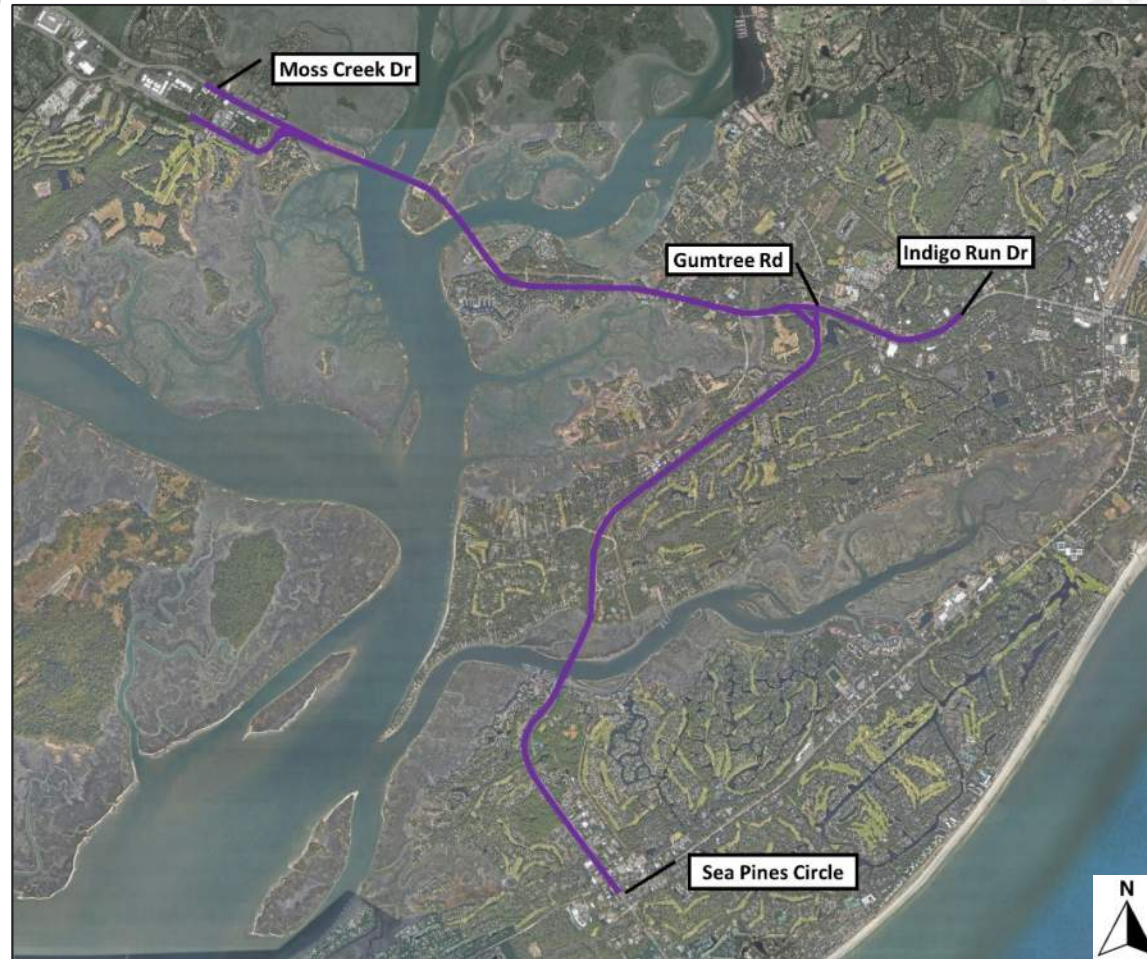
12	<div><div>104 ↓</div><div>202 ↓</div><div>240 ↓</div><div>Gumtree Rd</div></div> <div><div>214 ↑</div><div>876 ↑</div><div>218 ↑</div><div>Rd</div></div>
US 278	<div><div>174 →</div><div>1727 →</div><div>7 ↓</div></div> <div><div>9 ←</div><div>163 ←</div><div>328 ←</div></div>

12	<div><div>121 ↓</div><div>207 ↓</div><div>274 ↓</div><div>Gumtree Rd</div></div> <div><div>369 ↑</div><div>1745 ↑</div><div>220 ↑</div><div>Rd</div></div>
US 278	<div><div>141 →</div><div>1204 →</div><div>26 ↓</div></div> <div><div>253 ←</div><div>234 ←</div><div>313 ←</div></div>

Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

- Lochmueller previously analyzed four alternatives intended to improve the operating conditions along US 278 between Moss Creek Dr and Gumtree Rd.
- After review of the findings and discussion with SCDOT, Lochmueller was directed by the Town of Hilton Head Island to pursue Alternative 1: SCDOT Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at US 278 at Squire Pope Rd.
- As a next step, Lochmueller evaluated the impacts the modified Alternative 1 would have on the entire project study area and determined what, if any, improvements should be made to accommodate the 2045 forecasted traffic.

Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

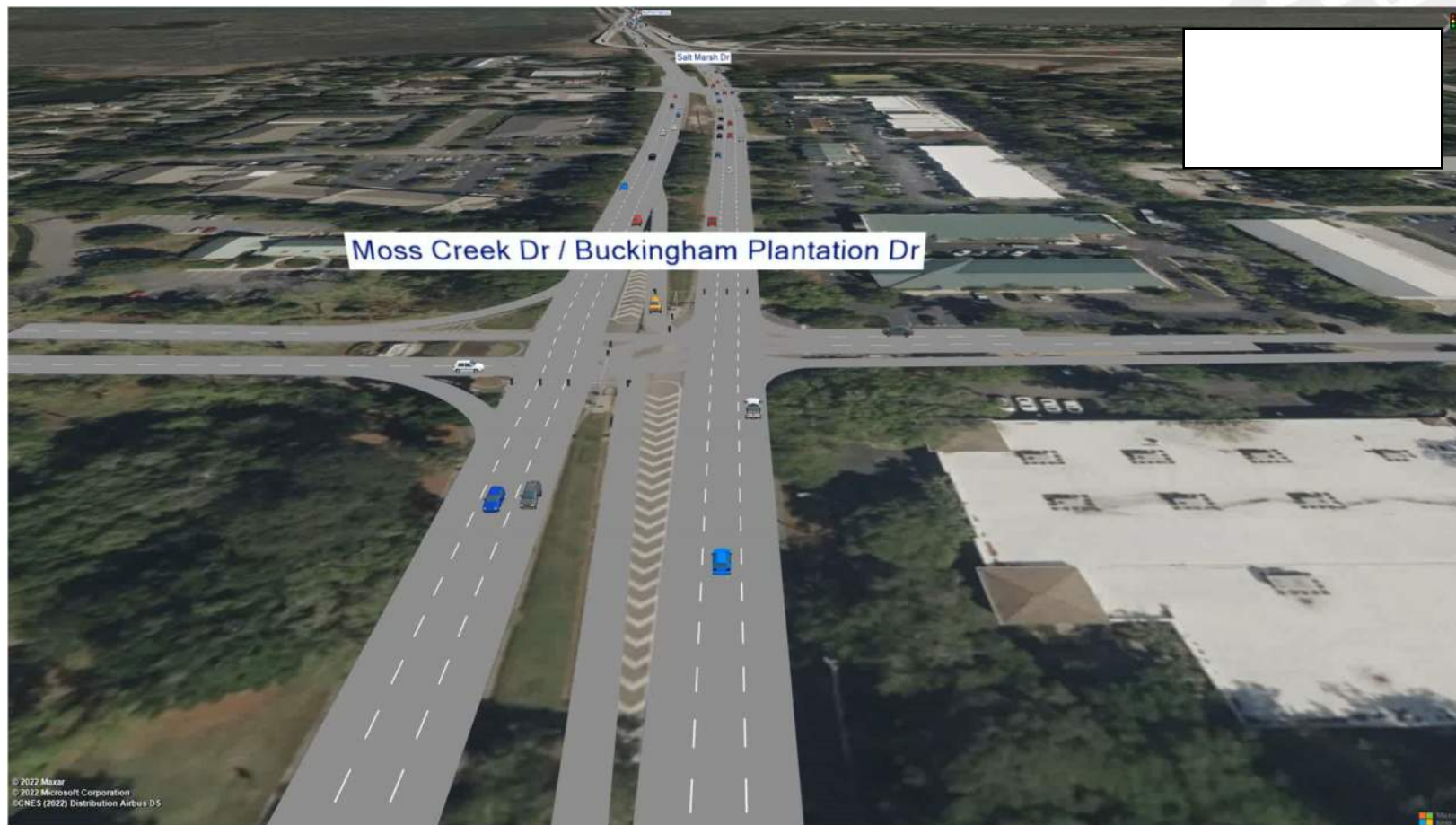


Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

- VISSIM travel time results:
 - Under the 2045 No Build scenario, it is expected that it would take approximately 26.3 minutes to travel eastbound along Hilton Parkway between Moss Creek and Indigo Run during the AM peak hour. It is expected that the travel time will be reduced to approximately 10.5 minutes under the modified Alternative 1.
 - Under the 2045 No Build scenario, it is expected that it would take approximately 25.7 minutes to travel westbound along Hilton Parkway between Moss Creek and Indigo Run during the PM peak hour. It is expected that the travel time will be reduced to approximately 10.3 minutes under the modified Alternative 1.

Corridor		2045 No Build Simulated travel time (secs)		2045 Modified Alternative 1 Simulated Travel Time (secs)		% Difference	
		AM	PM	AM	PM	AM	PM
Hilton Parkway between Moss Creek and Indigo Run	EB	1579	642	628	631	-60.23%	-1.71%
	WB	584	1544	597	616	2.23%	-60.10%
Hilton Parkway @Moss Creek to Cross Island Parkway @Sea Pine	SB	1984	873	1387	874	-30.09%	0.11%
	NB	823	2465	848	904	3.04%	-63.33%

Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)



Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)



Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

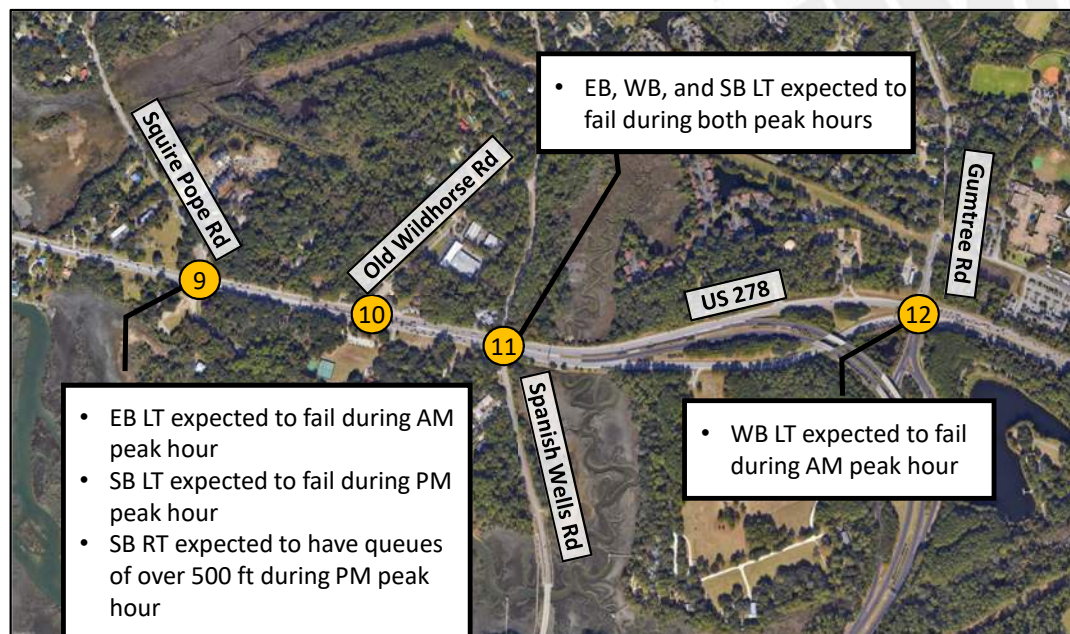


Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)



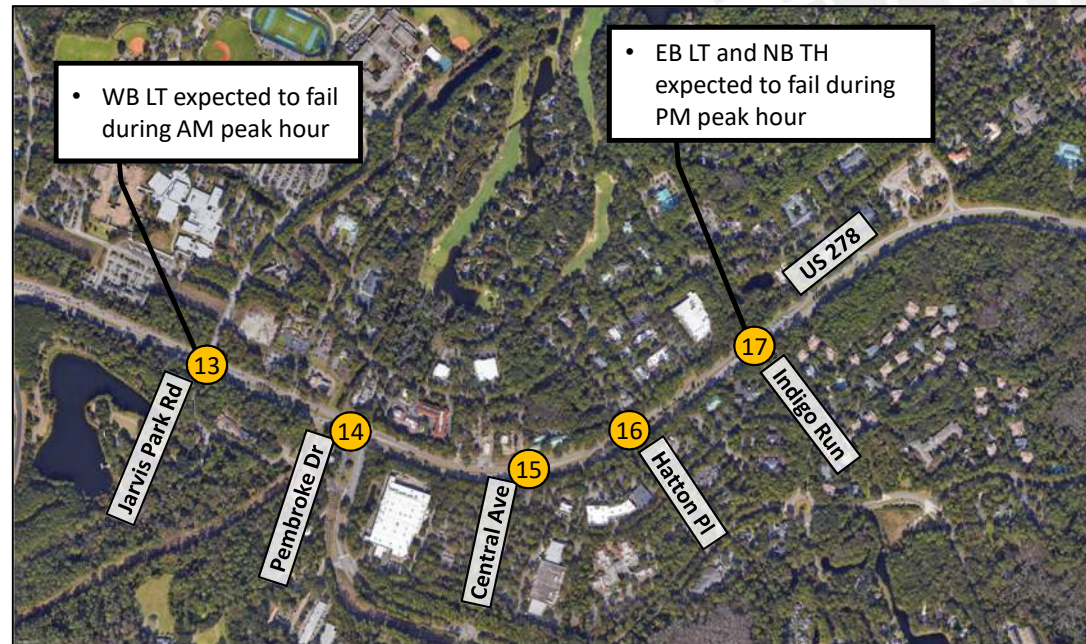
Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & Hilton Pkwy (signal)		
Overall Intersection	A (8.4)	B (11.8)
Eastbound Approach	A (7.0) [102] {697}	B (11.3) [124] {484}
Westbound Approach	A (8.2) [28] {237}	A (5.8) [36] {524}
Northbound Approach	C (30.4) [<25] {56}	E (67.0) [<25] {109}
Southbound Approach	C (22.6) [<25] {170}	D (51.1) [128] {521}
10: Old Wild Horse Rd & Hilton Pkwy (un signalized)		
Southbound Approach	A (4.7) [<25] {56}	B (12.5) [<25] {32}
11: Spanish Wells Rd/Wild Horse Rd & Hilton Pkwy (signal)		
Overall Intersection	B (16.6)	C (23.8)
Eastbound Approach	B (11.0) [106] {998}	C (27.9) [198] {861}
Westbound Approach	B (11.2) [56] {248}	B (11.9) [84] {779}
Northbound Approach	D (48.6) [45] {135}	E (65.2) [77] {196}
Southbound Approach	E (75.9) [74] {292}	E (60.6) [49] {197}
12: Guntree Rd & Hilton Pkwy (signal)		
Overall Intersection	D (37.1)	D (43.8)
Eastbound Approach	C (33.4) [164] {682}	E (57.1) [184] {562}
Westbound Approach	D (40.8) [130] {369}	D (35.4) [236] {786}
Northbound Approach	C (26.6) [61] {264}	D (37.3) [98] {327}
Southbound Approach	D (50.2) [93] {302}	D (52.7) [119] {453}



Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
13: Jarvis Park Rd/Wilborn Rd & Hilton Pkwy (signal)		
Overall Intersection	C (26.7)	B (18.8)
Eastbound Approach	C (25.4) [439] {1480}	B (16.3) [103] {735}
Westbound Approach	C (21.6) [101] {686}	B (18.2) [295] {1202}
Northbound Approach	E (68.6) [43] {170}	F (87.6) [56] {191}
Southbound Approach	D (39.1) [66] {228}	B (19.2) [29] {112}
14: Pembroke Dr/Museum St & Hilton Pkwy (signal)		
Overall Intersection	C (23.1)	C (24.5)
Eastbound Approach	B (18.9) [403] {1224}	B (17.2) [128] {910}
Westbound Approach	C (20.9) [75] {532}	C (21.6) [171] {903}
Northbound Approach	D (53.1) [71] {257}	E (60.1) [92] {299}
Southbound Approach	C (30.4) [<25] {89}	D (40.3) [<25] {111}
15: Central Ave & Hilton Pkwy (un signalized)		
Eastbound Left Turn	A (7.1) [<25] {<25}	C (19.3) [<25] {25}
Westbound Left Turn	C (24.1) [<25] {26}	A (9.5) [<25] {<25}
Northbound Right Turn	C (16.5) [<25] {27}	B (13.9) [<25] {32}
Southbound Right Turn	B (12.5) [<25] {45}	C (18.3) [<25] {38}
16: Hatton Pl/Merchant St & Hilton Pkwy (un signalized)		
Northbound Right Turn	A (9.5) [<25] {28}	A (7.8) [<25] {63}
Southbound Right Turn	B (11.3) [<25] {36}	C (22.9) [<25] {41}
17: Indigo Run Dr/Whooping Crane Way & Hilton Pkwy (signal)		
Overall Intersection	C (25.1)	D (36.1)
Eastbound Approach	C (21.1) [134] {846}	C (33.6) [128] {751}
Westbound Approach	B (17.3) [53] {359}	C (28.0) [207] {887}
Northbound Approach	E (56.6) [33] {114}	E (66.9) [65] {268}
Southbound Approach	D (47.7) [56] {192}	E (57.6) [77] {264}



*Highlighted cells indicate that the maximum queues are expected to extend into the next intersection

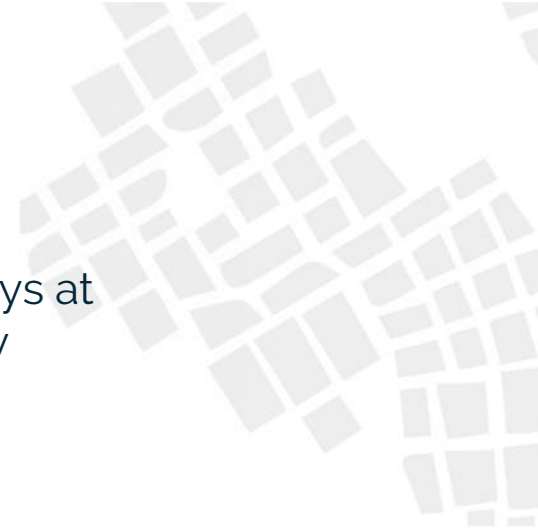
Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	C (29.0)	B (19.0)
Eastbound Approach	D (36.9) [1380] {1512}	B (15.9) [142] {823}
Westbound Approach	B (12.9) [39] {249}	B (15.8) [85] {539}
Northbound Approach	C (26.6) [<25] {105}	D (39.5) [65] {263}
Southbound Approach	D (35.7) [34] {151}	C (25.5) [37] {140}
28: Palmetto Bay Rd & Dunnagans Alley (un signalized)		
Westbound Left Turn	F (1,033.8) [80] {183}	F (101.3) [<25] {99}
Westbound Right Turn	F (91.9) [109] {217}	B (13.3) [35] {134}
Southbound Left Turn	C (22.0) [278] {513}	B (13.7) [29] {465}
29: Palmetto Bay Rd & Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	F (53.4)	F (79.2)
Eastbound Approach	F (314.9) [809] {838}	F (179.8) [805] {838}
Westbound Approach	B (14.0) [56] {420}	F (189.7) [1644] {1658}
Northbound Approach	A (4.1) [<25] {209}	F (52.9) [463] {788}
Southbound Approach	C (18.5) [307] {461}	A (9.1) [111] {460}



Next Steps

- Evaluate potential improvements to mitigate long queues and delays at intersections downstream of Gumtree Rd and Cross Island Parkway
 - Improvements may include:
 - Reconfiguring intersections and turn lanes to improve efficiency
 - Addition of lanes to improve capacity
 - Sea Pines roundabout improvements



QUESTIONS?



<https://www.islandpacket.com/news/local/traffic/article235209867.html>

APPENDIX



<https://www.islandpacket.com/news/local/traffic/article235209867.html>

2045 Modified Alternative 1 Results (VISSIM)

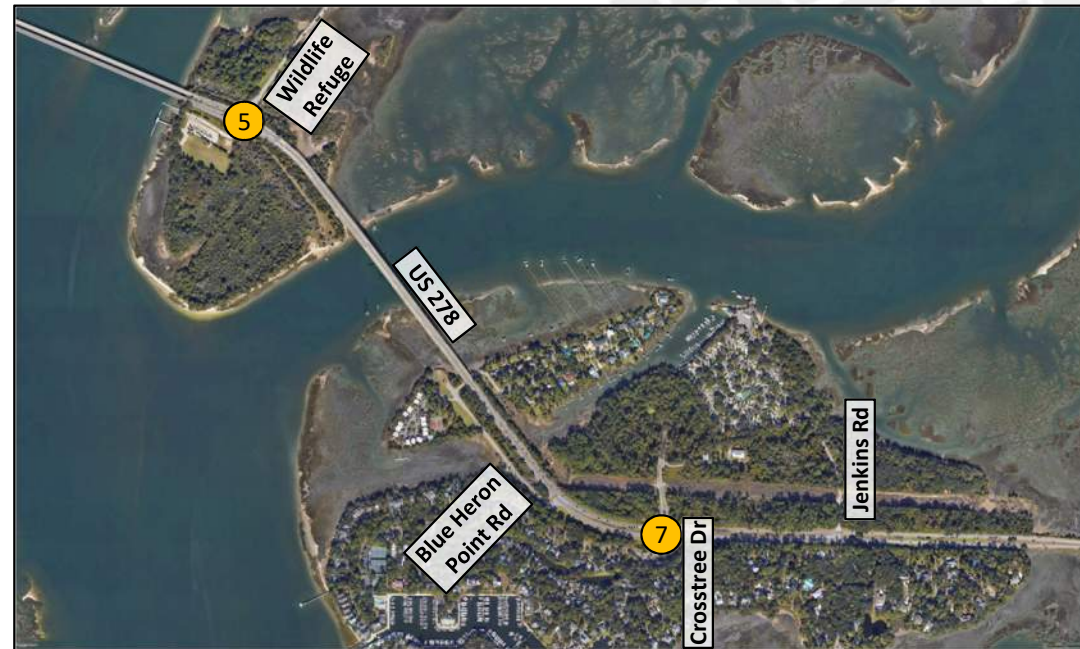
No Improvements East of Gumtree Rd

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (17.0)	B (17.3)
Eastbound Approach	B (19.6) [63] {351}	C (20.4) [50] {242}
Westbound Approach	B (12.9) [<25] {188}	B (16.0) [51] {406}
Northbound Approach	B (14.3) [<25] {74}	B (14.2) [<25] {52}
Southbound Approach	A (6.6) [<25] {57}	A (9.6) [<25] {91}
2: Buckingham Plantation Dr/Moss Creek Dr & Hilton Pkwy (signal)		
Overall Intersection	B (15.8)	B (19.7)
Eastbound Approach	B (14.6) [59] {389}	B (15.2) [51] {313}
Westbound Approach	B (15.7) [41] {286}	C (21.5) [127] {700}
Northbound Approach	B (20.0) [<25] {159}	D (37.5) [<25] {104}
Southbound Approach	C (22.8) [<25] {84}	C (26.3) [<25] {116}
3: Salt Marsh Dr/Moss Creek Village & Hilton Pkwy (un signalized)		
Eastbound Left Turn	A (8.0) [<25] {<25}	C (17.1) [<25] {50}
Westbound Left Turn	A (8.7) [<25] {<25}	A (8.3) [<25] {46}
Northbound Approach	B (11.3) [<25] {65}	B (10.7) [<25] {66}
Southbound Approach	A (8.6) [<25] {79}	B (10.5) [<25] {80}
4: Fording Island Rd Ext & Hilton Pkwy (un signalized)		
Westbound Left Turn	C (16.7) [<25] {<25}	C (15.6) [<25] {32}
Northbound Approach	B (13.3) [<25] {37}	B (12.1) [<25] {43}



2045 Modified Alternative 1 Results (VISSIM) No Improvements East of Guntree Rd

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
5: Boat Landing Driveway/Wildlife Refuge Driveway & Hilton Pkwy (un signalized)		
Northbound Right Turn	A (7.7) [<25] {<25}	A (6.4) [<25] {<25}
Southbound Right Turn	No volumes observed	C (16.2) [<25] {25}
6: Blue Heron Point Rd & Hilton Pkwy (un signalized)		
	Intersection combined with Crosstree Dr	
7: Crosstree Dr (Windmill Harbour) & Hilton Pkwy (signal)		
Overall Intersection	A (9.5)	A (7.3)
Eastbound Approach	A (8.9) [80] {818}	A (9.2) [58] {581}
Westbound Approach	A (8.6) [36] {330}	A (3.3) [31] {188}
Northbound Approach	D (42.5) [<25] {124}	E (58.1) [61] {244}
Southbound Approach	D (50.9) [<25] {92}	D (44.9) [<25] {101}
8: Jenkins Rd & Hilton Pkwy (un signalized)		
	Intersection combined with Crosstree Dr	



Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & Hilton Pkwy (signal)		
Overall Intersection	A (8.4)	B (11.8)
Eastbound Approach	A (7.0) [102] {697}	B (11.3) [124] {484}
Westbound Approach	A (8.2) [28] {237}	A (5.8) [36] {524}
Northbound Approach	C (30.4) [<25] {56}	E (67.0) [<25] {109}
Southbound Approach	C (22.6) [<25] {170}	D (51.1) [128] {521}
10: Old Wild Horse Rd & Hilton Pkwy (un signalized)		
Southbound Approach	A (4.7) [<25] {56}	B (12.5) [<25] {32}
11: Spanish Wells Rd/Wild Horse Rd & Hilton Pkwy (signal)		
Overall Intersection	B (16.6)	C (23.8)
Eastbound Approach	B (11.0) [106] {998}	C (27.9) [198] {861}
Westbound Approach	B (11.2) [56] {248}	B (11.9) [84] {779}
Northbound Approach	D (48.6) [45] {135}	E (65.2) [77] {196}
Southbound Approach	E (75.9) [74] {292}	E (60.6) [49] {197}
12: Gumtree Rd & Hilton Pkwy (signal)		
Overall Intersection	D (37.1)	D (43.8)
Eastbound Approach	C (33.4) [164] {682}	E (57.1) [184] {562}
Westbound Approach	D (40.8) [130] {369}	D (35.4) [236] {786}
Northbound Approach	C (26.6) [61] {264}	D (37.3) [98] {327}
Southbound Approach	D (50.2) [93] {302}	D (52.7) [119] {453}



Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
13: Jarvis Park Rd/Wilborn Rd & Hilton Pkwy (signal)		
Overall Intersection	C (26.7)	B (18.8)
Eastbound Approach	C (25.4) [439] {1480}	B (16.3) [103] {735}
Westbound Approach	C (21.6) [101] {686}	B (18.2) [295] {1202}
Northbound Approach	E (68.6) [43] {170}	F (87.6) [56] {191}
Southbound Approach	D (39.1) [66] {228}	B (19.2) [29] {112}
14: Pembroke Dr/Museum St & Hilton Pkwy (signal)		
Overall Intersection	C (23.1)	C (24.5)
Eastbound Approach	B (18.9) [403] {1224}	B (17.2) [128] {910}
Westbound Approach	C (20.9) [75] {532}	C (21.6) [171] {903}
Northbound Approach	D (53.1) [71] {257}	E (60.1) [92] {299}
Southbound Approach	C (30.4) [<25] {89}	D (40.3) [<25] {111}
15: Central Ave & Hilton Pkwy (un signalized)		
Eastbound Left Turn	A (7.1) [<25] {<25}	C (19.3) [<25] {25}
Westbound Left Turn	C (24.1) [<25] {26}	A (9.5) [<25] {<25}
Northbound Right Turn	C (16.5) [<25] {27}	B (13.9) [<25] {32}
Southbound Right Turn	B (12.5) [<25] {45}	C (18.3) [<25] {38}
16: Hatton Pl/Merchant St & Hilton Pkwy (un signalized)		
Northbound Right Turn	A (9.5) [<25] {28}	A (7.8) [<25] {63}
Southbound Right Turn	B (11.3) [<25] {36}	C (22.9) [<25] {41}
17: Indigo Run Dr/Whooping Crane Way & Hilton Pkwy (signal)		
Overall Intersection	C (25.1)	D (36.1)
Eastbound Approach	C (21.1) [134] {846}	C (33.6) [128] {751}
Westbound Approach	B (17.3) [53] {359}	C (28.0) [207] {887}
Northbound Approach	E (56.6) [33] {114}	E (66.9) [65] {268}
Southbound Approach	D (47.7) [56] {192}	E (57.6) [77] {264}



2045 Modified Alternative 1 Results (VISSIM)

No Improvements East of Gumtree Rd

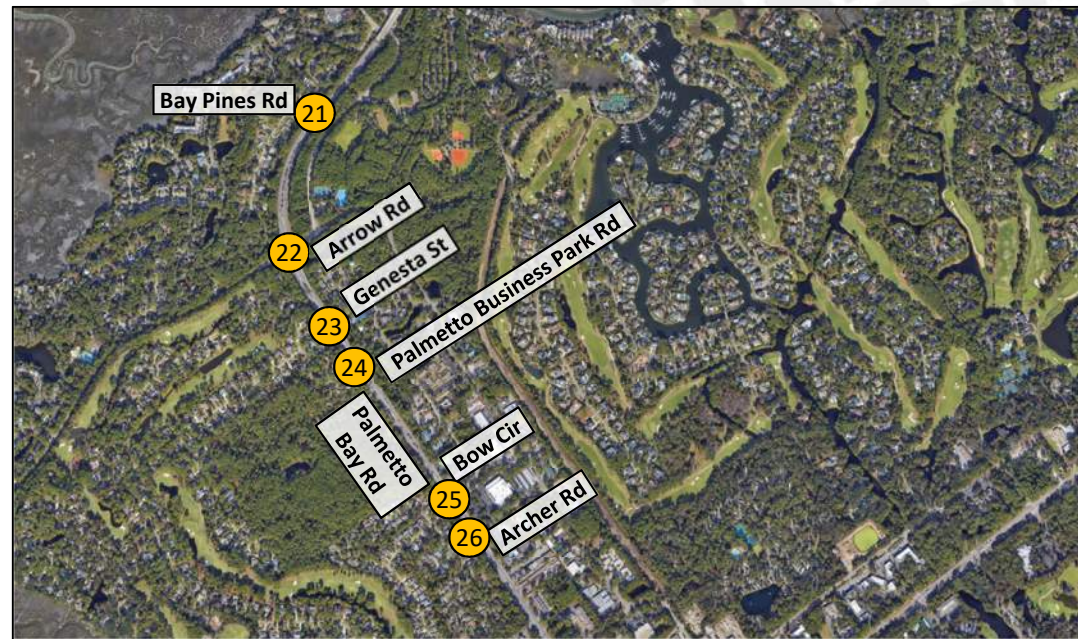
Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un signalized)		
Eastbound Approach	B (11.4) [<25] {45}	B (10.9) [<25] {69}
19: Cross Island Pkwy SB Ramp & Marshland Rd (un signalized)		
Westbound Left Turn	A (4.5) [<25] {63}	A (2.4) [<25] {70}
Southbound Left Turn	A (6.1) [<25] {85}	A (8.7) [<25] {127}
Southbound Right Turn	A (9.0) [<25] {51}	B (12.2) [<25] {94}
20: Cross Island Pkwy NB Ramp & Marshland Rd (un signalized)		
Eastbound Left Turn	A (1.6) [<25] {49}	A (1.5) [<25] {<25}
Northbound Left Turn	B (12.1) [<25] {76}	D (27.7) [44] {227}
Northbound Right Turn	A (6.1) [<25] {101}	A (7.5) [61] {252}



2045 Modified Alternative 1 Results (VISSIM)

No Improvements East of Gumtree Rd

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
21: Palmetto Bay Rd & Bay Pines Rd (un signalized)		
Eastbound Left Turn	No volumes observed	E (47.6) [<25] {40}
Eastbound Right Turn	D (29.7) [<25] {41}	C (17.8) [<25] {38}
Northbound Left Turn	F (91.9) [<25] {60}	A (8.1) [<25] {26}
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	C (33.0)	B (19.9)
Eastbound Approach	E (63.8) [98] {338}	C (30.6) [40] {184}
Westbound Approach	C (21.9) [26] {112}	C (28.0) [79] {328}
Northbound Approach	B (16.9) [50] {314}	B (16.6) [99] {607}
Southbound Approach	D (36.4) [840] {1658}	B (19.2) [120] {745}
23: Palmetto Bay Rd & Genesta St (un signalized)		
Westbound Approach	F (303.0) [78] {175}	D (25.2) [<25] {54}
Southbound Left Turn	C (19.7) [494] {946}	B (13.6) [<25] {26}
24: Palmetto Bay Rd & Palmetto Business Park Rd (un signalized)		
Westbound Approach	F (163.9) [109] {214}	C (17.9) [<25] {59}
Southbound Left Turn	B (10.5) [233] {419}	A (9.9) [<25] {<25}
25: Palmetto Bay Rd & Bow Cir (un signalized)		
Westbound Left Turn	F (207.8) [89] {174}	E (45.5) [<25] {40}
Westbound Right Turn	F (70.2) [118] {207}	B (13.0) [<25] {74}
Southbound Left Turn	D (30.8) [1399] {1658}	B (14.3) [<25] {28}
26: Palmetto Bay Rd & Archer Rd (un signalized)		
Westbound Left Turn	F (2,462.0) [73] {88}	E (35.5) [<25] {39}
Westbound Right Turn	B (13.2) [109] {125}	B (12.9) [<25] {76}
Southbound Left Turn	C (22.2) [380] {493}	B (11.6) [<25] {28}



Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	C (29.0)	B (19.0)
Eastbound Approach	D (36.9) [1380] {1512}	B (15.9) [142] {823}
Westbound Approach	B (12.9) [39] {249}	B (15.8) [85] {539}
Northbound Approach	C (26.6) [<25] {105}	D (39.5) [65] {263}
Southbound Approach	D (35.7) [34] {151}	C (25.5) [37] {140}
28: Palmetto Bay Rd & Dunnagans Alley (un signalized)		
Westbound Left Turn	F (1,033.8) [80] {183}	F (101.3) [<25] {99}
Westbound Right Turn	F (91.9) [109] {217}	B (13.3) [35] {134}
Southbound Left Turn	C (22.0) [278] {513}	B (13.7) [29] {465}
29: Palmetto Bay Rd & Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	F (53.4)	F (79.2)
Eastbound Approach	F (314.9) [809] {838}	F (179.8) [805] {838}
Westbound Approach	B (14.0) [56] {420}	F (189.7) [1644] {1658}
Northbound Approach	A (4.1) [<25] {209}	F (52.9) [463] {788}
Southbound Approach	C (18.5) [307] {461}	A (9.1) [111] {460}

