

2040 Long Range Transportation Plan - Needs Assessment: Crash Reduction Costs and Benefits

Prepared For:



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1.0 Introduction

Safety has a major impact on the transportation system—traffic incidents create non-recurring congestion, affect quality of life, and often require innovative solutions beyond conventional roadway capacity expansion.

Traffic crashes are a serious concern of the Federal Highway Administration as evidenced by their development of the Highway Safety Improvement Program, which led the way for the Florida Department of Transportation to produce their own Strategic Highway Safety Plan (SHSP). The SHSP identifies issues and solutions in the effort to reach the goal of “zero traffic fatalities.” The SHSP was last updated November 2012 and identifies eight focus areas:

- Aggressive Driving
- Intersection Crashes
- Vulnerable Road Users
- Lane Departure Crashes
- Impaired Driving
- As-Risk Drivers
- Distracted Driving
- Traffic Data

As the state and local agencies from a wide range of professions (engineering, law enforcement, planning) work cooperatively together to reduce crashes, this memo supplements the analysis of the state highway system by identifying high crash areas on non-limited access facilities, many of which are owned or maintained by Hillsborough County and the cities of Tampa, Plant City and Temple Terrace. In 2010, Hillsborough County had the highest traffic fatality rate of all large counties in the United States (populations greater than 1 million). This amounts to 12.4 fatalities for every 100,000 residents. Many of those crashes are on the county’s arterials and collectors.

This memo describes the methodology used to estimate safety performance measures for alternative investment plans in the 2040 Long Range Transportation Plan (LRTP) update. The methodology is based on work done for the Strategic Highway Research Program 2 (SHRP 2) under project C11, *Development of Improved Economic Impact Analysis Tools*.¹ In Project C11, several modules were developed to estimate the economic impact of transportation investments on factors not usually accounted for in transportation analyses: market access, connectivity, and travel time reliability. At the request of the Hillsborough MPO, the ability to estimate safety impacts was added.

A spreadsheet was developed in SHRP 2 Project C11 to estimate the reliability impacts of highway investments. This spreadsheet is not being used directly in the current work. Rather, its procedures are being built into a separate tool that post-processes the loaded network file from the Tampa Bay Regional Planning Model (TBRPM), henceforth known as the “C11 Post-Processor.”

This effort is being supported by the Florida Department of Transportation (FDOT) as part of its effort to implement products developed under the SHRP 2 program.

¹ <http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=2350>

2.0 Technical Approach

2.1 Modeling Structure

The C11 Post-Processor is developed as a series of scripts written in the Statistical Analysis System and is operated by Cambridge Systematics staff. It is hoped that next year’s FDOT work program will include a task to convert the C11 Post-Processor to “user grade” software. For input, the scripts read the 2040 loaded network file as well as a list of safety investment parameters. Base crash experience is calculated, then safety improvements are scheduled, using the procedure described in Section 2.3

2.2 Safety Performance Measures

- Total crashes reduced
- Fatal crashes reduced
- Bicycle/pedestrian crashes reduced

2.3 Methodology

2.3.1 Crash Prediction

The basis of the crash prediction methods is the *Highway Safety Manual*² (HSM), a comprehensive set of procedures for analyzing and predicting safety on highway facilities. For safety, crashes by daily time period are not computed – the entire day is used. It is based on producing an expected number of crashes using a statistical procedure known the Empirical Bayes method where total crashes for a facility are a weighted combination of actual crashes and predicted crashes from a safety performance function:

$$\text{Expected Crashes} = (w * \text{PredictedCrashes}) + \{(1-w) * \text{ObservedCrashes}\}$$

Where:

w is a weighting factor based on the goodness-of-fit of the safety performance function.

This method is used to control for the high variability in the number of annual crashes on short and/or low volume segments.

The MPO used a dataset of crashes from Hillsborough County’s Crash Data Management System. The data used in this analysis included crashes between 2006-2010. The crashes were linked to the Tampa Bay Regional Planning Model network for computing observed crashes in the above equation. However, these included only fatal and incapacitating injuries; minor injuries and property damage only crashes are excluded. The first step was to estimate the crashes for these other severity levels. National Highway Traffic Safety Administration’s General Estimate System for 2012 was analyzed to develop factors for urban crashes.³ Analysis of these data revealed that 70 percent of urban crashes were property damage only, 25 percent of crashes were non-incapacitating or possible injury, and 3 percent were fatal or incapacitating injury. (Two percent had unknown severity.) So the factors are:

- (non-incapacitating + possible injury crashes) = (25/3) * (fatal +incapacitating)
- property damage only crashes = (75/3) * (fatal +incapacitating)

² <http://www.highwaysafetymanual.org/>

³ <http://www.nhtsa.gov/NASS>

The next step involved adapting the *HSM*'s safety performance functions for the predicted crashes term in the above equation. The safety performance functions are of the general form:

$$e^{[a + b \times \ln(AADT) + \ln(L)]}$$

Where:

L = length of roadway segment (miles)

a, b = regression coefficients that vary with general design parameters

The safety performance functions that were used varied by type of location and type of crash, are as follows:

Arterials and Collectors

- Segment, multiple vehicle, non-driveway
- Segment, single vehicle, non-driveway
- Segment, multiple vehicle, driveway
- Intersection, multiple vehicle
- Intersection, single vehicle
- Entire section, pedestrian
- Entire section, bicycle

After total crashes are obtained using the Empirical Bayes formula, a base year crash rate is computed. Future crashes (2040) are calculated by multiplying the future average annual daily traffic (AADT) by the base crash rate. Crashes per mile are also calculated.

2.3.2 Identifying Roadway Sections in Need of Safety Improvements

Once the base number of crashes is established for 2040, the Post-Processor uses the following steps to identify the crash reduction on the safety-deficient highway segments. ***Only arterials and collectors within the urban area were considered in the safety analysis; freeways and local streets were excluded.*** The reason for this is that crash history analysis concluded that more than half of the county's severe injury crashes were occurring on major roads (arterials and collectors) within the county's urban area. The MPO further grouped the arterials and collectors into Priority Corridors for the primary focus of safety improvements and Other Major Roadways.

- Roadway segments are considered for improvement if their crashes per mile are higher than the overall average values for Hillsborough County roadways: 21 crashes per mile for arterials and 8 crashes per mile for collectors. The difference in values is due to generally higher traffic on arterials.
- The number of historical crashes per mile on the major roads is used to sort the segments, in descending order. **Appendix A** contains a list of the roadway sections with above average crashes.
- To identify segments for improvement at the different investment levels and determine their benefit, there was the option to begin at the top of the list of Priority Corridors, working down and onto the Other Major Roadways list as funding allowed. Instead, due to the potential for a greater budget in 2040, the MPO included all of the segments with higher than average crashes per mile in the analysis.

- To determine the crash reduction factor, the procedure starts at the top of the list and selects roadway sections in order. Once selected, the cost of making the improvement and the number of crashes reduced are calculated using unit costs shown in **Appendix B**. These are tallied at the end of the selection process to produce total cost and crash reduction values.
- **Appendix C** was developed outside of the modeling process and lists illustrative safety-related projects that have been identified by local agencies or as recommendations from plans and studies. These projects may or may not be included in Appendix B but have local support and could possibly be under development. The illustrative projects are not intended to be an exhaustive list.

3.0 Safety Improvements Results

The Long Range Transportation Plan is a cost-feasible assessment of the transportation projects needed by 2040. Decisions on where to spend existing and potential-new transportation funds are guided by performance measures – the greater the investment, the greater the return. The MPO proposed using three investment levels for the various categories of transportation projects (this memo summarizes the safety projects). During public outreach, citizens were asked to weigh in on whether they were satisfied with current spending or if increasing funding to a higher level, and therefore an improved level of performance, was preferred.

Investment Level 1 is reflective of current spending trends on safety-related projects projected to 20 years. The amount of funds and the types of projects were identified by researching the capital improvement programs of each local agency in Hillsborough County (unincorporated Hillsborough County, the City of Tampa, the City of Temple Terrace and the City of Plant City), as well as documenting the funds spent on safety by the Florida Department of Transportation. Costs for treatments such as building sidewalks, adding crosswalks, bikeways, other intersection improvements, and educational outreach were averaged for a year of spending and multiplied by 20 for a 20-year estimate.

Before developing Investment Levels 2 and 3, the intersections and major corridors in the county with above average crash rates were identified. This directs resources to the locations of greatest concern. To determine Level 2, effective crash reduction treatments such as intersection improvements were applied to the 900 high crash intersections. Level 3 applies crash reduction treatments documented to have even greater benefits in reducing crashes but also highest costs, such as Complete Streets,. Also included in Level 2 and Level 3 is funding for 300 miles of sidewalk construction and adding street lighting to 600 miles of unlit roadway in unincorporated Hillsborough County.

To measure the effectiveness of improving safety, the number of crashes, fatal crashes, and walk-bike crashes that could be reduced by the treatments funded at each level were determined. **Table 1** shows the crashes reduction expected at each level, what the treatments include, and the costs associated in 2014 and in 2040. **Table 2** shows just the crash reductions for each investment level compared to the 2040 base which assumes no safety improvements take place.

Subsequent to the final draft of this memo, public outreach on the 2040 LRTP pointed to concern over the substantial jump in cost between Level 2 and 3 Safety Improvements. It was recommended that another level be added, **Level 2A**, in which the more costly Complete Street treatments only are applied to the Priority Corridors listed in Appendix A instead of all corridors with above average crash rates. The model to determine the reduction in crashes was not run for Level 2A, therefore, the assumption is that crashes benefits fall between Level 2 and 3 benefits.

Table 1. Crash Reduction Costs and Benefits

Investment Level	Benefits	Responsible Agency	Description	Annual Cost (in thousands)	20 Year Cost (in thousands)
Level 1 Current Spending Trend	<ul style="list-style-type: none"> Total crashes are reduced by 4,390 (9%) Total fatal crashes reduced by 13 (10%) Bike/pedestrian crashes reduced by 136 	Hillsborough County	Intersections, medians, sidewalks, school safety	\$11,315	\$226,300
		City of Tampa	Sidewalks, bikeways, crosswalks	\$5,769	\$115,373
		Temple Terrace	Sidewalks, bike lanes, ADA curbs	\$133	\$2,655
		Plant City	Intersections, sidewalks	\$112	\$2,240
		FDOT	Education, enforcement, grants to local agencies	\$7,587	\$151,732
Total				\$24,915.	\$498,300
Level 2	<ul style="list-style-type: none"> Total crashes are reduced by 9,017 (20%) Total fatal crashes reduced by 28 (20%) Bike/pedestrian crashes reduced by 294 	All	900 intersection treatments: signal adjustments, pedestrian signals & refuge areas, turn lanes/bays, crosswalks	\$22,575	\$451,500
		Hillsborough County	600 miles of new standard street lights, including operational cost for 20 years	\$21,000	\$420,000
		All	300 miles of new sidewalks for continuous sidewalk on at least one side of all major roads	\$2,400	\$48,000
Total				\$45,975	\$919,500
Level 2 ½	<ul style="list-style-type: none"> Total crashes are reduced between 20%-51% Total fatal crashes reduced between 20%-51% 	All	450 miles of "Complete Streets" treatments, covering all Priority Corridors plus some other major roads with above-average crashes	\$44,787	\$895,735
		Hillsborough County	600 miles of new standard street lights, including operational cost for 20 years	\$21,000	\$420,000
		All	300 sidewalk miles, for continuous sidewalk on at least one side of all major roads	\$2,400	\$48,000

				Total	\$68,188	\$1,363,735
Level 3	<ul style="list-style-type: none"> • Total crashes are reduced by 22,722 (51%) • Total fatal crashes reduced by 68 (51%) • Bike/pedestrian crashes reduced by 704 	All	900 miles of "Complete Streets" treatments, covering all major roads with above-average crash rate	\$87,918	\$1,758,367	
		Hillsborough County	600 miles of new standard street lights, including operational cost for 20 years	\$21,000	\$420,000	
		All	300 sidewalk miles, for continuous sidewalk on at least one side of all major roads	\$2,400	\$48,000	
				Total	\$111,318	\$2,226,367

Table 2. Crash Reductions Due to Safety Investments (Arterials and Collectors, Hillsborough County)

Crash Type	Expected Number of Crashes in 2040 (% reduction)					
	Investment Level					
	2012 Crashes	2040 Base (no investment)	Level 1 (\$498M)	Level 2 (\$920M)	Level 2A (1,052M)	Level 3 (2,226M)
Total	20,180	44,741	43,122 (-9%)	37,773 (-20%)	Between 20-51%	22,019 (-51%)
Fatal	178	134	129 (-10%)	113 (-20%)	Between 20-51%	66 (-51%)
Bike/Pedestrian	1,088	1,387	1,337 (-4%)	1,171 (-16%)	Between 16-50%	683 (-50%)

Appendix A: Inventory of Major Road Network

Priority Corridors

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
Fletcher	Dale Mabry Hwy	Nebraska Ave	3.36	179	53.3
Fletcher	Nebraska Ave	I-75	5.58	297	53.1
US 41 (Hillsborough Co)	Busch Blvd	Bearss	3.79	178	47.0
Bruce B Downs Blvd	Bearss Ave	Cross Creek Rd	6.37	271	42.6
Bearss Ave	Florida Ave	30th St	2.38	96	40.4
Hillsborough Ave	Pinellas/Hillsborough Co Line	Memorial Hwy	4.83	188	38.8
SR 60	I-75	Turkey Creek Rd	9.57	371	38.7
Dale Mabry Hwy	Hillsborough Ave	US 41	14.00	493	35.2
Hillsborough Ave	Dale Mabry Hwy	US 301	9.01	274	30.4
MLK Jr Blvd/SR 574	I-4	I-75	3.47	104	30.1
Himes Ave	Swann Ave	Busch Blvd	6.80	203	29.8
Dale Mabry Hwy	Kennedy Blvd	Hillsborough Ave	3.34	99	29.6
Sheldon Rd	Hillsborough Ave	Ehrlich Rd	5.78	166	28.8
56th St	Hillsborough Ave	Fowler Ave	4.01	114	28.5
Hillsborough Ave	Memorial Hwy	Dale Mabry Hwy	4.67	131	28.0
MLK Jr Blvd/SR 574	I-75	Alexander St	12.27	318	25.9
US 41	Bearss	Hillsborough/Pasco Co Line	5.95	151	25.3
Florida Ave	Busch Blvd	Nebraska Ave/US 41	5.39	135	25.1
Nebraska Ave	Kennedy Blvd	Busch Blvd	5.69	140	24.6
US 41	Big Bend Rd	Selmon Crosstown	11.11	269	24.2
US 301	Big Bend Road	Leroy Selmon Crosstown	9.97	235	23.5
SR 60/Adamo Dr	US 301	I-75	1.58	37	23.2
Dale Mabry Hwy	Interbay Blvd	Kennedy Blvd	4.96	112	22.6
Busch Blvd	Dale Mabry Hwy	Nebraska Ave	6.86	149	21.7
MLK Jr Blvd/SR 574	Dale Mabry Hwy	I-275	3.13	68	21.6
40th St	SR 60/Brandon Blvd	Hillsborough Ave	2.85	59	20.8
US 301	Leroy Selmon Crosstown	I-4	4.45	83	18.8
Boy Scout Blvd/Spruce St	Memorial Hwy	Dale Mabry Hwy	1.92	35	18.2
SR 60/Adamo Dr	50th St	US 301	2.95	52	17.6
Park Rd	US 92	I-4	1.21	21	17.1

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
MLK Jr Blvd/SR 574	I-275	I-4	4.20	70	16.6
US 301	I-4	Fowler Ave	4.79	75	15.8
Westshore Blvd	Kennedy Blvd	Spruce St / Boy Scout Blvd	1.03	13	12.8
13th St / Channelside Dr	Kennedy Blvd	Adamo Dr	0.36	5	12.4
Fowler Ave	I-275	I-75	7.83	92	11.7
Gunn Hwy	Dale Mabry Hwy	Veterans Expy	4.49	53	11.7
Lithia Pinecrest Rd	Bloomington Ave	SR 60/Brandon Blvd	3.81	42	10.9
US 41	Manatee/Hillsborough Co Line	Big Bend Rd	14.18	152	10.7
SR 60/Adamo Dr	Channelside Dr	50th St	2.79	29	10.3
SR 674/College St	US 41	Hillsborough/Polk Co Line	23.37	241	10.3
Branch Forbes Rd	MLK Jr Blvd/SR 574	Thonotosassa Rd	3.06	31	10.0
Gunn Hwy	Veterans Expwy	Hillsborough/Pasco Co Line	8.69	81	9.3
CR 39	SR 674/Ruskin-Wimauma Rd	SR 60	16.54	152	9.2
Kennedy Blvd	Memorial Hwy	Dale Mabry Hwy	1.49	13	9.0
50th St	Melbourne Blvd	Hillsborough Ave	2.09	18	8.7
40th St	Hillsborough Ave	Fowler Ave	4.06	34	8.4
US 301	Fowler Ave	Hillsborough/Pasco Co Line	11.51	94	8.1
Gibson Rd	US 41	I-75	2.00	16	7.8
MacDill Ave	Boundary Blvd	MLK Jr Blvd/SR 574	8.06	50	6.2
James L Redman Pkwy/CR 39	SR 60	Reynolds Rd	5.44	21	3.9
Subtotal			297.04	6,306	1,089

Other Roadways

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
LYNN TURNER	GUNN HWY	LAGUNA WOODS CT	0.23	71	306.7
TOWN N COUNTRY B	HILLSBOROUGH AVE	JACKSON SPRINGS	0.36	52	146.7
KENNEDY BLVD / S	MERIDIAN ST	CHANNELSIDE DR	0.09	8	88.8
CYPRESS VILLAGE	SR 674	19TH AVE NE	0.33	21	62.9
LOIS AVE	AZEELE ST	KENNEDY BLVD	1.03	63	60.9
JACKSON SPRINGS	WEBB RD	HANLEY RD	0.39	21	54.0
CRENSHAW LAKE RD	SIMMONS RD	US HWY 41	0.35	18	52.5
HOOVER BLVD	HANNA AVE	SLIGH AVE	0.98	51	52.0
GIBSONTON DR	I-75 S RAMP	I-75 N RAMP	2.31	120	51.7

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/Mile
GANDY BLVD	HIMES AVE	MACDILL AVE	0.26	13	50.3
E 21ST ST	LESLIE RD	US HWY 301	0.16	8	49.7
46TH ST	BUSCH BLVD	BOUGAINVILLEA A	1.14	54	47.8
VAN DYKE RD	WHIRLEY RD	DALE MABRY HWY	1.60	76	47.4
LIVINGSTON AVE	COMMERCE PKWY	SUNSET LANE	1.36	60	44.3
DAWN VIEW DR	CASEY RD	NORTHDAL BLVD	0.06	3	43.1
KINGS AVE	SR 60/BRANDON BL	VICTORIA ST	2.70	114	42.2
BRANDON MAIN ST	PROVIDENCE RD	LAKWOOD RD	0.26	10	39.8
PARSONS AVE	M L KING BLVD	US HWY 92	4.62	178	38.5
BENJAMIN RD	SLIGH AVE	BARRY RD	2.38	82	34.5
PROVIDENCE LAKE	GORNTO LAKE RD	PROVIDENCE RD	0.51	17	32.5
HANNA AVE	50TH ST	56TH ST	0.93	30	32.2
EHRlich RD	CASEY RD	DALE MABRY HWY	6.95	222	31.9
PAULS DR	OAKFIELD DR	SR 60	0.25	8	30.9
CRYSTAL LAKE RD	GERACI RD	SIMMONS RD	0.96	29	30.1
FALKENBURG RD	M L KING	HIGHLAND MANOR	8.24	242	29.4
131ST AVE	LIVINGSTON AVE	27TH ST	3.17	91	28.7
BLOOMINGDALE AVE	LITHIA PINECREST	HILLGROVE RD	11.66	324	27.8
GEORGE RD	MEMORIAL HWY	HILLSBOROUGH AV	0.68	18	27.3
JOHN MOORE RD	BLOOMINGDALE AVE	LUMSDEN RD	1.00	26	26.0
WATERS AVE	ROWLETT PARK DR	22ND ST	20.93	541	25.9
CITRUS PARK DR	CITRUS TOWN CENT	GUNN HWY	0.79	20	25.1
GORNTO LAKE RD	PROVIDENCE LAKES	LUMSDEN RD	5.17	127	24.6
NORTHDAL BLVD	NORTHDAL BLVD	DAWNVIEW DR	3.86	93	24.0
MORRIS BRIDGE RD	TEMPLE TERRACE H	FOWLER AVE	2.04	48	23.5
N BOULEVARD	M L KING BLVD	OSBORNE AVE	1.93	45	23.5
BRUCE B DOWNS BL	WHARTON HIGH	COUNTY LINE RD	3.94	92	23.3
ALSOBROOK ST	SR 39	PARK RD	0.34	8	22.9
ANDERSON RD	SLIGH AVE	CRENSHAW ST	6.89	153	22.2
PROGRESS BLVD	I-75	US HWY 301	1.98	43	21.8
SR 60 / BRANDON	I-75 S RAMP	I-75 N RAMP	0.59	13	21.6
LITHIA PINECREST	FISHHAWK	BOYETTE RD	2.06	44	21.5
SYMMES RD	US HWY 41	US HWY 301	3.19	68	21.2
SLIGH AVE	HOOVER RD	HESPERIDES ST	9.21	193	20.9
LINEBAUGH AVE	NEBRASKA AVE	15TH ST	17.41	354	20.3
VICTORIA ST / LI	LAKWOOD DR	KINGS AVE	0.65	13	20.0
30TH ST	YUKON ST	BUSCH BLVD	6.21	123	19.8
HENDERSON RD	WATERS AVE	CAPITOL ONE	2.79	55	19.6
LUTZ LAKE FERN R	DALE MABRY HWY	HOLLY LN	3.95	75	19.0
MEMORIAL HWY	INDEPENDENCE PKW	GEORGE RD	3.92	74	18.9

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
OVERPASS RD	US HWY 301	W BROADWAY AVE	0.28	5	18.7
MADISON AVE	66TH ST	78TH ST	0.29	5	18.3
BOY SCOUT BLVD	SR 60/MEMORIAL	MEMORIAL FRONTA	0.09	2	18.0
ARMENIA AVE	LINEBAUGH AVE	COUNTRY CLUB DR	1.46	26	18.0
HILLSBOROUGH AVE	PINELLAS COUNTY	OLD MEMORIAL HW	0.04	1	17.7
LAMBRIGHT RD	TAMPANIA AVE	ARMENIA AVE	3.65	64	17.4
LESLIE RD	BROADWAY AVE	E 21ST ST	0.15	3	17.2
PALM RIVER RD	US HWY 301	FALKENBURG RD	6.83	115	16.9
TAMPA PALMS BLVD	COMPTON DR (N)	BRUCE B DOWNS B	1.06	17	16.4
LUMSDEN RD	VALRICO RD	SAINT CLOUD AVE	1.19	19	16.2
ORIENT RD	ADAMO DR	BROADWAY AVE	8.42	136	16.1
DOVER RD	SR 60	SYDNEY RD	0.98	16	16.0
MILLER RD	LITHIA PINECREST	DURANT RD	0.65	10	16.0
WILLOW AVE	KENNEDY BLVD	CASS ST	0.40	6	15.7
VALRICO RD	WHEELER RD	M L KING BLVD	10.05	158	15.7
HANLEY RD	WATERS AVE	WILSKY BLVD	5.30	83	15.6
ROME AVE	HILLSBOROUGH AVE	SLIGH AVE	1.64	25	15.5
HUTCHINSON RD	TOBACCO RD	N MOBLEY RD	3.79	58	15.4
LAKEWOOD DR	WINDHORST RD	BROADWAY AVE	6.72	104	15.4
BROOKER RD	LITHIA PINECREST	VALRICO RD	1.04	16	15.0
RIVERVIEW DR	US HWY 41	78TH ST	2.28	34	14.9
OSBORNE AVE	34TH ST	40TH ST	0.54	8	14.7
WOODBERRY RD	FALKENBURG RD	GRAND REGENCY B	0.89	13	14.2
KENNEDY BLVD / W	I-275	HOOVER BLVD	0.61	9	14.0
22ND ST	WATERS AVE	YUKON ST	5.98	84	14.0
W VILLAGE DR	EHRlich RD	S VILLAGE DR	0.75	10	13.9
COLUMBUS DR	TAMPA ST	FLORIDA AVE	9.64	129	13.4
BAY TO BAY BLVD	HENDERSON BLVD	MANHATTAN AVE	2.68	35	13.1
BALM RIVERVIEW R	BOYETTE RD	US HWY 301	6.77	88	13.1
BEARSS AVE	DALE MABRY HWY	EHRlich RD	3.60	46	12.8
78TH ST	FALKENBURG RD	MADISON AVE	5.74	73	12.8
WIGGINS RD	US HWY 92	I-4 FRONTAGE RD	0.82	10	12.7
WILLIAMS RD	US 92	SLIGH AVE	10.36	131	12.6
OAKFIELD DR	PAULS DR	KINGS AVE	3.24	40	12.5
HABANA AVE	TAMPA BAY BLVD	M L KING BLVD	7.64	95	12.4
TOWN CENTER BLVD	GORNTO LAKE RD	BRANDON PARKWAY	1.21	15	12.2
RACE TRACK RD	LINEBAUGH AVE	COUNTRYWAY BLVD	5.77	69	12.0
LAKE MAGDALENE B	FLETCHER AVE	BEARSS AVE	2.63	31	11.9
HARNEY RD	HILLSBOROUGH AVE	SLIGH AVE	10.30	121	11.7
KELLY RD	MEMORIAL HWY	BERKELEY PREP	1.31	15	11.7

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
BIG BEND RD	US HWY 41	OLD BIG BEND RD	6.24	73	11.7
20TH ST	MARITIME BLVD	HARPER ST	1.43	17	11.7
VICTORIA ST	KINGS AVE	PARSONS AVE	0.22	3	11.6
FORBES RD	TRAPNELL RD	SYDNEY RD	1.38	16	11.3
22ND ST CONNECTO	20TH ST	22ND ST	0.21	2	11.3
TEMPLE TERRACE H	DAVIS RD	MORRIS BRIDGE R	5.22	59	11.2
TURKEY CREEK RD	SR 60	TRAPNELL RD	2.89	32	11.2
PARK RD	PLANT CITY STADI	PARK RD	3.57	40	11.2
LAKE AVE	AVENIDA REPUBLIC	15TH ST	0.51	6	11.0
EUCLID AVE	WESTSHORE BLVD	MANHATTAN AVE	1.53	16	10.7
CASEY RD	EHRlich RD	DAWN VIEW DR	3.48	37	10.7
MANHATTAN AVE	SLIGH AVE	HAMILTON AVE	5.55	59	10.7
CHARLIE GRIFFIN	MUD LAKE RD	SR 39	0.49	5	10.7
TRAPNELL RD	TURKEY CREEK RD	MUDLAKE RD	7.20	76	10.5
KINGSWAY RD	I-4	SAM ALLEN RD	8.11	85	10.4
SMITH-RYALS RD	SR 60	TRAPNELL RD	1.04	10	10.0
CAUSEWAY BLVD	MARITIME BLVD	50TH ST	3.19	32	10.0
APOLLO BEACH BLV	SURFSIDE BLVD	DICKMAN DR	4.45	44	9.9
PROVIDENCE RD	BRANDON PARKWAY	SR 60	1.57	15	9.7
CROSS CREEK BLVD	KINNAN ST	CORY LAKE DR	7.23	70	9.7
CHANNELSIDE DR	ADAMO DR	4TH AVE	0.35	3	9.7
BOYETTE RD	BELL SHOALS RD	RHODINE RD	4.29	41	9.6
COUNTY LINE RD	US HWY 92	I-4 FRONTAGE RD	2.41	23	9.4
BELL SHOALS RD	BROOKER RD	LITHIA PINECRES	8.44	79	9.4
INDEPENDENCE PKW	VETERANS FRONTAG	VETERANS EXPWY	1.58	15	9.3
CR 579	US HWY 92	I-4	11.05	102	9.3
SPRUCE ST	LOIS AVE	DALE MABRY HWY	2.45	23	9.2
RIVERHILLS DR	40TH ST	46TH ST	1.30	12	9.0
TAMPA BAY BLVD	H.C.C.	DALE MABRY HWY	3.12	27	8.8
CYPRESS ST	ROME AVE	WILLOW AVE	3.82	33	8.8
NIXON RD	LINEBAUGH AVE	VILLAGE HILL RD	1.21	10	8.6
ALEXANDER ST	SR 600	BAKER ST	2.78	23	8.4
DAVIS BLVD	PLANT/HYDE PARK	N ADALIA AVE	1.14	10	8.4
PLATT ST	AZEELE ST	ARMENIA AVE	0.08	1	8.4
ASHLEY ST	WHITING ST	WASHINGTON ST	1.33	11	8.4
BROADWAY AVE	US HWY 301	FALKENBURG RD	8.04	67	8.3
SAM ALLEN RD	PARK ST	WILDER RD	6.74	56	8.2
FLORIBRASKA AVE	FLORIDA AVE	NEBRASKA AVE	0.29	2	8.0
BAYSHORE BLVD	MACDILL AFB	INTERBAY BLVD	9.98	77	7.8
56TH ST	FOWLER AVE	FLETCHER AVE	0.52	4	7.8

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
MCMULLEN RD	BALM RIVERVIEW R	BOYETTE RD	2.51	19	7.6
MERIDIAN ST	CHANNELSIDE DR	CUMBERLAND ST	0.40	3	7.6
BRYAN RD	LUMSDEN RD	LITHIA PINECRES	1.89	14	7.6
AZEELE ST	CHURCH	DALE MABRY HWY	2.72	21	7.5
WILDER RD	US HWY 92	I-4 FRONTAGE RD	3.54	26	7.4
TWIGGS ST	JEFFERSON ST	NEBRASKA AVE	1.57	11	7.3
MCINTOSH RD	US HWY 92	I-4 E RAMP	4.89	35	7.2
CRAWLEY RD	N MOBLEY RD	TARPON SPRINGS	0.74	5	7.1
15TH ST	OSBORNE AVE	HILLSBOROUGH AV	1.50	11	7.0
NUCCIO PKWY	7TH AVE	PALM AVE	1.82	13	7.0
WILSKY BLVD	MARBELLA CREEK A	LINEBAUGH AVE	1.17	8	7.0
MAPLE DR	HOLLY DR	FLETCHER AVE	0.63	4	6.8
GRANT ST	EVERS ST	SR 39	0.57	4	6.8
34TH ST	7TH AVE	COLUMBUS DR	5.94	41	6.8
CASS ST	TYLER ST (E)	NEBRASKA AVE	2.31	15	6.7
COUNTRYWAY BLVD	WATERS AVE	LINEBAUGH AVE	4.00	26	6.6
WINDHORST RD	LAKEWOOD RD	PARSONS AVE	0.79	5	6.5
7TH AVE	NUCCIO PKWY	13TH ST	5.63	36	6.4
NORTH PALM DR	HOLLY DR	FLETCHER AVE	0.47	3	6.4
MAIN ST	MACDILL AVE	HABANA AVE	4.44	28	6.4
N/S CARGO BLVD	M L KING BLVD	HILLSBOROUGH AV	2.29	15	6.3
DURANT RD	VALRICO RD	LITTLE RD	8.83	56	6.3
S VILLAGE DR	W VILLAGE DR	CASEY RD	2.64	17	6.3
BARRY RD	HANLEY RD	ARMAND DR	0.41	3	6.3
HENDERSON BLVD	MANHATTAN AVE	LOIS AVE	1.07	7	6.2
ALUMNI DR	SPECTRUM BLVD	LEROY COLLINS B	2.32	14	6.2
JEFFERSON ST	ZACK ST	POLK ST	0.57	4	6.2
BRANDON TOWN CEN	TOWN CENTER BLVD	SR 60	1.65	10	6.1
SYDNEY RD	DOVER RD	FORBES RD	6.67	40	6.0
HOWARD AVE	SWANN AVE	AZEELE ST	1.59	9	6.0
I-4 FRONTAGE RD	I-4 FRONTAGE RD	PARK RD	0.49	3	5.9
SUNLAKE BLVD	LUTZ LAKE FERN	PASCO COUNTY	3.53	21	5.9
HOLLY DR	NORTH PALM DR	MAPLE DR	2.44	14	5.8
19TH AVE NE	US HWY 41	US HWY 301	8.89	51	5.7
O'BRIEN ST	CYPRESS ST	LAUREL ST	1.07	6	5.7
PALM AVE	TAMPA ST	FLORIDA AVE	3.37	19	5.7
THONOTOSASSA RD	TAYLOR RD	KINGSWAY RD	12.47	69	5.5
KNIGHTS GRIFFIN	WILDER RD	POLK COUNTY	8.66	47	5.4
WESTSHORE BLVD	BAY AVE	GANDY BLVD	2.11	11	5.4
MORGAN ST	ZACK ST	POLK ST	1.60	9	5.4

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
21ST AVE	NEBRASKA AVE	AVENIDA REPUBLI	2.03	11	5.4
DUNCAN RD	US HWY 301	BLOOMINGDALE AV	0.92	5	5.4
MAYDELL DR	PALM RIVER RD	CITY LIMITS	4.18	22	5.2
COLUMBUS DRIVE E	US HWY 301	REGIONAL WATER	1.01	5	5.2
MAGNOLIA DR	HOLLY DR	FLETCHER AVE	1.61	8	5.1
SIMMONS RD	VAN DYKE RD	CRYSTAL LAKE RD	0.50	3	5.1
WHEELER RD	LENNA AVE	VALRICO RD	1.04	5	5.1
MT CARMEL RD	SR 60	FRONT ST	0.86	4	5.0
WHITAKER RD	US HWY 41	HANNA RD	1.03	5	5.0
YUKON ST	RIVERHILLS DR	30TH ST	0.26	1	5.0
HANNA RD	WHITAKER RD	DEBUEL RD	0.52	3	4.9
MARION ST	TYLER ST	HARRISON ST	0.64	3	4.9
MEDULLA RD	OLD MULBERRY RD	COUNTY LINE RD	1.96	9	4.8
BULL RUN	ALUMNI DR	SUN DOME REAR L	0.50	2	4.8
SYMMES RD EXT	US 301	BALM RIVERVIEW	1.29	6	4.8
CORONET RD	MEDULLA RD	ROBERTS RANCH R	3.29	16	4.8
WHITING ST	TAMPA ST	FRANKLIN ST	0.70	3	4.7
GERACI RD	DALE MABRY HWY	GERACI RD	0.55	3	4.7
COMMERCE PARK BL	TAMPA PALMS BLVD	S. OF EAST WEST	0.46	2	4.7
FRANKLIN ST	ICE PALACE DR	CHANNELSIDE DR	0.37	2	4.6
13TH ST EXT	4TH AVE	NUCCIO PKWY	0.22	1	4.6
KINNAN ST	CROSS CREEK BLVD	DEAD END	0.75	3	4.6
SPECTRUM BLVD	ALUMNI DR	FOWLER AVE	0.78	4	4.6
BENEFICIAL DR	KNIGHTS RUN AVE	CHANNELSIDE DR	1.27	6	4.5
ZACK ST	TAMPA ST	FRANKLIN ST	1.11	5	4.5
ANGEL LN	LUTZ LAKE FERN	PASCO COUNTY	0.94	4	4.5
SUMMERFIELD BLVD	RHODINE RD	SYMMES RD EXT	0.79	3	4.4
GRAND REGENCY BL	SR 60	WOODBERRY RD	0.74	3	4.4
TAYLOR RD	THONOTOSASSA RD	MAIN ST	0.78	3	4.3
M L KING BLVD	N/S CARGO RD	LOIS AVE	1.86	8	4.3
KNIGHTS RUN AVE	HARBOR ISLAND DR	BENEFICIAL DR	0.58	2	4.3
HARBOR ISLAND DR	ICE PALACE DR	KNIGHTS RUN AVE	0.61	3	4.3
TAMPA EAST BLVD	US 301	BROADWAY AVE	1.23	5	4.3
SWANN AVE	CHURCH AVE	DALE MABRY HWY	5.36	23	4.3
NEW TAMPA BLVD	TROUT CREEK COMM	BRUCE B DOWNS B	1.10	5	4.2
SHELL POINT RD	24TH ST	30TH ST	0.53	2	4.2
INTERBAY BLVD	WESTSHORE BLVD	MANHATTAN AVE	2.49	10	4.2
SKIPPER RD	NEBRASKA AVE	16TH ST	1.24	5	4.1
S BOULEVARD	PLATT ST	CLEVELAND ST	0.41	2	4.1
AIRPORT RD	WOODROW WILSON S	ALEXANDER ST	1.09	4	4.1

Corridor Name	From	To	Length (Mi.)	Expected Crashes	Crashes/ Mile
DALE MABRY HWY	I-275 W RAMP	SPRUCE ST	0.03	0	4.1
JIM JOHNSON RD	JAP TUCKER RD	ALEXANDER RD	0.94	4	4.0
E BAY DR	SYMMES RD	GIBSONTON DR	1.08	4	4.0
SAINT CLOUD AVE	DURANT RD	LUMSDEN RD	0.64	3	4.0
BALM RD	US HWY 301	BALM RIVERVIEW	1.54	6	4.0
4TH AVE	CHANNELSIDE DR	15TH ST	0.34	1	4.0
ROBERTS RANCH RD	JIM JOHNSON RD	CORONET RD	0.34	1	3.9
LAUREL ST	HILLSBOROUGH RIV	TAMPA ST	0.23	1	3.9
WISHART BLVD	ROME AVE	HILLSBOROUGH AV	2.45	10	3.9
MARITIME BLVD	20TH ST	CAUSEWAY BLVD	0.86	3	3.9
MADISON ST	TAMPA ST	FRANKLIN ST	0.20	1	3.9
JAP TUCKER RD	SPARKMAN RD	JIM JOHNSON RD	0.61	2	3.8
ROWLETT PARK DR	SLIGH AVE	22ND ST	1.70	6	3.8
CHARLIE TAYLOR R	US HWY 92	I-4	0.07	0	3.6
BOUGAINVILLEA AV	30TH ST	MCKINLEY DR	0.15	1	3.6
FORT KING RD	MAIN ST	KNIGHTS GRIFFIN	0.97	3	3.6
STACY RD	FT KING RD	US HWY 301	0.24	1	3.5
Subtotal			606.15	8,477	3,542
Subtotal from Priority Corridors			297.04	6,306	1,089
TOTALS			903.19	14,783	4,631

Appendix B: Safety Investment Costs

This Appendix documents research on developing the unit costs for Levels 2, 2A and 3, shown Table 1.

INTERSECTIONS

Data Source	Description	Number of Intersections	Program Cost	Cost/intersection
Hillsborough County's Intersection Master Plan	Geometric intersection improvements	70	\$5,676,000	\$82,000
Hillsborough CIP Budget (Walk-Bike)	Dangerous Intersections/Pedestrian Safety Program	10	\$8,600,000	\$900,000
JACOBS 2014 research	Intersections: signal adjustments, ped signals and refuge, turn lanes/bays, crosswalks			\$500,000
Intersection Improvements			AVERAGE	\$494,000 Rounded to \$500,000/intersection

The types and costs of intersection treatments vary greatly. The MPO wanted to use the most reasonable costs by researching actual project costs when available, although there was a wide range, \$500,000 per intersection was a reasonable assumption.

Intersection improvements were included for investment Levels 2.

The number of intersections on the major roads with above-average crash rates to be improved over 20 years was 903.

Therefore the 20-year cost for Level 2 intersection projects is \$451,500,000

STREET LIGHTING

Data Source	Description	Number/mile*	Unit Cost	Cost/Mile
Hillsborough County Public Works Department - 2014	Installation of standard luminaire, high-pressure sodium lights & wiring	70	\$8,000	\$560,000
Hillsborough County Public Works Department	Maintenance x 20 years	70	\$2,000	\$140,000
			Total Including Operations	\$700,000

***150' spacing, both sides of roadway**

The Hillsborough County Public Works Department maintains an inventory of unlit arterials and collectors. In 2014, there were 600 miles of roadways in need of street lights.

Street Lighting was included for all three investment Levels 2, Level 2A and Level 3.

Using the cost estimate for capital and maintenance of \$700,000/mile for the 600 unlit miles, the **20-year cost shown at each level is \$420,000,000**

SIDEWALK GAPS

Data Source	Description	Length	Cost/mile
MPO 2035 LRTP Needs Assessment	Major roadways with no sidewalk at all, on either side.	300 miles	\$160,000

An inventory of roadways with no sidewalk were previously identified and totaled 300 miles.

Sidewalk Gaps were included for all three investment Levels 2, Level 2A and Level 3 for a 20-year cost of \$48,000,000

COMPLETE STREETS

FHWA Complete Streets Guidance	Description	Assumptions	Unit Cost	Low Cost/Mile	High Cost/Mile
	Lower automobile speeds	2 signs/mile x 2 for both sides	\$50 - 150/sign	\$200	\$600
	Road diet. Restriping 4-lane to 3-lane divided, two-way left turn, bike lane. Cost varies due to amount of lane lines that need to be repainted		\$5,000 - 20,000/mile	\$5,000	\$20,000
	Tighten curb radii. Cost varies due to on-site conditions: drainage, utilities	2 signalized intersections/mile x4 approaches	\$2,000 20,000/corner	\$8,000	\$80,000
	Accessible pedestrian signals	2 signalized intersections/mile x4 approaches	\$20,000 - 140,000/signal	\$80,000	\$560,000
	Raised medians. Cost varies due to added as part of utility improvement or other construction	4 medians/mile	\$15,000-30,000/100 feet	\$60,000	\$120,000
	Addition of bike lanes. Cost varies if during reconstruction, resurfacing	x2 both sides	\$5,000-50,000/mile	\$10,000	\$100,000
	Right turn on red restrictions sign	2 signalized intersections/mile x4 approaches	\$30 - 150/sign	\$240	\$1,200
	Installation of no right turn on red sign	2 signalized intersections/mile x4 approaches	\$200/sign	\$1,600	\$1,600
	Sidewalk installation for concrete curbs and sidewalks	5280 feet x 2 for both sides	\$15/linear foot	\$158,400	\$158,400
	ladder crosswalk - patterned concrete crosswalk	2 signalized intersections/mile x4 approaches	\$300 - 3,000/crosswalk	\$2,400	\$24,000

	Curb ramps, new or retrofitted	2 signalized intersections/mile x4 approaches	\$800 - 1,500/curb ramp	\$6,400	\$12,000
	Curb extensions. Cost varies depending on design and site conditions	2 signalized intersections/mile x4 approaches	\$2,000 - 20,000/curb ramp	\$16,000	\$160,000
	Crossing island. Cost varies if asphalt with no landscaping or raised concrete pedestrian island with landscaping	4 ped crossings/mile	\$4,000 - 30,000/crossing island	\$16,000	\$120,000
	Sidewalk widening or retrofit	x2 both sides	\$62,000 - 100,000/mile	\$124,000	\$ 200,000
TOTALS				\$488,240	\$1,557,800
TYPICAL CONTINGENCIES	Scope	25%		\$122,060	\$389,450
	Long Range Planning	25%		\$122,060	\$389,450
	Maintenance of Traffic	10%		\$48,824	\$155,780
	Mobilization	10%		\$48,824	\$155,780
	Construction, Engineering & Inspections	15%		\$73,236	\$233,670
	Design	15%		\$73,236	\$233,670
	Right of Way	25%		\$122,060	\$389,450
TOTALS with Contingencies				\$610,300	\$1,947,250

Using cost estimates from the Federal Highway Administration and adding contingencies used locally by FDOT District 7, the higher cost estimate for transforming a mile of roadway into a complete street was decided to be most reasonable.

Complete Street treatments were included for investment Levels 2A and Level 3.

Level 2A applied complete street treatments to the 300 miles of Priority Corridors for a 20-year cost of 584,175,000.

All corridors with above average crash rates were included in Level 3 for a 20-year cost of \$1,758,366,750

Appendix C: Illustrative Safety Projects

Agency	Project	Further Description	Transportation for Economic Development*
City of Tampa	109th Ave (Nebraska to 30th St)	Shared lane markings and sidewalks	YES
City of Tampa	113th Ave (48th St to 50th St)	Sidewalk	
City of Tampa	15th St (at 109th Ave)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	15th St (at Bougainvillea)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	22nd St (21st Ave to 23rd Ave) Phase 3	Complete Street - Roundabout at 21st/22nd, on-street bike lanes, bus shelters, sidewalks	
City of Tampa	22nd St (at 109th Ave)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	22nd St (at Bougainvillea)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	22nd St (at Linebaugh)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	22nd St (Hillsborough Ave to MLK Blvd)	Complete Street	
City of Tampa	22nd St (Riverhills Dr to Fowler Ave)	Bicycle and pedestrian enhancements	YES
City of Tampa	30th St (at Annie St)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	30th St (at Bougainvillea)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	30th St (Busch to Fowler)	Redesign with 11' travel lanes & 5' bike lanes; mid-block crossing treatments	
City of Tampa	40th St (SR 60 to Hillsborough Ave)	Complete Street - road diet	YES
City of Tampa	40th St/McKinley (Busch to Fowler)	Bus stops, mid-block safety improvements	
City of Tampa	42nd St (Skipper to BBDowns)	Shared lane arrows	
City of Tampa	43rd St (Skipper to BBDowns)	Shared lane arrows	
City of Tampa	46th (Busch to Fowler)	Bicycle and pedestrian enhancements, widen sidewalk 3-lanes with bike lanes	YES

Agency	Project	Further Description	Transportation for Economic Development*
City of Tampa	46th St (at Bougainvillea/Serena)	Crosswalk, intersection lighting, and pedestrian signal features	
City of Tampa	46th St (at Sweetwater Lakes Dr)	Enhanced crossing	
City of Tampa	46th St (Eva St to Temple Heights)	Sidewalk	
City of Tampa	46th St (Fletcher to Skipper)	Sidewalk	
City of Tampa	48th St (Whiteway to 113th Ave)	Sidewalk	
City of Tampa	50th St (at Whiteway Dr)	Crosswalk, intersection lighting, pedestrian signals	
City of Tampa	7th Ave (22 St to 50 St)	Complete Street - road diet	YES
City of Tampa	Bayshore Blvd (Howard to Rome)	Median narrowing, restriping for new on-road southbound bike lanes	
City of Tampa	Beardsley Dr Extension (Meadow Point to Morris Bridge)	Complete Street	
City of Tampa	Bougainvillea (30th to McKinley Dr)	Sidepath along south side of roadway	
City of Tampa	Bougainvillea (McKinley to 46th St)	Sidewalk	
City of Tampa	Bougainvillea (Nebraska to 30th)	Shared lane arrows	
City of Tampa	Bruce B. Downs (138th Ave to Skipper Rd)	Sidewalk	
City of Tampa	Bruce B. Downs	Enhanced crossings at: 138 th Ave, Bearss Ave, Lake Forest Dr, Oak Preserve Blvd, Regents Park Dr, Skipper Rd.	
City of Tampa	Bruce B. Downs (Fowler to Fletcher)	Sidewalk	
City of Tampa	Bruce B. Downs (Shumard Oak Dr to Pebble Creek Dr)	Sidewalk	
City of Tampa	Bruce B. Downs (Skipper Rd to Cypress Creek/City Limit)	Sidewalk	
City of Tampa	Busch Blvd	Pedestrian countdown signals, sidewalks crosswalks, signs, ramps, curbing	YES
City of Tampa	Cass/Tyler/Nuccio "the Green Spine"	Complete Street - 2-way, roundabout, protected bikeway	YES
City of Tampa	Columbus Dr (Florida to 14th Street)	Bicycle and pedestrian enhancements	YES
City of Tampa	Columbus Dr/17th, 18th, and 19th	Complete Street - 2-way conversion, on-street	YES

Agency	Project	Further Description	Transportation for Economic Development*
	(from 14th Street to 43rd Street)	parking, protected bikeway	
City of Tampa	Commerce Park Blvd (at New Tampa Community Park entrance)	Enhanced crossing	
City of Tampa	County Line Rd (I-75 overpass to Bruce B Downs)	Complete Street	
City of Tampa	Cross Creek Blvd (Bruce B Downs to Larkbunting Dr)	Sidewalk	
City of Tampa	Cross Creek Blvd (Larkbunting to Corey Lake Dr)	Bike lanes	
City of Tampa	Cypress St (Howard to Hillsborough River)	Bicycle and pedestrian enhancements	YES
City of Tampa	Dale Mabry Hwy (Bay to Bay to Columbus Dr)	Bicycle and pedestrian enhancements	YES
City of Tampa	E. Yukon (Riverhills to Hyaleah)	Sidewalk	
City of Tampa	East Ybor, Palmetto Beach & Channel District, Downtown & Ridgewood park	Sidepath, shared lane markings, widen sidewalk, restripe bike lane, lighting	YES
City of Tampa	Euclid Ave (Dale Mabry to Bayshore Blvd)	Bicycle and pedestrian enhancements	YES
City of Tampa	Floribraska Ave (Nebraska to Florida)	Complete Street - road diet, bicycle and pedestrian enhancements	YES
City of Tampa	Fowler (46th St to Lee Roy Collins)	Widen sidewalk south side of Fowler to 10-foot shared use path	
City of Tampa	Fowler (at 50th St, Bull Run, LeRoy Collins, McKinley, Nebraska)	Install raised islands and other pedestrian safety enhancements	
City of Tampa	Henderson Blvd (Bay to Bay to Kennedy Blvd)	Bicycle and pedestrian enhancements	YES
City of Tampa	Highwood Preserve Pkwy (Bruce B Downs to New Tampa Hwy)	Sidewalk	
City of Tampa	Highwood Preserve Pkwy (Highwoods Palm Way and Galbraith)	Enhanced crossing	
City of Tampa	Highwood Preserve Pkwy (Stone View Way to New Tampa Hwy)	Widen sidewalk	

Agency	Project	Further Description	Transportation for Economic Development*
City of Tampa	Himes Ave (Kennedy Blvd to Hillsborough Ave)	Bicycle and pedestrian enhancements	YES
City of Tampa	Howard Ave (Bayshore Blvd to Kennedy Blvd)	Bicycle and pedestrian enhancements	YES
City of Tampa	Kennedy Blvd (Memorial Hwy to Channelside Dr)	Bicycle and pedestrian enhancements	YES
City of Tampa	Linebaugh Ave (52nd St/City Limits to 40th St)	Shared lane markings; provide unsignalized crossing at 46th St; upgrade/install other crosswalks	
City of Tampa	Linebaugh Ave (Nebraska to 30th St)	Shared lane markings	
City of Tampa	Lizard Tail Rd (Palm Point to City Limits)	Sidewalk	
City of Tampa	MacDill Ave (MacDill AFB to Columbus Dr)	Bicycle and pedestrian enhancements	YES
City of Tampa	Madison St (Ashley Dr to Marion St)	Bicycle and pedestrian enhancements	YES
City of Tampa	Manhattan Ave (Richardson to Interbay Blvd)	Bicycle and pedestrian enhancements	YES
City of Tampa	Morris Bridge Rd (N of Pictorial Park Dr to County Line)	Bike lanes	
City of Tampa	Palm Ave (Nebraska to N. Boulevard)	Bicycle and pedestrian enhancements	YES
City of Tampa	Platt St at Armenia Ave	Intersection improvement	YES
City of Tampa	Rome Ave (Kennedy Blvd to Hillsborough River)	Bicycle and pedestrian enhancements	YES
City of Tampa	Sidewalk Construction	Sidewalks requested by schools, citizens to FDOT standards	
City of Tampa	Skipper Rd (BBDowns to 46th St)	Shared Lane arrows	
City of Tampa	South Tampa, Davis Islands, North Tampa - 50 projects	Sidepath, shared lane markings, widen sidewalk, restripe bike lane, lighting	
City of Tampa	Spruce Street Corridor Improvements (Lois to Himes)	Safety & operational improvements, roadway, sidewalk, drainage upgrades	
City of Tampa	Tampa Street Off-Ramp	Reconfigure off ramp, high-emphasis crosswalk	YES
City of Tampa	Tampa/Florida (I-275 to Violet St.)	Complete Street - one-way conversion to two-way	YES

Agency	Project	Further Description	Transportation for Economic Development*
City of Tampa	Westshore (Gandy Blvd to Beach Park Dr)	Bicycle and pedestrian enhancements	YES
City of Tampa	Westshore Blvd (Kennedy Blvd to Spruce St)	Complete Street - Bicycle and pedestrian enhancements	YES
City of Tampa	Westshore/W. Commerce (Picnic Island to Gandy Blvd)	Shared bicycle lane markings	YES
City of Tampa	Whiteway Dr (52nd St/City Limits to 46th St)	Shared lane markings; midblock crossing at Connechussett Rd; high emphasis crosswalk at 50th St, sidewalks	
City of Tampa	Whiting St (Ashely Dr to Brush St)	Complete Street	
City of Tampa	Willow Ave (Kennedy Blvd to Cypress St)	Bicycle and pedestrian enhancements	YES
City of Tampa	Zack St. Promenade of the Arts	Complete Street - ped friendly, public art, gateway to Curtis Hixon, shade, crosswalks, medians, on-street parking	
FDOT D7 Safety Office	District safety initiatives	Crash management system, road safety audits, push button, countdown, crosswalk, audible, bike safety, quick curb, feedback signs, bright stick	
FDOT D7 Safety Office	Off system safety	intersection, vulnerable, departures, rural risk, sr2s	
FDOT D7 Safety Office	Ped Safety Enforcement	Overtime Program - 12 law enforcement agencies in D7	
FDOT D7 Safety Office	Safe Routes 2 School	Education program – walking school bus, Walkwise, book markers	
Hillsborough County	131st St (Nebraska Ave to 30th St)	Complete Street - bicycle and pedestrian enhancements	YES
Hillsborough County	46th St (Fletcher to Skipper)	Bicycle and pedestrian enhancements	YES
Hillsborough County	78th St (Madison to Lee Roy Selmon)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Adamo Dr. at Falkenburg	High-Crash Intersection	
Hillsborough County	Ambassador Dr (Powhattan Ave to Hillsborough Ave) Town & Country Community Plan	Complete Street - Add curb, sidewalks, bike lanes, landscaping, streetscaping	YES
Hillsborough County	Apollo Beach Blvd (Marbella Blvd to US 41)	Bicycle and pedestrian enhancements	YES

Agency	Project	Further Description	Transportation for Economic Development*
Hillsborough County	Bloomington Ave (US 301 to Lithia Pinecrest)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Channelization of Traffic	Traffic separators, raised medians and/or turn lanes	
Hillsborough County	Consolidated Road Median Improvement	Barrier medians or traffic separators	
Hillsborough County	CR 672 (CR 39 to US 301)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Critical Accident Mitigation - Intersection	PDE, design, row, construct Intersection Master Plan	
Hillsborough County	Gunn Hwy (Citrus Park to Ehrlich Rd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Gunn Hwy (Pasco County Line to S. Mobley Rd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Intersection & Pedestrian Safety	Enhanced traffic control devices, markings, signs, lanes, medians	
Hillsborough County	John Moore Rd (Bloomington Ave to Lumsden Rd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Kings Ave (SR 60 to Victoria St)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Kingsway Rd (SR 60 to MLK Blvd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Lambright /Sligh (Dale Mabry to Armenia Ave)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Lithia Pinecrest (SR 60 to Bloomington Ave)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Mango Rd/CR 579 (MLK Blvd to N or I-4)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Maydell Dr (Causeway Blvd to Adamo Dr)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Northdale Blvd (Dale Mabry to Lakeshore Rd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Northeast unincorporated county	Bicycle and pedestrian enhancements	YES
Hillsborough County	Northwest unincorporated county	Bicycle and pedestrian enhancements	YES
Hillsborough County	Oakfield Dr (Lakewood Dr to Kings Ave)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Parsons Ave (SR 60 to MLK Blvd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Paula Dr (TnC Blvd to Hanley Rd)	Complete Street - Add curb, sidewalks, bike lanes,	YES

Agency	Project	Further Description	Transportation for Economic Development*
	Town & Country Community Plan	landscaping, streetscaping	
Hillsborough County	Pauls Dr - Brandon Main Street (SR 60 to Feeder Rd)	Complete Street - Sidewalks, on-street parking, streetscaping, landscaping, gateways	YES
Hillsborough County	Paved Shoulders/Bicycle Lanes Rural Roads	Construct paved shoulders	
Hillsborough County	School Safety Program	Flashing beacons, crosswalks, signals, signs, markings, sign retro reflectivity	
Hillsborough County	Sheldon Rd (Hillsborough Ave to Linebaugh Ave)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Shell Point Rd (US 41 to 30th St SE)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Sidewalk Retrofit construction	Improved sidewalks, connectivity to existing	
Hillsborough County	Sligh Ave/Pinecrest (Benjamin Rd to Dale Mabry)	Bicycle and pedestrian enhancements	YES
Hillsborough County	SR 60 (I-75 to Valrico Rd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	US 301 (Broadway Ave to MLK Blvd)	Bicycle and pedestrian enhancements	YES
Hillsborough County	USF Area	Sidewalks and bike lanes	
Hillsborough County	Victoria St (Kings Ave to Parson Ave)	Bicycle and pedestrian enhancements	YES
Hillsborough County	Waters Ave (Sheldon Rd to Anderson Rd)	Bicycle and pedestrian enhancements	YES
Plant City	Alabama St (Maryland Ave to Park Rd)	Sidewalks	
Plant City	Charlie Taylor Rd (Knights Griffin to US 92)	Bicycle and pedestrian enhancements	YES
Plant City	Church St (Gordon St to Maryland Ave)	Sidewalks	
Plant City	Park Rd at S. Frontage	Intersection and pedestrian safety	
Plant City	Sidewalks repaired/replaced	5,000 feet/year, maintain, repair, ADA	
Plant City	SR39/Collins (Alexander St to Reynolds St.)	Bicycle and pedestrian enhancements	YES
Plant City	SR39/Collins (Park Rd. to Alabama St.)	Complete Street	
Plant City	Terrace Dr (Alexander St to	Bicycle and pedestrian enhancements	YES

Agency	Project	Further Description	Transportation for Economic Development*
	Frontage Rd)		
Plant City	Turkey Creek Rd (Sydney Rd to SR 60)	Bicycle and pedestrian enhancements	YES
Temple Terrace	112th (Frances Arbor to Saginaw)	Sidewalks	
Temple Terrace	122nd Ave (Dead end to 50th St)	Bicycle and pedestrian enhancements	YES
Temple Terrace	127th Ave (Dead end to 50th St)	Bicycle and pedestrian enhancements	YES
Temple Terrace	131st Ave Bikeway (50th to 52nd St)	On-road bicycle facility	
Temple Terrace	131st Ave Bikeway (east of 56th)	On-road bicycle facility	
Temple Terrace	56th St (Fowler Ave to Fletcher Ave)	Bicycle and pedestrian enhancements	YES
Temple Terrace	78th St (Harney Rd to Temple Terrace Hwy)	Bicycle and pedestrian enhancements	YES
Temple Terrace	Bannockburn (Glen Arven to Riverhills Dr)	Sidewalks	
Temple Terrace	Belle Meade (W. River Dr to E. River Drive)	Sidewalks	
Temple Terrace	Bicycle Projects	Share Road signage, miscellaneous bicycle projects	
Temple Terrace	Bullard (56th St to Morris Bridge Rd)	Bicycle and pedestrian enhancements	YES
Temple Terrace	Davis Rd (Temple Terrace Hwy to Morris Bridge Rd)	Bicycle and pedestrian enhancements	YES
Temple Terrace	E. River Dr (Belle Meade Ave to Vanderbaker)	Sidewalk enhancements	
Temple Terrace	Fletcher Ave (56th St to Morris Bridge Rd)	Sidewalk gaps	YES
Temple Terrace	Fowler Ave (Riverhills Blvd to I75)	Complete Street- bicycle and pedestrian enhancements	YES
Temple Terrace	Gillette Ave Bikeway (Whiteway to n city limits)	On-road bicycle facility	
Temple Terrace	Morris Bridge Rd (I75 to Cross Creek Blvd)	Bicycle and pedestrian enhancements	YES
Temple Terrace	Ridgedale/Sunnyside/Carolyne (Riverhills to Ridgedale)	On-road bicycle facility	

Agency	Project	Further Description	Transportation for Economic Development*
Temple Terrace	Saginaw Dr (112th to 113th)	Sidewalks	
Temple Terrace	Sidewalk, Ramps, Curbs, ADA Transition Plan		
Temple Terrace	Temple Terrace Hwy (56th St to 78th St)	On-road bicycle facility	
Temple Terrace	Whiteway Bikeway (Riverhills to w City Limits)	On-road bicycle facility	

Source Document	Project	Further Description	Transportation for Economic Development
Bicycle Safety Action Plan	Lighting	COT Bright Lights, FDOT Lighting Program	YES
Bicycle Safety Action Plan	Outreach	Bus wraps, benches, movie theaters, gas stations	
Bicycle Safety Action Plan	Restriping Urban Roads	Design services	
E. Hillsborough Avenue Corridor Study	12th at Giddens Ave	High-emphasis crosswalk at intersection	
E. Hillsborough Avenue Corridor Study	15th at Giddens Ave	Raised median 2' traffic diverter (with bicycle slots); curb extensions/bulb outs	
E. Hillsborough Avenue Corridor Study	15th St from Hillsborough to Mohawk	Complete sidewalks along both sides; high emphasis crosswalks along 15th	
E. Hillsborough Avenue Corridor Study	19th St at Giddens Ave	High-emphasis crosswalk both sides, curb extensions/bulb outs along Giddens	
E. Hillsborough Avenue Corridor Study	19th St from Hillsborough to Giddens	Complete/delineate sidewalk both sides of 19th St; signage; lighting	
E. Hillsborough Avenue Corridor Study	19th St from Hillsborough to Mohawk	Sidewalk along eastside of 19th St; high-emphasis crosswalk; signage; lighting	

Source Document	Project	Further Description	Transportation for Economic Development
E. Hillsborough Avenue Corridor Study	22nd St at Giddens Ave	Raised landscaped median traffic diverter (leave channel for cyclists & pedestrians); tighten turn radius, curb-extensions; high-emphasis crosswalks	
E. Hillsborough Avenue Corridor Study	22nd St, Hillsborough Ave to Comanche	Sidewalk eastside of 22nd St; lighting; raised landscaped median (approx 10' x 25'), signage; bus bay along east side.	
E. Hillsborough Avenue Corridor Study	22nd St, Hillsborough to Giddens Ave	Raised landscaped median island prior to left-turn lane; bus bay southbound, lighting	
E. Hillsborough Avenue Corridor Study	30th St, Hillsborough Ave to Comanche	Raised landscaped median (approx 100' long) prior to left-turn lane (existing painted median); signage; high-emphasis crosswalks; additional crosswalk along southern leg	
E. Hillsborough Avenue Corridor Study	30th St, Hillsborough Ave to Giddens	Complete/delineate sidewalk along both sides, signage; lighting; high-emphasis crosswalk	
E. Hillsborough Avenue Corridor Study	32nd St from Hillsborough Ave to Comanche	High-emphasis crosswalk, sidewalk both sides; lighting; signage	
E. Hillsborough Avenue Corridor Study	32nd St from Hillsborough Ave to Giddens	High-emphasis crosswalk; complete/delineate sidewalks along both sides, lighting; signage	
E. Hillsborough Avenue Corridor Study	34th St from Hillsborough Ave to Giddens Ave	Lighting, signage	
E. Hillsborough Avenue Corridor Study	34th St from Hillsborough Ave to Mohawk	Complete sidewalks along west side, lighting	
E. Hillsborough Avenue Corridor Study	37th St from Hillsborough Ave to Giddens Ave	High-emphasis crosswalks; sidewalks along west side, lighting; signage	
E. Hillsborough Avenue Corridor Study	37th St from Hillsborough Ave to Mohawk Ave	High-emphasis crosswalks, sidewalks along both sides, lighting, signage	
E. Hillsborough Avenue Corridor Study	43rd St from Hillsborough Ave to Deleuil	High-emphasis crosswalks, lighting, signage, sidewalk along eastside	
E. Hillsborough Avenue Corridor Study	43rd St from Hillsborough Ave to Frierson Ave	High-emphasis crosswalks, lighting, signage, complete sidewalk along both sides	

Source Document	Project	Further Description	Transportation for Economic Development
E. Hillsborough Avenue Corridor Study	45th St from Hillsborough Ave to Giddens Ave	High-emphasis crosswalks, lighting, signage, complete sidewalk along both sides	
E. Hillsborough Avenue Corridor Study	47th St from Hillsborough Ave to Giddens Ave	High-emphasis crosswalks, lighting, signage, sidewalks along both sides	
E. Hillsborough Avenue Corridor Study	47th St from Hillsborough Ave to Shipman Ct	High-emphasis crosswalks, lighting, signage, complete sidewalks along both sides	
E. Hillsborough Avenue Corridor Study	Eastbound Hillsborough Ave left-turn at Nebraska	Extend left-turn lane approximately 100'; enhanced landscaping in raised median	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at I-275 southbound ramps	High-emphasis crosswalks; move eastbound stop bar back; signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 11th Street	High-emphasis crosswalks, signage, sidewalks along both sides, lighting at the intersection	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 12th Street	High-emphasis crosswalks, signage; sidewalks along west side	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 13th Street NORTH	High-emphasis crosswalks, signage, sidewalks along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 13th Street SOUTH	High-emphasis crosswalks, signage, sidewalks along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 15th Street	High-emphasis crosswalks, lighting, no right on red during pedestrian phase, leading pedestrian interval, protective phase left-turn	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 17th St	High-emphasis crosswalks, signage, lighting; complete sidewalks along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 19th St	Traffic signal with future redevelopment on NW quadrant; bus bay west of 19th (north side); no right on red during pedestrian phase; leading pedestrian interval	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 20th St	High-emphasis crosswalks	

Source Document	Project	Further Description	Transportation for Economic Development
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 22nd St	Intersection lighting; protected only left turn, no right on red during pedestrian phases, leading pedestrian interval, flashing yellow left-turn arrow for the permissive left-turn phase	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 30th St	Intersection lighting, protected only left turn phase (four-head left turn signal to change phasing based on time of day); no right-turn on red during pedestrian phases; leading pedestrian interval	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 32nd St	Two-phased mid-block crossing with RRFB, overhead signage/beacon or ped traffic signal, raised landscaped median, lighting, shift bus stops to far-side of 32nd St	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 34th St	Pedestrian lighting, no right-turn on red during pedestrian phases, protected only left turn phase (four-head left turn signal to change phasing based on time of day/pedestrian phase), leading pedestrian interval	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 36th St	Landscaping within existing raised median, high-emphasis crosswalks, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 37th St	Two-phased mid-block crossing with RRFB (with overhead signage/beacon or ped traffic signal), landscape existing raised median, lighting, shift existing bus stops to far-side of 37nd St	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 39th St	Landscaping within existing raised medians, high--emphasis crosswalk, sidewalk/delineate walkway along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 40th St	Intersection lighting, no right on red during pedestrian phases, leading pedestrian interval	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 42nd St	High-emphasis crosswalk, lighting, signage, landscape existing raised median	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 43rd St	2-phased midblock crossing with RRFB (overhead signage/beacon or ped traffic signal), raised channelized median, mid-block crossing, lighting	

Source Document	Project	Further Description	Transportation for Economic Development
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 44th St	High-emphasis crosswalks, lighting, signage, install/complete sidewalk along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 45th St (north)	High-emphasis crosswalks, lighting, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 46th St	High-emphasis crosswalks, lighting, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 47th St	Signalizing intersection or two-phased mid-block crossing with RRFB (supplement with overhead signage/beacon or ped traffic signal), raised landscaped directional median, lighting, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 48th St	High-emphasis crosswalks, lighting, signage, sidewalks along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 50th St	High-emphasis crosswalks, lighting, signage, sidewalks along both sides (to min. 200' north of Hillsborough Ave)	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at 9th Street	High-emphasis crosswalks, signage, sidewalks along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at I-275 northbound on ramp	Replace painted island with raised island, high-emphasis crosswalks, lighting, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at I-275 northbound-eastbound off ramp	High-emphasis crosswalk, lighting, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at I-275 northbound-westbound off ramp	High-emphasis crosswalk, lighting, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at I-275 southbound off ramp	High-emphasis crosswalk, move stop bar back, lighting	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at I-275 southbound on ramp	High-emphasis crosswalk across right & left-turn access lanes, lighting, signage	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at Nebraska Ave	High-emphasis crosswalk, lighting, no right on red during pedestrian phase, leading pedestrian interval, bus bay east of Nebraska (southside)	

Source Document	Project	Further Description	Transportation for Economic Development
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at Rose Ln	Landscaping within existing raised medians; extend existing raised median west approx 100'	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave at Shipman Ct	High-emphasis crosswalks, lighting, signage, sidewalk along both sides	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave between 11th St and 12th St	Two-phased mid-block crossing with RRFB or ped signal, landscaping existing raised median, lighting; move eastbound bus stop 300' east to 12th St.	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave between 12th St and 13th St	Raised landscaped median, approx 30' long where westbound left turn begins	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave east of 37th St	Raised median west of the existing left-turn opening	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave east of 50th St	Raised landscaped median east of 50th (approx 150' long), signage (pedestrian crossing warning flashing beacon and reduce speed ahead), "gateway" feature	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave entrance to Meridian Point Apts/Tampa Festival Care	Signalizing intersection; no right on red during the pedestrian phases, leading pedestrian interval, high-emphasis crosswalks, lighting	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave from 44th St to 45th St	Landscaping within existing raised median	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave west of 19th St	Landscaping within existing raised median	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave, east of 9th Street	Landscaping within existing raised median	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave, west of 15th Street	Landscaping within existing median at beginning of eastbound left-turn lane	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave, west of 22nd St	Landscaping within existing raised median	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave, west of 30th St	Raised landscaped median	

Source Document	Project	Further Description	Transportation for Economic Development
E. Hillsborough Avenue Corridor Study	Hillsborough Ave, west of 32nd St	Landscaping within existing raised median	
E. Hillsborough Avenue Corridor Study	Hillsborough Ave, west of RR tracks	Landscaping within existing raised median	
MPO's Crash Severity Reduction Study	Bloomington Ave (Providence to Bell Shoals) 3.0 miles	High-Crash Corridor	
MPO's Crash Severity Reduction Study	Brandon Blvd (Valrico to Dover) 3.0 miles	High-Crash Corridor	
MPO's Crash Severity Reduction Study	Brandon Blvd at Grand Regency	High-Crash Intersection	
MPO's Crash Severity Reduction Study	Dale Mabry (Bearss/Ehrlich to North Lakeview) 2.0 miles	High-Crash Corridor	
MPO's Crash Severity Reduction Study	Dale Mabry (Busch to Fletcher) 1.9 miles	High-Crash Corridor & includes High-Crash Intersection at Fletcher	
MPO's Crash Severity Reduction Study	Dale Mabry at Bearss/Fletcher	High-Crash Intersection	
MPO's Crash Severity Reduction Study	East Hillsborough Corridor Study	(Recommendations listed separately above)	
MPO's Crash Severity Reduction Study	Fowler Ave (Nebraska to 30 th St)	Complete Street - bicycle boulevard, frontage roads, widen median, landscaping	
MPO's Crash Severity Reduction Study	Gunn Hwy at Anderson Rd	High-Crash Intersection	
MPO's Crash Severity Reduction Study	Hillsborough Ave (Longboat Blvd to Eisenhower)	High-Crash Corridor	
MPO's Crash Severity Reduction Study	US 301 at Boyette Rd	High-Crash Intersection	
MPO's Crash Severity Reduction Study	Waters Ave at Hanley Rd	High-Crash Intersection	

Source Document	Project	Further Description	Transportation for Economic Development
Pedestrian Safety Action Plan	Infrastructure, education, enforcement, land use, funding	RRR projects	
SR60 Compatibility Study	Add traffic signal	SR60 at Pauls Dr. and Beverly Blvd.	
SR60 Compatibility Study	Landscaping	Complete Street - Consistent with SR60 Overlay District	
SR60 Compatibility Study	Lithia Pinecrest and Bryan Road reconfigure	Complete Street - Roundabout, one-way pairs for circulation	
SR60 Compatibility Study	Narrow Lanes	Lanes to 11' allowing more separation between cyclists and motorists	
SR60 Compatibility Study	Pedestrian Connections	Provide ped connections on side roads	
SR60 Compatibility Study	Speed Reduction	reduce speed to 45mph through entire corridor	
SR60 Compatibility Study	Walk-Bike facilities	At interchange of SR60 and I-75	
USF Multimodal Transp. District Study	46th St to 50th St		
USF Multimodal Transp. District Study	138th Ave (15th to 19th St)	Sidewalk gaps, both sides	
USF Multimodal Transp. District Study	15th St (Fowler to Fletcher)	Bike lanes, west side & gaps on east side	
USF Multimodal Transp. District Study	30th St (Bearss Ave to Fowler)	Sidewalk gaps, crosswalks	
USF Multimodal Transp. District Study	53rd St (Fletcher to Fowler)	Sidewalk gaps	
USF Multimodal Transp. District Study	Pine Dr (30th to Alumni)	Bicycle and pedestrian enhancements	

Source Document	Project	Further Description	Transportation for Economic Development
USF Multimodal Transp. District Study	Alumni Dr (Pine to Bull Run)	Bicycle and pedestrian enhancements	
USF Multimodal Transp. District Study	Cambridge Wood Dr (37th to 42nd)	Bicycle and pedestrian enhancements	
USF Multimodal Transp. District Study	Elm Dr (Bull Run to 50th St)	Sidewalk gaps, intersection improvements	
USF Multimodal Transp. District Study	Bull Run (Alumni to Elm)	Bike lane gaps	
USF Multimodal Transp. District Study	Holly Dr (30th to N Palm Dr)	Bicycle and pedestrian enhancements	
USF Multimodal Transp. District Study	Livingston Ave (Fletcher to 131st St)	Sidewalk gaps	
USF Multimodal Transp. District Study	Magnolia Dr (Fletcher Ave to Holly Dr)	Bicycle and pedestrian enhancements	
USF Multimodal Transp. District Study	Maple (Fletcher to Alumni Dr)	Bicycle and pedestrian enhancements	
USF Multimodal Transp. District Study	Nebraska Ave (Bearss to Fowler)	Bicycle and pedestrian enhancements	
USF Multimodal Transp. District Study	N Palm Dr (Fletcher to Holly)	Bicycle facility gaps	
USF Multimodal Transp. District Study	Spectrum Blvd (Pine to Fowler)	Bicycle and pedestrian enhancements	
USF Multimodal Transp. District Study	Sycamore Dr (Elm to Holly)	Bicycle facilities	
USF Multimodal Transp. District Study	University Square Dr (30th St to Club Dr)	Bicycle facility - increase width	

*Transportation for Economic Development in Hillsborough County *Proposed Non-Transit Projects*, August 2014

Appendix E: Statewide Performance Measures

Following are excerpts of the 2014 Florida Multimodal Mobility Performance Measures Source Book that relate to the performance measures discussed in this technical memorandum.

2014 MAP-21 Performance Report



Safety

The number of fatalities and serious injuries on Florida's roadways continued to drop in 2012

Overview: Because life is precious, FDOT has set the highway safety improvement bar as high as possible with a long-range goal of zero traffic fatalities. This commitment has resulted in a steady decline in average annual fatalities and serious injuries since 2005. FDOT's safety strategy encompasses education, enforcement, engineering and emergency response. Our actions include targeted intersection safety improvements and varied education and enforcement efforts. The "Put It Down" campaign is aimed at reducing distracted driving and pedestrian texting in crosswalks. FDOT also partners to focus on at-risk drivers with other stakeholder organizations such as the Florida Sheriffs Association (which teaches teens safe driving practices) or the Safe Mobility for Life Coalition (which coordinates efforts to reach aging road users). Improved safety for bicyclists, pedestrians, and motorcyclists, and campaigns to address impaired and aggressive driving are pursued through a combination of education, engineering and enforcement.

MAP-21 Provisions: Requires states to have a safety data system for analyses that support the Strategic Highway Safety Plan and the Highway Safety Improvement Program and to use the safety data systems to identify fatalities and serious injuries on all public roads by location and to identify locations and roadway elements that pose dangers to all road users, including vehicle occupants and non-occupant roadway users (e.g. pedestrians and bicyclists) [23 U.S.C. 148 (c)(2)(B)(i) and(iii)].

Issues:

- Target Setting: Reduce the number of fatalities and injuries by 5 percent each year based on the 5-year average
- There is no consistent classification of "serious injury" from state to state

For More Information: See the Safety & Security Annual Performance Report at FDOTPerforms.org for Florida's strategies to achieve our objectives.

