

TRANSIT CONCEPT FOR 2050: ESTIMATED CAPITAL, OPERATIONS & MAINTENANCE COSTS









TECHNICAL MEMORANDUM

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Hillsborough County Metropolitan Planning Organization County Center, 18th Floor Tampa, Florida 33602 813-272-5940 www.hillsboroughmpo.org Prepared by:
PB
5404 West Cypress Street, Suite
300
Tampa, Florida 33607
813-289-5300

TABLE OF CONTENTS

Background	3
Capital Cost Assumptions and Approach	3
Standard Cost Categories	5
Capital Cost Summary	7
Operations and Maintenance Cost Assumptions and Approach	7
Alignment, Service Characteristics, and Operating Details	8
Estimated O&M Annual Cost	10
O&M Cost Summary	13
APPENDIX A	15
Detailed Capital Cost Estimates	15
Preferred LRT – 102 pages	15
Preferred CR – 45 pages	15
APPENDIX B	16
Mapbook Preferred Transit System Plan– 48 pages	16

BACKGROUND

In November 2006, the Hillsborough Metropolitan Planning Organization (MPO) commenced the MPO Transit Study to assess transit service needs in Hillsborough County in the context of mobility, economic vitality and overall quality of life. Through an iterative process of public visioning and values workshops, stakeholder meetings, technical committee review, and local government oversight, the MPO advanced a series of three conceptual rail transit scenarios along with a grid of Bus Rapid Transit (BRT) and complimentary bus support service.

The three conceptual rail transit scenarios consisted of:

- Concept A Tampa Rail: Concept A revisited the Tampa Rail project as described in the December 2002 Final EIS.
- **Concept B Light Rail**: Concept B included Concept A with light rail extensions to serve other geographic areas of Hillsborough County such as Southshore, the Airport, New Tampa, and Brandon.
- Concept C Commuter Rail: Concept C consisted of traditional diesel locomotive driven commuter coaches serving areas north to the Polk County line, west to Pinellas County, east to Plant City, and along the Southshore to the Manatee County line.

After further public and stakeholder review as well as input from County technical and leadership committees a **Preferred Transit System Plan** (Transit Concept for 2050) was developed incorporating fixed rail transit components (light rail, commuter rail and regional rail) as well as a complimentary bus system.

The purpose of this technical memorandum is to document the approach, assumptions, and estimated capital and operating costs for the rail elements of the **Transit Concept for 2050.** Complimentary bus service including BRT, local, express and non fixed route bus systems are not addressed in this memorandum.

CAPITAL COST ASSUMPTIONS AND APPROACH

The capital cost estimate prepared for the Hillsborough MPO Transit System Plan is first and foremost, a planning level estimate. Planning level estimates are based on broad and geographically homogeneous data regarding alignment, grade, and transit system elements. At the planning level, specific information regarding physical conditions, engineering design, and environmental constraints are unknown or in some cases assumed. The planning level



approach for transportation is also referred to as a systems level of analysis. The transportation emphasis at the planning or systems level addresses broad goals of mobility, connectivity, land use, environmental sensitivity, and community input. The following critical project analyses and investigations have not been developed for this planning level of system plan development:

- Engineering design,
- Geotechnical analysis,
- · Geometrically rectified survey and mapping,
- Environmental assessment (exception Tampa Rail Final EIS, Dec 2002),
- Property appraisal,
- Legal review,
- Construction peer review.

Conceptual alignments on aerial based photo images (GIS shape files) were received from Renaissance Planning Group (RPG) and were adjusted by PB Americas (PB). The conceptual alignments consisted of **Concept A** - Tampa Rail, **Concept B** - Tampa Rail with extensions, and **Concept C** - Commuter Rail. PB used planning and engineering judgment to re-align the conceptual locations provided by RPG.

The consequences of this exercise resulted in alignment shifts which provided the following benefits:

- Place the light rail and commuter rail alignments within or adjacent to existing roadway and/or freight rail alignments,
- Eliminate or avoid major commercial and institutional structures,
- Facilitate more economical water body crossings,
- Minimize or avoid major residential takings, park facilities, and natural resource features.

Quantities were computed for the adjusted rail alignments utilizing GIS techniques. Stations were counted from those locations provided by RPG. Stream, river, and bay crossings were computed and special situations such as elevated crossings and vehicle maintenance facilities were factored in. Unit costs were determined utilizing PB's nationwide library of transit cost categories. Unit costs were also localized to consider Tampa conditions. The capital cost estimating professional in charge of the effort is stationed in Orlando. Thus, ready access to local bid data was considered in the determination of unit costs.



STANDARD COST CATEGORIES

Each of the transit lines was broken down into logical segments. To the extent possible, the segments reflected homogenous land use, terrain, and construction conditions. Unit costs were assigned to the quantities within each segment and compiled to determine segment costs. Segments were then assembled to determine transit line costs for each major **Concept (A, B & C)**. Segments were compiled and identified in a Map Book which illustrated the alignment and stations locations on an aerial image. Spreadsheets were developed using the Federal Transit Administration's (FTA) Standard Cost Categories of transit cost elements. The FTA Standard Cost Categories are common practice in developing capital costs for FTA funding applications; also know as a Full funding Grant Agreement (FFGA). Major cost categories include;

Cost Category 10, Guideway and Track

Cost Category 20, Stations, Stops, Terminals, and Intermodal Facilities

Cost Category 30, Support Facilities; Yards, Shops, and Administrative Buildings

Cost Category 40, Sitework and Special Conditions

Cost Category 50, Systems; Train Control, Signals, Power, Communications, Fare Collection

Cost Category 60, Right of Way (ROW), Land, Existing Improvements

Cost Category 70, Vehicles

Cost Category 80, Professional Services

Cost Category 90, Unallocated Contingency

Unit costs were applied to each of the estimated quantities of cost categories listed above to arrive at a base cost. To account for lack of precision in development of the quantities and the unit costs, a contingency is allocated to the base cost in the amount of 15% to 30% depending upon the complexity of the cost category or uncertainty regarding the location and field conditions associated with the cost category elements. Totals were calculated for all elements within each transit alternative to arrive at an estimated Construction Cost Subtotal.

Cost Category 60 elements, Right of Way (ROW) and property acquisition costs, include not only property and easements, but the process of property acquisition which includes appraisal services, property negotiations, transfer and realtor fees, taxes, legal, and potential condemnation fees. At the systems planning



stage, ROW is estimated using rail route foot unit cost allowances differentiated into three alignment categories; at-grade, aerial, and underground. A contingency of 50% was added to acknowledge the higher level of uncertainty and unknowns typically associated with property valuation for projects at this stage of evaluation.

Light rail and commuter rail vehicle requirements (Cost Category 70) are actually determined from the product of estimated transit ridership and a more detailed train operations and performance plan. This is generally not available at the systems planning level. For Light Rail technology, a rule of thumb of 2 vehicles per rail mile was applied to calculate the number of LRT vehicles to include in the estimate. A factor of 20% was also included to account for spare vehicles, a standard industry practice. For commuter rail technology, a rule of thumb of 0.5 vehicles per rail mile was applied to calculate the number of coach car vehicles, including the same allowance of 20% for spare cars. In addition a factor of 50% of the coach car quantity was included as an allowance for cab cars, as well as a factor of 50% for diesel locomotives. Typically a start up commuter rail train set includes a locomotive, one or more coach cars, and a cab coach. Each of these units in the train set has a different cost. No attempt has been made to distinguish between single level and bi-level commuter rail coaches.

Cost Category 80, Professional Services are commonly called soft costs. The term soft cost is actually a misnomer as Professional Services are often the hardest costs to estimate, particularly at the systems planning level. Soft costs can be significant project cost elements. They include professional engineering, architectural, and planning services for design and project development. Additional soft costs are identified as project management, construction management, insurance, legal, surveys, testing, and start up. These costs are factored as a percentage of construction costs and range individually from 1% to 8% of construction. Soft cost can be found in the standard cost category 80, Professional Services.

Cost Category 90, Unallocated Contingency, accounts for project uncertainty and risk at the early systems planning level of development. It is calculated at 10% of Construction, ROW, and Professional Services.

In summary, total estimated project cost consist of Construction costs (Guideways, Stations, Support Facilities, Sitework, and Systems), ROW costs, Vehicle Costs, Professional Services, and Unallocated Contingency. All costs reflect mid-calendar year 2007 cost. No attempt has been made to account for actual year of expenditure and the impact of inflation upon a projected build year. It is important to account for and acknowledge the actual year of



expenditure as the planning level estimate for 2007 is just a preliminary estimate and considerably more information and time will pass before a more precise estimate can be advanced.

After further public and stakeholder review as well as input from County technical and leadership committees a Preferred Transit System Plan was developed incorporating fixed rail transit components (light rail, commuter rail, and regional rail) as well as a complimentary bus system. Similar to the A, B and C Concept validation effort, RPG generated alignment and station GIS shape files were reviewed and adjusted by PB for to:

- Accommodate or avoid cultural, community and environmental features,
- Enhance ridership
- Avoid conflicts with existing freight rail lines,
- Consolidate facilities
- Reduce construction or ROW costs

CAPITAL COST SUMMARY

A summary of 2007 Capital Costs for **Transit Concept for 2050** is provided in Table 1.

Transit	Length	#	# Revenue	Capital Costs	Cost Per Mile
Alternative	(Miles)	Stations	Vehicles	\$ Billions	\$ Millions
Preferred-LRT	60.8	51	147	\$3.831	\$63.00
Preferred – Commuter Rail	91.6	16	112	\$2.331	\$25.44

Table 1: 2007 Rail Transit Capital Cost Summary

OPERATIONS AND MAINTENANCE COST ASSUMPTIONS AND APPROACH

Operations and maintenance (O&M) costs include a wide range of ongoing and re-occurring costs which are necessary to maintain daily operation of a transit system. O&M costs typically include labor, labor fringe benefits (overhead), power, fuel, train & non-train maintenance, special services, materials, supplies, casualty and liability insurance, and general administration. As re-occurring expenses O&M costs are offsetting charges against revenue, thus affecting the agency's income statement. Capital costs are assets and are reflected in the agency's balance sheet.



Similar to the Capital Cost exercise, the O&M cost estimate prepared for the Hillsborough MPO Transit System Plan is a planning level estimate. Planning level estimates for O&M are based on estimated operating scenarios and a sampling of representative transit systems. At the planning level, specific information regarding train performance and operations, schedules, dispatching protocol, and stringline analyses of two way train constraints are unknown. As the Preferred Transit System Plan has been developed with a horizon year of 2050, O&M costs were projected to year 2050 as well.

ALIGNMENT, SERVICE CHARACTERISTICS, AND OPERATING DETAILS

In estimating the O&M costs for the proposed LRT routes in 2050, the following three alignments were used:

- Blue Line: starting at West Park Village station and terminating at Brandon Blvd station
- Red Line: starting in St. Petersburg, Florida and terminating at I-75/Bruce B Downs Blvd station
- Green Line: starting at Interbay Blvd station and terminating at North Blvd in Tampa downtown

The following four lines were used for the commuter rail operating scenario in 2050:

- I-4 Corridor: starting at the Downtown Tampa (Marion St) station and terminating at Plant City station
- Purple Line: starting at the Downtown Tampa (Marion St) station and terminating at Plant City station
- Orange Line: starting at the Downtown Tampa (Marion St) station and terminating at Tamiami Trail station
- Red Line: starting at the Downtown Tampa (Marion St) station and terminating at Land O' Lakes Blvd station

Table 2 provides the basis for the lengths, peak/off-peak travel times, and speeds used.

Table 2: Service Characteristics and Operating Assumptions

		Length Route		AM and PM Peak Headway	Midday Off-Peak Headway	Evening Off-Peak Headway	Weekend Off-Peak Headway	Average	Cycle Travel
		(miles)	Miles	6am to 9am & 3pm to 6pm	& 3pm to 9am to 4pm		6am to 1am	Speed	Time
	Blue Line	27.85	55.70	10 min	12 min	15 min	15 min	15 mph	223 min
LRT	Red Line	31.65	63.31	10 min	12 min	15 min	15 min	15 mph	253 min
	Green Line	7.81	15.61	10 min	12 min	15 min	15 min	15 mph	62 min
	I-40	26.09	52.18	30 min				30 mph	104 min
CR	Purple	26.37	52.74	30 min	60 min		60 min	30 mph	105 min
CIC	Orange	29.49	58.99	30 min				30 mph	118 min
	Red/Pink	17.56	35.12	30 min	60 min		60 min	30 mph	70 min

These assumptions were derived from the Technical Memorandum entitled "Service Characteristics for Proposed Transit Corridors" dated July 9, 2007 prepared by PB. Since the service characteristics were created before the final alternative alignments were established, headways, and speeds were reestimated to determine operating needs. Cycle travel times are planning level estimates calculated by dividing cycle travel distance by average speed.

Given the service characteristics, peak vehicles, annual revenue miles, and annual revenue hours were estimated as illustrated in Table 3: Estimates of Vehicle Miles, Vehicle Hours, and Peak Vehicles.

Service **Light Rail Commuter Rail** Characteristic Blue Red Green I-4 Purple Red Orange Line Line Line **Total Annual** Vehicles-Miles 1,821,207 2,069,918 510,525 159,667 371,581 180,507 247,417 **Total Annual** Vehicle-Hours 123,405 140,590 39,520 6,120 13,870 6,120 12,340 **Peak Vehicles** Required 23 26 7 4 4 4 3

Table 3: Estimates of Vehicle Miles, Vehicle Hours, and Peak Vehicles

ESTIMATED O&M ANNUAL COST

Two models were used to estimate annual O&M costs: one model approximates Light Rail Transit operation and another model simulates Commuter Rail operation.

Light Rail Model

FTA data maintained in the National Transit Database was used to determine cost and efficiency characteristics for the LRT model. Some additional costs from Broward County Transit (BCT) were used. Cost characteristics for 16 LRT operations in the U.S. in 2004 were analyzed to estimate annual cost factors for peak vehicles, annual revenue miles, annual revenue hours, and directional route miles. The table below demonstrates the model used for the calculation of O&M costs. The numbers listed below are in 2004 dollars. The O&M estimates in the last section of this memo are converted to 2007 dollars. An additional 2% was added on for taxes and other miscellaneous expenses.



Table 4: Light Rail O&M Unit Costs

Vehicle Operations		
Labor - Admin. & Scheduling	\$31.15	Vehicle Hours
Labor - Operator Wages & Fringes	\$36.71	Vehicle Hours
Propulsion Power - demand	\$6,247.13	Peak Vehicles
Propulsion Power - energy	\$0.68	Vehicle Miles

Maintenance		
Labor - Train Maintenance	\$2.52	Vehicle Miles
Labor - Non Train Maintenance	\$39,797.20	Dir Rte Miles
Services	\$111,114.50	Peak Vehicles
Materials and Supplies	\$1.38	Vehicle Miles

Other		
Casualty and Liability	\$6.32	Vehicle Hours
Labor - General Administration	\$31,733.83	Peak Vehicles

Commuter Rail Model

The Commuter Rail O&M cost model is based on the Light Rail model because it is expected that many of the cost characteristics would be similar. The labor costs associated with vehicle operations (including administration, scheduling, operator wages, and fringes) are assumed to be similar between LRT and Commuter Rail operations. This would mean staffing plans for Commuter Rail operations very similar to what would be used in an LRT environment. Specifically, this means one person operating the vehicle during normal operations. Larger Commuter Rail systems with train set consists of 3 or more coaches can carry additional staff (conductor), but it is unlikely that this would occur in Hillsborough until the system matured in the later years of the planning horizon.

Propulsion costs for Commuter Rail operations are expected to differ from LRT, and the unit cost is specific to Commuter Rail. Regarding maintenance costs, the only line item that is adjusted is the non-vehicle maintenance labor costs, which



are suspected to be lower for Commuter Rail operations because of the lack of a catenary system to maintain. This difference between Commuter Rail and LRT operations could also mean lower vehicle maintenance costs and lower maintenance materials and supplies, although these numbers are not adjusted in the model. Other costs (namely insurance and general administrative costs) are assumed to be similar, regardless of Commuter Rail or LRT mode.

Below, Table 5: Commuter Rail O&M Unit Costs, demonstrates the CR model used for the calculation of O&M costs. The numbers below are in 2006 dollars and the O&M estimates in the last section of this memo are converted to 2007 dollars. An additional 5% was added on for taxes and other miscellaneous expenses.

Table 5: Commuter Rail O&M Unit Costs

Vehicle Operations		
Labor - Admin. & Scheduling	\$10.79	Vehicle hours
Labor - Operator Wages & Fringes	\$41.34	Vehicle hours
Propulsion Power	\$2.38	Vehicle miles

Maintenance		
Labor - Train Maintenance	\$2.29	Vehicle miles
Labor - Non Train Maintenance	\$73,294.00	Dir Rte Miles
Services	\$55,872.00	Peak vehicles
Materials and Supplies	\$2.19	Vehicle miles

Other		
Casualty and Liability	\$6.81	Vehicle hours
Labor - General Administration	\$43,223.00	Peak vehicles

O&M COST SUMMARY

Cost of annual operating and maintenance of the LRT and CR network are expected be \$91 million in 2007 dollars as illustrated in Table 6.

Table 6: 2007 O&M Costs for Commuter and Light Rail Transit

		Total O&M Cost
		(2007 Dollars)
	Blue Line	\$26,065,000
Light Rail	Red Line	\$29,629,000
	Green Line	\$7,812,000
	I-4	\$6,358,000
Commuter Rail	Purple	\$8,546,000
Commuter Run	Orange	\$7,078,000
	Red	\$5,933,000
Total		\$91,421,000

Table 7: Summary of Capital and Operational Cost for the Preferred Transit System, By Revenue Line **Unless Designated Otherwise, Costs Are Expressed as \$ Millions**

Category		LRT	LRT	LRT	LRT	CR	CR	CR	CR	CR	LRT&CR
#	Description	Blue	Red	Green	Totals	Magenta	Purple	Orange	I-4 Red	Totals	Totals
	Length(miles)	23	30	8	61	16	26	26	26	94	155
	# of Stations	20	23	8	51	3	2	6	5	16	67
	# of Rev. Vehicles	55	72	19	147	19	31	31	31	112	259
10	Guideway & Track	\$310	\$493	\$54	\$857	\$69	\$128	\$154	\$305	\$656	\$1,512
20	Stations, Stops, Terminals	\$132	\$81	\$29	\$242	\$5	\$5	\$11	\$11	\$33	\$275
30	Yard, Shops, Buildings	\$105	\$137	\$36	\$278	\$24	\$39	\$39	\$39	\$141	\$419
40	Sitework, Special Conditions	\$98	\$172	\$21	\$290	\$37	\$54	\$60	\$58	\$209	\$500
50	Systems Control, Signals & Communications	\$145	\$182	\$50	\$377	\$23	\$38	\$38	\$24	\$124	\$501
	Construction Cost Totals (Category 10-50)	\$790	\$1,064	\$190	\$2,044	\$158	\$265	\$301	\$438	\$1,162	\$3,206
60	ROW, Land	\$86	\$92	\$25	\$202	\$50	\$83	\$96	\$75	\$304	\$507
70	Vehicles	\$219	\$286	\$76	\$582	\$48	\$78	\$78	\$75	\$280	\$862
80	Professional Services	\$308	\$297	\$49	\$654	\$43	\$72	\$129	\$128	\$372	\$1,026
90	Unallocated Contingency	\$194	\$132	\$23	\$348	\$23	\$38	\$83	\$68	\$212	\$560
	Project Capital Cost Totals (Category 10-90)	\$1,597	\$1,871	\$363	\$3,831	\$322	\$537	\$688	\$784	\$2,331	\$6,162
	Capital Cost Per Mile (\$Millions)	\$69.44	\$62.36	\$45.32	\$62.80	\$20.13	\$20.67	\$26.46	\$30.14	\$24.80	\$39.75
	Annual O&M Costs Per Mile (\$ Millions)	\$1.13	\$0.99	\$0.98	\$1.04	\$0.37	\$0.33	\$0.27	\$0.24	\$0.30	\$1.34



APPENDIX A DETAILED CAPITAL COST ESTIMATES

Preferred LRT – 102 PAGES

Preferred CR – 45 pages

Hillsborough County MPO Transit Study

System Planning

Light Rail Transit

Capital Cost Estimate

(2007 Dollars in Millions)

		Alternative
	Description	Total
	Length (Mile):	60.8
	Number of Stations:	51
	Number of Revenue Vehicles:	147
10	GUIDEWAY & TRACK ELEMENTS	\$856.55
20	STATIONS, STOPS, TERMINALS, INTERMODAL	\$242.10
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	\$277.95
40	SITEWORK & SPECIAL CONDITIONS	\$290.39
50	SYSTEMS	\$376.75
	Construction Subtotal (Sum Categories 10 - 50)	\$2,043.74
60	ROW, LAND, EXISTING IMPROVEMENTS	\$202.43
70	VEHICLES	\$582.12
80	PROFESSIONAL SERVICES	\$654.00
90	UNALLOCATED CONTINGENCY	\$348.23
	Total Project Cost	\$3,830.51

Appendix A 137

Hillsborough County MPO Transit Study System Planning

System Planning
Light Rail Transit
Capital Cost Estimate

												(2007 D	ollars in Millions)															
		LR-	-Airport		LR-Brandon Ext		LR-Cypress St.		LR-Downtown		LF	R-I275	LR-Ma	c Dill AFB	LR-NE Ext	LR-N	North	LR-Tampa Bay	LR-Uni	versity		LR-We	stchase		LR-Ybor City			T
CAT No.	Description	LR-01 Airport Sta to George Bean Parkway	LR-02 George Bean Parkway to Trask St along Spruce	Rail (east of	LR-04 L East of Acline to CSX main line & Yard	LR-05 East of CSX mainline & Yard to Kingsway		LR-07 N Boulevard to I Tampa St.	LR-08 N N Tampa St. to N Marion St./ E Polk St.	LR-09 N Marion/ E Polk to N Nebraska Ave	LR-10 k Armenia Ave to West Shore Dr.		Tampa Prep Pl t	o to N Boulevard	LR-14 n Bruce B Downs/ / 37th to Pebble l Creek (east of I-	LR-15 CSX N/S split to Busch Blvd	LR-16 Busch Blvd. to 30th St.	LR-17 West Shore Dr to St. Pete		LR-19 E Fletcher/ 31st St to N 37th St	LR-20 Airport to at grade section	LR-21 Airport (north) to Hillsborough	LR-22 Hillsborough to CSX	LR-23 On CSX to west of Sheldon	LR-24 Nebraska Ave. to CSX N/S split	Maintenance Facility	Vehicles	Alternative Total
Length (Mile):		1.1	0.9	1.9	1.5	5.9	0.7	0.5	0.4	0.4	2.5	1.0	7.1	0.7	75)	5.3	2.7	8.0	3.3	1.2	0.8	1.0	3.1	4.4	1.7			60.8
Number of Stations:		0	1	2	1.5	6	1	0.5	1	1	2.0	1.0	8	0.7	4.0	5.5	2.7	0.0	3	1	1	1.0	2	4.4	2			51
Number of Revenue		v		_		Ü		-	•	•	2	,	Ü	Ū	7	<u> </u>	-	0	3	'	,		-	•	2		147	147
10 GUIDEWAY & TRA	CK ELEMENTS																											
10.01 Guideway:	At-grade exclusive right-of-way	\$3.21	\$2.65	\$5.79	\$4.42	\$16.61	\$0.00	\$0.00	\$0.00	\$0.62	\$6.77	\$2.5	7 \$21.07	\$1.8	\$0.00	\$15.51	\$8.13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7.39	\$13.03	\$5.02			\$114.69
10.02 Guideway:	At-grade semi-exclusive (allows cross-traffic)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3.03	\$0.81	1 \$2.01	\$0.97	\$0.00	\$0.0	0 \$0.00	\$0.0	\$21.33	\$0.00	\$0.00	\$0.00	\$15.06	\$5.50	\$0.00	\$0.00	\$2.45	\$0.00	\$0.00			\$51.16
10.03 Guideway:	At-grade in mixed traffic	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00
10.04 Guideway:	Aerial structure	\$0.78	\$0.00	\$0.00	\$0.00	\$6.24	\$0.00	\$8.13	3 \$0.00	\$0.00	\$8.58	\$5.7	2 \$0.00	\$3.1	2 \$0.00	\$1.17	\$0.00	\$138.39	\$0.00	\$0.00	\$20.74	\$0.00	\$0.78	\$0.39	\$0.00			\$194.03
10.05 Guideway:	Built-up fill	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00
10.06 Guideway:	Underground cut & cover	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.29	\$111.45	\$0.00	\$0.00	\$0.00			\$112.75
10.07 Guideway:	Underground tunnel	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00
10.08 Guideway:	Retained cut or fill	\$0.00	\$0.00	\$0.00	\$0.00	\$3.33	\$0.00	\$2.50	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$102.05	\$0.00	\$0.00	\$7.07	\$0.00	\$5.20	\$0.00	\$0.00			\$120.15
10.09 Track: Dire	ect fixation	\$0.09	\$0.00	\$0.00	\$0.00	\$0.75	\$0.00	\$1.02	2 \$0.00	\$0.00	\$1.12	\$0.7	5 \$0.00	\$0.3	7 \$0.00	\$0.14	\$0.00	\$16.67	\$0.00	\$0.00	\$3.13	\$4.96	\$0.56	\$0.05	\$0.00			\$29.61
10.10 Track: Eml	bedded	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3.91	\$1.05	5 \$2.59	\$1.25	\$0.00	\$0.0	0 \$0.00	\$0.0	\$27.47	\$0.00	\$0.00	\$0.00	\$19.40	\$7.08	\$0.00	\$0.00	\$3.16	\$0.00	\$0.00			\$65.89
10.11 Track: Ball	lasted	\$3.15	\$2.60	\$5.68	\$4.34	\$16.74	\$0.00	\$0.33	3 \$0.00	\$0.61	\$6.64	\$2.5	2 \$20.68	\$1.8	\$0.00	\$15.22	\$7.98	\$13.54	\$0.00	\$0.00	\$0.39	\$0.00	\$7.25	\$12.79	\$4.92			\$127.25
10.12 Track: Spe	ecial (switches, turnouts)	\$0.49	\$0.39	\$0.85	\$0.65	\$2.62	\$0.59	\$0.36	\$0.39	\$0.28	\$1.16	\$0.4	9 \$3.10	\$0.3	3 \$4.12	\$2.30	\$1.20	\$4.53	\$2.91	\$1.06	\$0.53	\$0.74	\$1.64	\$1.93	\$0.74			\$33.41
10.13 Track: Vibr	ration and noise dampening	\$0.19	\$0.16	\$0.34	\$0.26	\$1.00	\$0.00	\$0.02	2 \$0.00	\$0.04	\$0.40	\$0.1	5 \$1.24	\$0.1	1 \$0.00	\$0.91	\$0.48	\$0.81	\$0.00	\$0.00	\$0.02	\$0.00	\$0.44	\$0.77	\$0.30			\$7.63
	Subtotal Category 10	\$7.91	\$5.80	\$12.67	\$9.67	\$47.29	\$7.53	\$14.22	2 \$4.98	\$3.76	\$24.66	\$12.2	0 \$46.09	\$7.6	\$52.91	\$35.27	\$17.79	\$276.00	\$37.37	\$13.64	\$33.17	\$117.16	\$28.87	\$28.95	\$10.97			\$856.55
20 STATIONS, STOPS	S, TERMINALS, INTERMODAL																											
20.01 At-grade st	tation, stop, shelter, mall, terminal, platform	\$0.00	\$3.60	\$7.20	\$3.60	\$21.60	\$3.60	\$7.20	\$3.60	\$3.60	\$7.20	\$3.6	0 \$28.80	\$0.0	\$14.40	\$18.00	\$7.20	\$0.00	\$10.80	\$3.60	\$3.60	\$0.00	\$7.20	\$14.40	\$7.20			\$180.00
20.02 Aerial statio	on, stop, shelter, mall, terminal, platform	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00
20.03 Undergrour	nd station, stop, shelter, mall, terminal, platform	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$58.50	\$0.00	\$0.00	\$0.00			\$58.50
20.04 Other statio	ons, landings, terminals: Intermodal, ferry, trolley, etc.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00
20.05 Joint develo	opment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00
20.06 Automobile	e parking multi-story structure	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	0 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00
20.07 Elevators, e	escalators	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.02	\$1.0	2 \$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.56	\$0.00	\$0.00	\$0.00			\$3.60
	Subtotal Category 20	\$0.00	\$3.60	\$7.20	\$3.60	\$21.60	\$3.60	\$7.20	\$3.60	\$3.60	\$8.22	\$4.6	2 \$28.80	\$0.0	\$14.40	\$18.00	\$7.20	\$0.00	\$10.80	\$3.60	\$3.60	\$60.06	\$7.20	\$14.40	\$7.20			\$242.10

Preferred LRT

System Planning

Preferred LRT

LD Decedes Fed	I D C: Ct	I D Deventering	I D 1975	T
			(2007 Doll	lars ir
			Capital C	Cost E
			Light I	Rail T
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							lia a a					•	liars in Millions)					1	1									
			-Airport		LR-Brandon Ex		LR-Cypress St.		LR-Downtown			-I275	1	Dill AFB	LR-NE Ext	LR-N		LR-Tampa Bay		niversity			estchase		LR-Ybor City			
		LR-01	LR-02	LR-03	LR-04	LR-05	LR-06	LR-07	LR-08	LR-09	LR-10	LR-11	LR-12	LR-13	LR-14	LR-15	LR-16	LR-17	LR-18	LR-19	LR-20	LR-21	LR-22	LR-23	LR-24			
CAT		Airport Sta to George Bean			CSX main line 8	East of CSX mainline & Yard		N Boulevard to Tampa St.	N N Tampa St. to Marion St./ E	N N Marion/ E Poll to N Nebraska	k Armenia Ave to West Shore Dr.				n Bruce B Downs/ 37th to Pebble	CSX N/S split to Busch Blvd	Busch Blvd. to 30th St.	West Shore Dr to St. Pete	 30th St to Maple Dr to Fletcher/ 			Airport (north) to Hillsborough	Hillsborough to CSX	of Sheldon	st Nebraska Ave. to CSX N/S split	Maintenance		
No.	Description	Parkway	St along Spruce	(Yard	to Kingsway	Trask St	g rampa ot.	Polk St.	Ave	West online Dr.	Amenia Ave.			Creek (east of I-	Duscii Divu	3011 01.	Ot. 1 etc	31st (Univ)	Ot 1014 57111 Ot	grade section	Tilliaborougii	OOX	or orieldori	COX 14/O Split	Facility	Vehicles	Alternative To
			St.												75)													
30 SUPPORT F	ACILITIES: YARDS, SHOPS, ADMIN. BLDGS																											
30.01 Adm	inistration Building: Office, sales, storage, revenue counting																									\$0.00		\$0.0
30.02 Ligh	t Maintenance Facility																									\$0.00		\$0.
30.03 Hea	vy Maintenance Facility																									\$275.63		\$275.
30.04 Stor	age or Maintenance of Way Building																									\$0.00		\$0.0
30.05 Yard	and Yard Track																									\$2.32		\$2.
	Subtotal Category 30																									\$277.95		\$277.9
40 SITEWORK	SPECIAL CONDITIONS																											
	nolition, Clearing, Earthwork	\$0.23	\$0.18	\$0.4	0 \$0.31	\$1.26	\$0.23	\$0.17	7 \$0.15	\$0.11	\$0.55	\$0.23	\$ \$1.46	\$0.16	\$1.58	\$1.09	\$0.56	\$2.76	\$1.12	\$0.41	\$0.27	7 \$0.62	\$0.7	3 \$0.9	1 \$0.35			\$15.
	Utilities, Utility Relocation	\$1.08		\$1.8												\$5.09	\$2.63											\$90.
	mat'l, contam'd soil removal/mitigation, ground water treatments	\$0.15		\$0.2												\$0.72	\$0.38								•			\$8.
	ronmental mitigation, e.g. wetlands, historic/archeologic, parks	\$0.38		\$0.6												\$1.80	\$0.94				\$0.26							\$20.
	structures including retaining walls, sound walls	\$0.06		\$0.1				•								\$0.29	\$0.15				\$0.01							\$2.4
	estrian / bike access and accommodation, landscaping	\$0.16		\$0.3								• • • • • • • • • • • • • • • • • • • •				\$0.91	\$0.44				\$0.46							\$19.4
	emobile, bus, van accessways including roads, parking lots	\$0.00		\$0.5												\$1.56	\$3.12											\$119.7
	porary Facilities and other indirect costs during construction	\$0.10	\$0.11	\$0.2			\$0.82	\$0.13			\$0.35	\$0.16	\$0.89	\$0.07	\$2.43	\$0.55	\$0.40			\$0.57	\$0.17	7 \$0.36	\$0.5	7 \$0.79	5 \$0.15			\$13.33
	Subtotal Category 40	\$2.15		\$4.3												\$12.00	\$8.62				\$3.61	• • • • • • • • • • • • • • • • • • • •			• • • •			\$290.3
50 SYSTEMS																												
	n control and signals	\$1.74	\$1.41	\$3.0	8 \$2.35	\$9.31	\$1.04	\$0.79	9 \$0.69	\$0.66	\$3.95	\$1.60	\$11.20	\$1.12	\$7.29	\$8.29	\$4.32	\$12.69	\$5.15	\$1.88	\$1.21	1 \$1.59	\$4.9	\$6.9	4 \$2.67			\$95.9
	fic signals and crossing protection	\$0.86		\$1.4												\$4.03	\$2.01				\$0.00				•			\$39.4
	tion power supply: substations	\$2.99		\$2.9												\$8.97	\$4.49				\$1.50							\$110.0
	tion power distribution: catenary and third rail	\$0.00	\$0.00	\$0.0				\$0.00	0 \$0.00					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00			\$0.00	0 \$0.00			\$0.0
	nmunications	\$1.60		\$3.9												\$10.53	\$5.14				\$1.70				• • • • • • • • • • • • • • • • • • • •			\$117.
	collection system and equipment	\$0.00		\$0.5								\$0.25				\$1.27	\$0.51	\$0.00			\$0.25							\$12.
50.07 Cen		\$0.00		\$0.0												\$0.00	\$0.00				\$0.00				•			\$0.0
	Subtotal Category 50	\$7.19	\$5.61	\$12.0	0 \$9.49	\$36.15	5 \$4.83	\$4.84	4 \$3.99	\$4.05	\$15.47	\$7.48	\$45.59	\$4.23	\$28.94	\$33.08	\$16.47	\$37.85	\$21.29	\$8.47	\$4.66	\$6.88	\$19.6	7 \$27.59	9 \$10.92			\$376.7
Sub	total Construction Costs	\$17.26	s \$17.31	\$36.2	5 \$26.21	\$129.20	\$33.93	\$29.18	8 \$16.5	\$ \$13.75	\$55.88	\$27.68	\$139.91	\$13.44	\$149.20	\$98.35	\$50.09	\$344.68	\$104.07	\$38.16	\$45.03	3 \$191.97	\$68.0	3 \$87.2°	1 \$32.43	\$277.95		\$2.043.74
			•	• • • • • • • • • • • • • • • • • • • •			• • • • • • • • • • • • • • • • • • • •				• • • • • • • • • • • • • • • • • • • •					• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •					• • • • •					1

Hillsborough County MPO Transit Study System Planning Preferred LRT

System Planning
Light Rail Transit
Capital Cost Estimate

												(2007 Dol	llars in Millions)															
		LR-Airp	oort		LR-Brandon Ext		LR-Cypress St.		LR-Downtown		LR-	1275	LR-Mad	Dill AFB	LR-NE Ext	LR-N	lorth	LR-Tampa Bay	LR-Unive	ersity		LR-W	/estchase		LR-Ybor City			
CAT Description	LR- Airport George Park	Sta to Bean Pa	LR-02 George Bean arkway to Trask St along Spruce St.	LR-03 Downtown to CL Rail (east of Acline St)	LR-04 East of Acline to CSX main line & Yard	LR-05 East of CSX mainline & Yard to Kingsway	LR-06 Spruce St to Cypress St along Trask St	LR-07 N Boulevard to N Tampa St.	LR-08 N Tampa St. to N Marion St./ E Polk St.	LR-09 N Marion/ E Polk to N Nebraska Ave	LR-10 Armenia Ave to West Shore Dr.	LR-11 N Boulevard to Armenia Ave.		LR-13 E Polk/ N Marion to N Boulevard/ Tampa Prep Pl	LR-14 Bruce B Downs/ 37th to Pebble Creek (east of I- 75)	LR-15 CSX N/S split to Busch Blvd	LR-16 Busch Blvd. to 30th St.	LR-17 West Shore Dr to St. Pete		LR-19 Fletcher/ 31st St to N 37th St	LR-20 Airport to at grade section	LR-21 Airport (north) to Hillsborough		LR-23 On CSX to wes of Sheldon	LR-24 t Nebraska Ave. to CSX N/S split	Maintenance Facility	Vehicles	Alternative To
60 ROW, LAND, EXISTING IMPROVEMENTS																												
60.01 Purchase or lease of real estate		\$3.47	\$2.83	\$6.18	\$4.72	\$18.55	\$2.08	\$1.41	\$1.38	\$1.33	\$7.76	\$3.10	\$22.48	\$2.20	\$14.62	\$16.62	\$8.68	\$22.77	\$10.33	\$3.77	\$1.99	\$2.00	0 \$9.91	1 \$13.92	\$5.35	\$15.00		\$202.43
Subtotal Right-of-Way		\$3.47	\$2.83	\$6.18	\$4.72	\$18.55	\$2.08	\$1.41	\$1.38	\$1.33	\$7.76	\$3.10	\$22.48	\$2.20	\$14.62	\$16.62	\$8.68	\$22.77	\$10.33	\$3.77	\$1.99	\$2.00	0 \$9.91	1 \$13.92	\$5.35	\$15.00		\$202.43
70 VEHICLES																												
70.01 Streetcar																											\$582.12	2 \$582.12
Subtotal Vehicles																											\$582.12	2 \$582.12
80 PROFESSIONAL SERVICES																												
80.01 Preliminary Engineering	4.0%	\$0.69	\$0.69	\$1.45	\$1.05	\$5.17	\$1.36	\$1.17	\$0.66	\$0.55	\$2.24	\$1.11	\$5.60	\$0.54	\$5.97	\$3.93	\$2.00	\$13.79	\$4.16	\$1.53	\$1.80	\$7.68	8 \$2.72	2 \$3.49	\$1.30	\$11.12		\$81.75
80.02 Final Design	6.0%	\$1.04	\$1.04	\$2.17	\$1.57	\$7.75	\$2.04	\$1.75	\$0.99	\$0.82	\$3.35	\$1.66	\$8.39	\$0.81	\$8.95	\$5.90	\$3.01	\$20.68	\$6.24	\$2.29	\$2.70	\$11.52	2 \$4.08	8 \$5.2	\$1.95	\$16.68		\$122.62
80.03 Project Management for Design and Construction	5.0%	\$0.86	\$0.87	\$1.81	\$1.31	\$6.46	\$1.70	\$1.46	\$0.83	\$0.69	\$2.79	\$1.38	\$7.00	\$0.67	\$7.46	\$4.92	\$2.50	\$17.23	\$5.20	\$1.91	\$2.25	\$9.60	\$3.40	\$4.30	\$1.62	\$13.90		\$102.19
80.04 Construction Administration & Management	8.0%	\$1.38	\$1.38	\$2.90	\$2.10	\$10.34	\$2.71	\$2.33	\$1.32	\$1.10	\$4.47	\$2.21	\$11.19	\$1.07	\$11.94	\$7.87	\$4.01	\$27.57	\$8.33	\$3.05	\$3.60	\$15.36	6 \$5.45	5 \$6.98	\$2.59	\$22.24		\$163.50
80.05 Insurance	2.0%	\$0.35	\$0.35	\$0.72	\$0.52	\$2.58	\$0.68	\$0.58	\$0.33	\$0.27	\$1.12	\$0.55	\$2.80	\$0.27	\$2.98	\$1.97	\$1.00	\$6.89	\$2.08	\$0.76	\$0.90	\$3.84	4 \$1.36	6 \$1.74	\$0.65	\$5.56		\$40.87
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.	3.0%	\$0.52	\$0.52	\$1.09	\$0.79	\$3.88	\$1.02	\$0.88	\$0.50	\$0.41	\$1.68	\$0.83	\$4.20	\$0.40	\$4.48	\$2.95	\$1.50	\$10.34	\$3.12	\$1.14	\$1.35	\$5.76	6 \$2.04	4 \$2.62	\$0.97	\$8.34		\$61.31
80.07 Surveys, Testing, Investigation, Inspection	3.0%	\$0.52	\$0.52	\$1.09	\$0.79	\$3.88	\$1.02	\$0.88	\$0.50	\$0.41	\$1.68	\$0.83	\$4.20	\$0.40	\$4.48	\$2.95	\$1.50	\$10.34	\$3.12	\$1.14	\$1.35	\$5.76	6 \$2.04	4 \$2.62	\$0.97	\$8.34		\$61.31
80.08 Start up	1.0%	\$0.17	\$0.17	\$0.36	\$0.26	\$1.29	\$0.34	\$0.29	\$0.17	\$0.14	\$0.56	\$0.28	\$1.40	\$0.13	\$1.49	\$0.98	\$0.50	\$3.45	\$1.04	\$0.38	\$0.45	\$1.92	2 \$0.68	3 \$0.8	\$0.32	\$2.78		\$20.44
Subtotal Professional Services	LS	\$5.52	\$5.54	\$11.60	\$8.39	\$41.34	\$10.86	\$9.34	\$5.29	\$4.40	\$17.88	\$8.86	\$44.77	\$4.30	\$47.74	\$31.47	\$16.03	\$110.30	\$33.30	\$12.21	\$14.41	\$61.43	3 \$21.78	8 \$27.9	\$10.38	\$88.94	\$0.00	0 \$654.00
90 UNALLOCATED CONTINGENCY	10.0%	\$2.62	\$2.57	\$5.40	\$3.93	\$18.91	\$4.69	\$3.99	\$2.32	\$1.95	\$8.15	\$3.96	\$20.72	\$1.99	\$21.16	\$14.64	\$7.48	\$47.77	\$14.77	\$5.41	\$6.14	\$25.54	4 \$9.98	3 \$12.90	\$4.82	\$38.19	\$58.21	1 \$348.23
Project Total		\$28.87	\$28.24	\$59.43	\$43.25	\$208.00	\$51.55	\$43.92	\$25.52	\$21.42	\$89.67	\$43.60	\$227.88	\$21.93	\$232.73	\$161.08	\$82.27	\$525.52	\$162.47	\$59.56	\$67.58	\$280.94	4 \$109.74	4 \$141.9	\$52.98	\$420.08	\$640.33	3 \$3,830.51

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	COST
10	GUIDEWAY & TRACK ELEI	MENTS						
0.01	Guideway: At-grade exclusive	e right-of-way						
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	Ş
	Double Track	At Grade - Ballasted, Open	5,708	RF	\$450	\$2,568,506	25%	\$3,210,63
		Element Total	5,708	RF		\$2,568,506		\$3,210,63
0.02	Guideway: At-grade semi-ex	,						
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
n n3	Guideway: At-grade in mixed	traffic						
0.03	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	
	Double Hack	Element Total	0	RF	φοσο	\$0	23 /0	!
0.04	Guideway: Aerial structure							
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	
	Double Track	Aerial - Direct Fixation Over Water	100	RF	\$6,000	\$600,000	30%	\$780,0
		Element Total	100	RF	· ,	\$600,000		\$780,0
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		;
0.06	Guideway: Underground cut							
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0 07	Guideway: Underground tuni	nel						
0.0.	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
		Element Total	0	RF		\$0		
n ng	Guideway: Retained cut or fil	ı						
0.00		Detained Cut. Diseat Fiveties		DE	#C 000	\$0	30%	
0.00	Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	**		
0.00	Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0	RF RF	\$6,800	\$0	30%	
0.00							30% 30%	
0.00	Single Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0	RF RF RF	\$2,800	\$0 \$0 \$0		
0.00	Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0	RF RF	\$2,800 \$8,000	\$0 \$0	30%	
	Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30%	
	Single Track Double Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30%	
	Single Track Double Track Double Track Track: Direct fixation	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0	30% 30%	\$93,1
0.09	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track	0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405	\$0 \$0 \$0 \$0 \$0 \$0	30% 30% 15%	\$93,1
0.09	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 100	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$81,000	30% 30% 15% 15%	\$93,1 \$93,1
0.09	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 0 0 0 100 100	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$81,000 \$81,000	30% 30% 15% 15%	
0.09	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 100	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$81,000	30% 30% 15% 15%	
).09).10	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 100 100	RF RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$81,000 \$81,000	30% 30% 15% 15%	\$93,1 \$93,1
0.09	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track Track: Embedded Single Track Track: Embedded Single Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Element Total	0 0 0 0 100 100	RF RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810 \$490 \$980	\$0 \$0 \$0 \$0 \$0 \$81,000 \$81,000 \$0 \$0	30% 30% 15% 15%	
0.09	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 100 100	RF RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$81,000 \$81,000	30% 30% 15% 15%	\$93,1 \$93,1

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12	Track: Special (switches, tu	rnouts)						
10.12	Track. Opecial (Switches, ta	Special Trackwork (15% of Track Cost)	15%			\$423,111	15%	\$486,578
		Element Total	1070	LS		\$423,111	1070	\$486,578
						*,		*,
10.13	Track: Vibration and noise	dampening Vibration Allowance (6% of Ballasted Track	6%			\$164,384	15%	\$189,042
		Cost)	076			φ104,304	1370	φ109,042
		Element Total	1	LS		\$164,384		\$189,042
20	STATIONS, STOPS, TERM	INALS. INTERMODAL						
	At-grade station, stop, shelte							
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$(
		Center Platform Station	0	EA	\$3,000,000	\$0	20%	\$(
		Element Total	0	EA		\$0		\$
20.02	Aerial station, stop, shelter,	mall, terminal, platform						
	•••	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	\$
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	\$
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA	, ,	\$0		\$
20.03	Underground station, stop, s	shelter, mall, terminal, platform						
	, , ,	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	\$
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	\$
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	\$
		Element Total	0	EA		\$0		\$
20.04	Other stations, landings, ten	minals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		\$(
20.05	Joint development							
		N/A Element Total	1	LS		\$0		\$(
20.06	Automobile parking multi-sto	ory structure						
		Parking Garage	0	STL	\$12,000	\$0	20%	\$(
		Element Total	1	LS	,	\$0		\$(
20 07	Elevators, escalators							
	=.ovato.o, occanato.o	Eleavator	0	EA	\$200,000	\$0	20%	\$
		Escalator	0	EA	\$450,000	\$0	20%	\$(
		Element Total	1	LS	, , , , , , , , ,	\$0		\$
40	SITEWORK & SPECIAL CO							
+U.U'l	Demolition, Clearing, Earthw		E 700	DE	ድያስ	¢171 004	300/	മോദ ഭവ
		Demolition Allowance - Low	5,708	RF	\$30 \$50	\$171,234	30%	\$222,60
		Demolition Allowance - Median	100	RF	\$50 \$00	\$5,000	30%	\$6,50
		Demolition Allowance - High Element Total	5,808	RF RF	\$90	\$0 \$176,234	30%	\$229,10
			,			,		, -
10.02	Site Utilities, Utility Relocation	on Utility Relocation Allowance - Low	5,708	RF	\$140	\$799,091	30%	\$1,038,81
		Utility Relocation Allowance - Median	100	RF	\$340	\$34,000	30%	\$44,20
		Utility Relocation Allowance - High	0	RF	\$570	\$34,000	30%	\$44,20
		Element Total	5,808	RF	ψυτυ	\$833,091	JU /0	\$1,083,01
10.00	Her mostly agreement and							
£U.U3	naz. mati, contam'd soil ren	noval/mitigation, ground water treatments	E 000	DE	ድጋቢ	¢116 156	300/	¢1E1 00
		Hazardous Material Removal Allowance	5,808	RF	\$20	\$116,156 \$116,156	30%	\$151,00 \$151,00
		Element Total	1	LS		\$116,156		φ101,0

	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	g. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	5,808	RF	\$50	\$290,390	30%	\$377,500
		Element Total	1	LS		\$290,390		\$377,500
0.05	Site structures including retain	ining walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	571	RF	\$80	\$45,662	30%	\$59,36
		Element Total	1	LS		\$45,662		\$59,36
IO 06	Pedestrian / hike access and	accommodation, landscaping						
.0.00	1 odobilan / bino doodo and	Landscaping Allowance - Low	5,708	RF	\$15	\$85,617	30%	\$111,30
		Landscaping Allowance - Median	100	RF	\$25	\$2,500	30%	\$3,25
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$
		Artwork (1% of Guideway & Stations)	1%		, ,	\$31,685	30%	\$41,19
		Element Total	1	LS		\$119,802		\$155,74
10.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$
		Parking Lots	0	STL	\$4,000	\$0	30%	\$
		Element Total	1	LS		\$0		\$
10.08	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$79,067	25%	\$98,83
		Element Total	1	LS		\$79,067		\$98,83
50.01	Train control and signals Single Track	Signal System	0	RF	\$240	\$0	15%	\$(
	Double Track	Signal System	5,808	RF	\$260	\$1,510,026	15%	\$1,736,530
		Element Total	5,808	RF		\$1,510,026		\$1,736,530
50.02	Traffic signals and crossing p	protection						
	rame eignale and erecoming p							
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$(
		Traffic Signal Crossing Protection	0	EA EA	\$150,000 \$250,000	\$0 \$750,000	15% 15%	
		Traffic Signal Crossing Protection Element Total		EA EA		\$0 \$750,000 \$750,000	15% 15%	\$862,500
50.03	Traction power supply: subs	Crossing Protection Element Total	3	EA		\$750,000		\$862,50
50.03	Traction power supply: subs	Crossing Protection Element Total	3	EA		\$750,000		\$862,500 \$862,500
50.03	Traction power supply: subs	Crossing Protection Element Total tations	3	EA EA	\$250,000	\$750,000 \$750,000	15%	\$862,500 \$862,500 \$2,990,000
	Traction power supply: subs	Crossing Protection Element Total tations Traction Power, Substation Element Total	3 3	EA EA	\$250,000	\$750,000 \$750,000 \$2,600,000	15%	\$862,500 \$862,500 \$2,990,000
		Crossing Protection Element Total tations Traction Power, Substation Element Total	3 3	EA EA	\$250,000	\$750,000 \$750,000 \$2,600,000	15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000
	Traction power distribution:	tations Traction Power, Substation Element Total tations Traction Power, Substation Element Total catenary and third rail	2 2	EA EA EA	\$250,000 \$1,300,000	\$750,000 \$750,000 \$2,600,000 \$2,600,000	15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000
	Traction power distribution: (Single Track	tations Traction Power, Substation Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard	3 3 2 2	EA EA EA	\$250,000 \$1,300,000 \$240	\$750,000 \$750,000 \$2,600,000 \$2,600,000	15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530
50.04	Traction power distribution: (Single Track	tations Traction Power, Substation Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard	3 3 2 2 2 0 5,808	EA EA EA RF RF	\$250,000 \$1,300,000 \$240	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$0 \$1,510,026	15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530
50.04	Traction power distribution: o Single Track Double Track	tations Traction Power, Substation Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard	3 3 2 2 2 0 5,808	EA EA EA RF RF	\$250,000 \$1,300,000 \$240	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$0 \$1,510,026	15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,533 \$0
50.04	Traction power distribution: o Single Track Double Track	tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total	3 3 2 2 2 0 5,808 5,808	EA EA EA RF RF RF EA	\$250,000 \$1,300,000 \$240 \$260	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870 \$0	15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950
50.04	Traction power distribution: o Single Track Double Track	Crossing Protection Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	3 3 2 2 2 0 5,808 5,808	EA EA EA RF RF RF	\$250,000 \$1,300,000 \$240 \$260	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870	15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950
50.04 50.05	Traction power distribution: o Single Track Double Track	tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	3 3 2 2 2 0 5,808 5,808	EA EA EA RF RF RF EA	\$250,000 \$1,300,000 \$240 \$260	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870 \$0	15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950
50.04 50.05	Traction power distribution: 6 Single Track Double Track Communications	tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	3 3 2 2 2 0 5,808 5,808	EA EA EA RF RF RF EA	\$250,000 \$1,300,000 \$240 \$260	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870 \$0	15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950
50.04 50.05	Traction power distribution: 6 Single Track Double Track Communications	Crossing Protection Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	3 3 3 2 2 2 5,808 5,808 5,808	EA EA EA EA RF RF EA LS	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870 \$0 \$1,393,870	15% 15% 15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950
50.04 50.05	Traction power distribution: 6 Single Track Double Track Communications	Crossing Protection Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform	3 3 3 2 2 2 5,808 5,808 5,808	EA EA EA EA LS EA	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870 \$0 \$1,393,870	15% 15% 15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950 \$1,602,950
50.04 50.05 50.06	Traction power distribution: of Single Track Double Track Communications Fare collection system and e	Crossing Protection Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	3 3 3 2 2 2 2 5,808 5,808 5,808	EA EA EA RF RF EA LS EA EA	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870 \$0 \$1,393,870	15% 15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950 \$1,602,950
50.04 50.05 50.06	Traction power distribution: 6 Single Track Double Track Communications	Crossing Protection Element Total tations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	3 3 3 2 2 2 2 5,808 5,808 5,808	EA EA EA RF RF EA LS EA EA	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$750,000 \$750,000 \$2,600,000 \$2,600,000 \$1,510,026 \$0 \$1,393,870 \$0 \$1,393,870	15% 15% 15% 15% 15%	\$862,500 \$862,500 \$2,990,000 \$2,990,000 \$1,736,530 \$1,602,950 \$1,602,950 \$1,602,950

IIVAIN	SII WODE: LKI								
CAT	STATIC	DNING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMF	PROVEMENTS						
60.01	Purchase or lease	e of real est	ate						
			Right of Way Allowance - At Grade	5,708	RF	\$400	\$2,283,116	50%	\$3,424,675
			Right of Way Allowance - Aerial	100	RF	\$300	\$30,000	50%	\$45,000
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	5,808	RF		\$2,313,116		\$3,469,675
İ									

Hillsborough County MPO Transit Study System Planning

LR-Airport

George Bean Parkway to Trask St along Spruce St.

	STATIONIN BEGIN E	G END DESCRIPTION	QTY	UNIT	UNIT	BASE COST	ALLCTD CONTGY	COST
10	GUIDEWAY & TRACE	KELEMENTS						
0.01	Guideway: At-grade ex							
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track	At Grade - Ballasted, Open	4,711	RF	\$450	\$2,120,134	25%	\$2,650,16
		Element Total	4,711	RF		\$2,120,134		\$2,650,16
0.02		emi-exclusive (allows cross-traffic)	0	DE	* 440	ФО.	050/	4
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	9
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	9
	Double Track Double Track	At Grade - Ballasted, In-Street At Grade - Embedded, In-Street	0	RF	\$530 \$700	\$0 \$0	25%	9
	Double Track	Element Total	0	RF RF	\$700	\$0 \$0	25%	
0 03	ß Guideway: At-grade in	mixed traffic						
0.00	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	9
	Bouble Huok	Element Total	0	RF	Ψοσο	\$0	2070	\$
0.04	Guideway: Aerial struc	ture						
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	9
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	9
	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	9
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	Ş
	Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	\$
	Double Track	Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0	30%	;
		Element Total	0	RF		\$0		
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	9
	Double Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$600	\$0 \$0	25%	
0.06	Guideway: Undergrou Single Track Double Track	Subway - Direct Fixation Subway - Direct Fixation	0 0	RF RF	\$10,000 \$15,500	\$0 \$ 0	35% 35%	9
0.06	Single Track	Subway - Direct Fixation						
	Single Track Double Track 'Guideway: Undergrou	Subway - Direct Fixation Subway - Direct Fixation Element Total nd tunnel	0	RF RF	\$15,500	\$0 \$0	35%	5
	Single Track Double Track Guideway: Undergrout Single Track	Subway - Direct Fixation Subway - Direct Fixation Element Total nd tunnel Subway - Direct Fixation	0	RF RF	\$15,500 \$12,000	\$0 \$0 \$0	35% 35%	
	Single Track Double Track 'Guideway: Undergrou	Subway - Direct Fixation Subway - Direct Fixation Element Total nd tunnel	0	RF RF	\$15,500	\$0 \$0	35%	
0.07	Single Track Double Track Guideway: Undergrout Single Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total nd tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0 0	RF RF RF RF	\$15,500 \$12,000	\$0 \$0 \$0 \$0	35% 35%	; ;
0.07	Single Track Double Track Guideway: Undergrout Single Track	Subway - Direct Fixation Subway - Direct Fixation Element Total nd tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0 0	RF RF RF RF	\$15,500 \$12,000	\$0 \$0 \$0 \$0	35% 35%	\$ \$ \$
0.07	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained c	Subway - Direct Fixation Subway - Direct Fixation Element Total nd tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total ut or fill	0 0 0 0	RF RF RF RF RF	\$15,500 \$12,000 \$20,000	\$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35%	\$ \$ \$
0.07	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained c Single Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total ut or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0 0	RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800	\$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35%	
0.07	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained ct Single Track Single Track Single Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total ut or fill Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0 0 0	RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30%	
0.07	Single Track Double Track Guideway: Undergroute Single Track Double Track Guideway: Retained coming track Single Track Single Track Double Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total ut or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0 0 0	RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30% 30%	
0.07	Single Track Double Track Guideway: Undergroute Single Track Double Track Guideway: Retained coming track Single Track Single Track Double Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Element Total	0 0 0 0 0	RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30% 30%	
0.07 0.08	Single Track Double Track Guideway: Undergrouth Single Track Double Track Guideway: Retained comingle Track Single Track Single Track Double Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Element Total	0 0 0 0 0	RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30% 30%	
0.07 0.08	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained c Single Track Single Track Double Track Double Track Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Element Fill - Ballasted Element Total	0 0 0 0 0	RF RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30% 30% 30%	
0.07 0.08	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained ct Single Track Single Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Individual Element Total Subway - Direct Fixation Subway - Direct Fixation Element Total Ut or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track	0 0 0 0 0	RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30% 30% 30%	
0.07 0.08 0.09	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained ct Single Track Single Track Double Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total Ind tunnel Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30% 30% 30% 15%	
0.07	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained c Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Fixation Indicates the subway - Direct Fixation Indicates the subway -	0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 30% 30% 30% 30% 15%	
0.07	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained ct Single Track Single Track Double Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Fixation Indicates the subway - Direct Fixation Indicates the subway -	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 30% 30% 30% 30% 15%	
0.07 0.08 0.09	Single Track Double Track Guideway: Undergrouth Single Track Double Track Guideway: Retained coming Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Fixation Indicates the subway - Direct Fixation Indicates the subway -	0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 30% 30% 30% 30% 15%	
0.07 0.08 0.09	Single Track Double Track Guideway: Undergrout Single Track Double Track Guideway: Retained ct Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track Double Track Track: Embedded Single Track Double Track Track: Embedded Single Track Double Track Track: Ballasted	Subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Fixation Indicates the subway - Direct Fixati	0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 30% 30% 30% 30% 15% 15%	
0.07 0.08 0.09	Single Track Double Track Guideway: Undergrouth Single Track Double Track Guideway: Retained coming Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Total Indicates the subway - Direct Fixation Element Fixation Indicates the subway - Direct Fixation Indicates the subway -	0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 30% 30% 30% 30% 15%	

Hillsborough County MPO Transit Study System Planning LR-Airport

George Bean Parkway to Trask St along Spruce St.

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12 T	Frack: Special (switches, tur	mouts)						
	raem operar (emierice, tar	Special Trackwork (15% of Track Cost)	15%			\$339,221	15%	\$390,10
		Element Total	1	LS		\$339,221	, .	\$390,10
10 42 T	Frank, Vihustian and naise d							
10.13 1	Frack: Vibration and noise d	Vibration Allowance (6% of Ballasted Track Cost)	6%			\$135,689	15%	\$156,04
		Element Total	1	LS		\$135,689		\$156,04
20 S	STATIONS, STOPS, TERMI	NAIS INTERMODAI						
	At-grade station, stop, shelte							
	g ,p,p,	Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	9
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,00
		Element Total	1	EA	**,***,***	\$3,000,000		\$3,600,00
0.02 A	Aerial station, stop, shelter, n	nall, terminal, platform						
	., ,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	9
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	9
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	9
		Element Total	0	EA		\$0		Ç
20.03 L	Jnderground station, stop, st	helter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	9
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	;
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	:
		Element Total	0	EA		\$0		
20.04 C	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		9
		Liement Total		LO		ΨΟ		4
20.05 J	loint development	N/A						
		Element Total	1	LS		\$0		\$
20.06 A	Automobile parking multi-stor	ry structure						
		Parking Garage Element Total	0	STL	\$12,000	\$0 \$0	20%	9
		Element Total	'	LS		ΦΟ		1
20.07 E	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	\$
		Escalator Element Total	0 1	EA LS	\$450,000	\$0 \$0	20%	5
		Element Total	'	LS		Φυ		•
	SITEWORK & SPECIAL CO Demolition, Clearing, Earthwo							
	5 ·	Demolition Allowance - Low	4,711	RF	\$30	\$141,342	30%	\$183,74
		Demolition Allowance - Median	0	RF	\$50	\$0	30%	, , ,
		Demolition Allowance - High	0	RF	\$90	\$0	30%	;
		Element Total	4,711	RF		\$141,342		\$183,74
0.02 S	Site Utilities, Utility Relocation	n						
	, . ,	Utility Relocation Allowance - Low	4,711	RF	\$140	\$659,597	30%	\$857,4
		Utility Relocation Allowance - Median	0	RF	\$340	\$0	30%	(
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	
		Element Total	4,711	RF		\$659,597		\$857,47
10.03 ⊢	Haz. mat'l, contam'd soil rem	oval/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	4,711	RF	\$20	\$94,228	30%	\$122,49
		Element Total	1	LS	4-0	\$94,228	× - / -	\$122,49
						•		,

Hillsborough County MPO Transit Study System Planning

LR-Airport

George Bean Parkway to Trask St along Spruce St. TRANSIT MODE: LRT CAT STATIONING UNIT BASE ALLCTD TOTAL DESCRIPTION UNIT COST CONTGY BEGIN **END** OTY COST COST NO. 40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance RF \$50 \$235,570 30% \$306,242 4,711 Element Total LS \$235,570 \$306,242 40.05 Site structures including retaining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) \$48,999 471 RF \$80 \$37,691 30% Element Total 1 LS \$37,691 \$48,999 40.06 Pedestrian / bike access and accommodation, landscaping Landscaping Allowance - Low \$70.671 4,711 RF \$15 30% \$91,872 Landscaping Allowance - Median 0 RF \$25 \$0 30% \$0 Landscaping Allowance - High 0 RF \$40 \$0 30% \$0 \$800.000 Pedestrain Overpasses 0 FΑ \$0 30% \$0 Artwork (1% of Guideway & Stations) 1% \$51,201 30% \$66,562 Element Total \$121,872 \$158,434 LS 40.07 Automobile, bus, van accessways including roads, parking lots Roadway Modifications Allow. - Full Intersection EΑ \$50,000 n \$0 30% \$0 Roadway Modifications Allow. - AC Paving (incl. Curb & Sidewalk) 0 SF \$30 \$0 30% \$0 Parking Lots \$400,000 \$520,000 100 STL \$4,000 30% Element Total LS \$400,000 \$520,000 40.08 Temporary Facilities and other indirect costs during construction Temporary Facilities (5% of Category 40) \$84,515 25% \$105,644 5.0% Element Total LS \$84,515 \$105,644 SYSTEMS 50.01 Train control and signals Signal System Single Track 0 RF \$240 Signal System Double Track 4,711 RF \$260 \$1,224,966 15% \$1,408,711 Element Total 4 711 RF \$1,224,966 \$1,408,711 50.02 Traffic signals and crossing protection 0 Traffic Signal EΑ \$150,000 \$0 15% \$0 Crossing Protection \$575,000 2 EΑ \$250,000 \$500,000 15% Element Total 2 EΑ \$500,000 \$575,000 50.03 Traction power supply: substations Traction Power, Substation \$1,300,000 \$1,300,000 \$1,495,000 EΑ 15% Element Total \$1,495,000 EΑ \$1,300,000 50.04 Traction power distribution: catenary and third rail OCS System - Standard RF \$240 Single Track 0 \$0 15% \$0 Double Track OCS System - Standard \$1,408,711 4,711 RF \$260 \$1,224,966 15% Flement Total 4,711 RF \$0 \$0 50.05 Communications Communication, Line \$1,130,738 \$1,300,349 4,711 RF \$240 15% Communication, Station EΑ \$500,000 \$500,000 15% \$575,000 **Element Total** LS \$1,630,738 \$1,875,349 1 50.06 Fare collection system and equipment Fare Collection - 1 Platform EΑ \$220,000 \$220,000 15% \$253.000 1 Fare Collection - 2 Platform 0 EΑ \$400,000 \$0 15% \$0 Flement Total LS \$220,000 \$253,000 50.07 Central Control N/A

LS

\$0

\$0

Element Total

Hillsborough County MPO Transit Study System Planning LR-Airport

George Bean Parkway to Trask St along Spruce St.

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMP	ROVEMENTS						
60.01	Purchase or lease	e of real esta	ite						
			Right of Way Allowance - At Grade	4,711	RF	\$400	\$1,884,563	50%	\$2,826,845
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	4,711	RF		\$1,884,563		\$2,826,845
1									

TRANSIT MODE: LR	Γ
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CAT STATIONING NO. BEGIN EN	D DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	COST
10 GUIDEWAY & TRACK E	ELEMENTS						
0.01 Guideway: At-grade excl							
Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	
Double Track	At Grade - Ballasted, Open	10,295	RF	\$450	\$4,632,828	25%	\$5,791,0
	Element Total	10,295	RF		\$4,632,828		\$5,791,0
	ni-exclusive (allows cross-traffic)						
Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
					•		
0.03 Guideway: At-grade in m				4 =00		0=0/	
Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
004.0 : 1							
0.04 Guideway: Aerial structu			DE	# 2.222		0.004	
Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	
Double Track	Aerial - Direct Fixation Over Water Element Total	0	RF RF	\$6,000	\$0 \$0	30%	
0.05 Guideway: Built-up fill							
Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
Double Track	At Grade - Ballasted, Built-up At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
Double Hack	Element Total	0	RF	φοσο	\$0	2570	
0.06 Guideway: Underground	cut & cover						
Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
Double Track	Subway - Direct Fixation	0	RF	\$15,500	\$0	35%	
200010 110011	Element Total	0	RF	V.0,000	\$0		
0.07 Guideway: Underground	tunnel						
Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
Double Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
	Element Total	0	RF	,	\$0		
0.08 Guideway: Retained cut	or fill						
Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	
	Element Total	0	RF		\$0		
0.09 Track: Direct fixation							
Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
Double Track	Direct Fixation Track Element Total	0	RF RF	\$810	\$0 \$0	15%	
		· ·			40		
0.10 Track: Embedded				_			
Single Track	Embedded Track	0	RF	\$490	\$0	15%	
Double Track	Embedded Track Element Total	0	RF RF	\$980	\$0 \$0	15%	
244 Teach Dall 1		-					
).11 Track: Ballasted	Rallasted Track		DE	6040		450/	
Single Track	Ballasted Track	10.205	RF	\$240	\$0	15%	PE 000
Double Track	Ballasted Track	10,295	RF	\$480	\$4,941,683	15%	\$5,682,9
	Element Total	10,295	RF		\$4,941,683		\$5,68

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12	Track: Special (switches, tu	rnoute)						
10.12	Track. Special (Switches, tu	Special Trackwork (15% of Track Cost)	15%			\$741,253	15%	\$852,440
		Element Total	1	LS		\$741,253	1070	\$852,440
0.13	Track: Vibration and noise of	dampening Vibration Allowance (6% of Ballasted Track	6%			\$296,501	15%	\$340,97
		Cost)	0 70			φ290,30 i	1370	φ340,97
		Element Total	1	LS		\$296,501		\$340,970
20	STATIONS, STOPS, TERM	INALS. INTERMODAL						
	At-grade station, stop, shelte							
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$
		Center Platform Station	2	EA	\$3,000,000	\$6,000,000	20%	\$7,200,00
		Element Total	2	EA		\$6,000,000		\$7,200,00
0.02	Aerial station, stop, shelter,	mall, terminal, platform						
	. , , , , ,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	\$
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	\$
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		\$
0 03	Underground station stop s	helter, mall, terminal, platform						
.0.00	ondorground diation, dtop, d	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	\$
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	9
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	9
		Element Total	0	EA	ψ .0,000,000	\$0	0070	
20.04	Other stations, landings, terr	ninals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		\$
20.05	Joint development	N/A						
		N/A Element Total	1	LS		\$0		\$
20.06	Automobile parking multi-sto	ory structure						
	, ,	Parking Garage	0	STL	\$12,000	\$0	20%	\$
		Element Total	1	LS		\$0		\$
0.07	Elevators, escalators							
	,	Eleavator	0	EA	\$200,000	\$0	20%	\$
		Escalator	0	EA	\$450,000	\$0	20%	\$
		Element Total	1	LS		\$0		\$
40	SITEWORK & SPECIAL CO							
.U.U I	Demonition, Oleaning, Earthw	Demolition Allowance - Low	10,295	RF	\$30	\$308,855	30%	\$401,51
		Demolition Allowance - Low Demolition Allowance - Median	10,295	RF	\$50 \$50	\$300,033 \$0	30%	\$401,51
		Demolition Allowance - High	0	RF	\$90	\$0 \$0	30%	\$
		Element Total	10,295	RF	ΨΟΟ	\$308,855	3070	\$401,51
0.02	Site Utilities, Utility Relocation	on Utility Relocation Allowance - Low	10,295	RF	\$140	\$1,441,324	30%	\$1,873,72
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median	10,295	RF	\$140 \$340	\$1,441,324 \$0	30%	\$1,073,72 \$
		Utility Relocation Allowance - Median Utility Relocation Allowance - High	0	RF	\$570	\$0 \$0	30%	\$
		Element Total	10,295	RF	ΨΟΙΟ	\$1,441,324	JU /0	\$1,873,72
0.03	Haz. mat'l, contam'd soil ren	noval/mitigation, ground water treatments	10.205	DE	മാറ	¢205 002	300/	¢067.67
		Hazardous Material Removal Allowance Element Total	10,295	RF LS	\$20	\$205,903 \$205,903	30%	\$267,67 \$267,67
		Liement Total	1	LO		Ψ200,903		φ201,0

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	10,295	RF	\$50	\$514,759	30%	\$669,186
		Element Total	1	LS		\$514,759		\$669,186
40.05	Site structures including retai	ning walls, sound walls						
	·	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	1,030	RF	\$80	\$82,361	30%	\$107,070
		Element Total	1	LS		\$82,361		\$107,070
40 O6	Padaetrian / hika access and	accommodation, landscaping						
40.00	r edestriarr bike access and	Landscaping Allowance - Low	10,295	RF	\$15	\$154,428	30%	\$200,756
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	\$0
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%		φοσο,σσο	\$106,328	30%	\$138,227
		Element Total	1	LS		\$260,756	20,0	\$338,983
40.07	Automobile, bus, van access	ways including roads, parking lots Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving			, ,			
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	100	STL	\$4,000	\$400,000	30%	\$520,000
		Element Total	1	LS	•	\$400,000		\$520,000
40 08	Temporary Facilities and other	er indirect costs during construction						
10.00	romporary r dominos and our	Temporary Facilities (5% of Category 40)	5.0%			\$160,698	25%	\$200,872
		Element Total	1	LS		\$160,698	2070	\$200,872
	SYSTEMS Train control and signals							
00.01	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	10,295	RF	\$260	\$2,676,745	15%	\$3,078,257
		Element Total	10,295	RF		\$2,676,745		\$3,078,257
50.02	Traffic signals and crossing p	protection						
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	5	EA	\$250,000	\$1,250,000	15%	\$1,437,500
		Element Total	5	EA		\$1,250,000		\$1,437,500
50.03	Traction power supply: subst	tations						
50.05	rraction power supply. Subs	Traction Power, Substation	2	EA	\$1,300,000	\$2.600.000	15%	\$2,990,000
		Element Total	2	EA	Ψ1,000,000	\$2,600,000	1070	\$2,990,000
50.04	To all a server distributions							
50.04	Traction power distribution: c Single Track	Catenary and third rail OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard OCS System - Standard	10,295	RF	\$240 \$260	\$2,676,745	15%	\$3,078,257
	Double Hack	Element Total	10,295	RF	\$200	\$2,676,745	15%	\$3,076,237
50.05	Communications	Communication, Line	10,295	RF	\$240	\$2,470,842	150/	\$2,841,468
		Communication, Line Communication. Station	10,295	EA	\$240 \$500,000	\$2,470,842	15% 15%	\$2,641,466
		Element Total	1	LS	\$500,000	\$3,470,842	15%	\$3,991,468
F0 05								
50.06	Fare collection system and e	• •	_	E^	¢000.000	¢440.000	150/	#E00.000
		Fare Collection - 1 Platform	2	EΑ	\$220,000	\$440,000	15%	\$506,000
		Fare Collection - 2 Platform Element Total	<u>0</u>	EA LS	\$400,000	\$0 \$440,000	15%	\$0 \$506,000
		Element Total	1	LO		φ 44 U,UUU		φυυ 0, 000
50.07	Central Control							
		N/A		1.0		M O		Φ0
		Element Total	1	LS		\$0		\$0

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMPR	OVEMENTS						
60.01	Purchase or leas	e of real estate	e						
			Right of Way Allowance - At Grade	10,295	RF	\$400	\$4,118,070	50%	\$6,177,104
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	10,295	RF		\$4,118,070		\$6,177,104

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext

East of Acline to CSX main line & Yard

TRANSII	L M O D	E · I E	ÞΤ

	STATIONING BEGIN EN	D DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	COST
10	GUIDEWAY & TRACK E							
0.01	Guideway: At-grade excl			DE	4050	40	050/	
	Single Track	At Grade - Ballasted, Open At Grade - Ballasted, Open	7.004	RF	\$350	\$0	25%	\$4.404.00
	Double Track	Element Total	7,861 7,861	RF RF	\$450	\$3,537,334 \$3,537,334	25%	\$4,421,66 \$4,421,66
0.02	Guideway: At-grade sem	ni-exclusive (allows cross-traffic)						
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	9
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	9
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	Ş
	Double Track	At Grade - Embedded, In-Street	0	RF	\$700	\$0	25%	;
		Element Total	0	RF		\$0		;
0.03	Guideway: At-grade in m							
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
		Element Total	U	KF		ΦΟ		,
0.04	Guideway: Aerial structu	re Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track Single Track	Aerial - Direct Fixation	0	RF	\$6,200 \$4,600	\$0 \$0	30%	
	Single Track Single Track	Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0	RF	\$4,600 \$5,000	\$0 \$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	
	Double Track	Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0	30%	
		Element Total	0	RF	+-,	\$0		
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		
0.06	Guideway: Underground							
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
				I.L		ΨU		
		Element Total	U					
0.07	Guideway: Underground	tunnel	_	DE	¢12,000	ФО	250/	
0.07	Single Track	tunnel Subway - Direct Fixation	0	RF DE	\$12,000 \$20,000	\$0	35% 35%	
0.07		tunnel	_	RF RF RF	\$12,000 \$20,000	\$0 \$0 \$0	35% 35%	
	Single Track Double Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0	RF		\$0		
0.08	Single Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation	0 0	RF		\$0		
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0	RF RF RF RF	\$20,000 \$6,800 \$2,800	\$0 \$0 \$0 \$0 \$0	35%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0	RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0	RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800	\$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0	RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0	RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0	RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track	0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation Single Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track	0 0 0 0	RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 30%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 15%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 15%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 15%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track Double Track Double Track Double Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 15%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track Track Double Track Track: Embedded Single Track Double Track Track: Ballasted	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Element Total	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 30% 30% 30% 30% 15% 15%	
0.08	Single Track Double Track Guideway: Retained cut Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track Double Track Double Track Double Track	tunnel Subway - Direct Fixation Subway - Direct Fixation Element Total or fill Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 15%	\$4,339,1

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext East of Acline to CSX main line & Yard

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12	Track: Special (switches, tu	rnouts)						
10.12	aok. Opoolal (Switchies, tu	Special Trackwork (15% of Track Cost)	15%			\$565,973	15%	\$650,869
		Element Total	1	LS		\$565,973	1070	\$650,86
								. ,
10.13	Track: Vibration and noise of	dampening Vibration Allowance (6% of Ballasted Track	6%			\$226,389	15%	\$260,34
		Cost)	0 70			\$220,309	1370	φ200,34
		Element Total	1	LS		\$226,389		\$260,34
20	STATIONS, STOPS, TERM	INALS INTERMODAL						
	At-grade station, stop, shelte							
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,000
		Element Total	1	EA		\$3,000,000		\$3,600,00
20.02	Aerial station, stop, shelter,	mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	\$
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	\$
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		\$
20.03	Underground station, stop, s	helter, mall, terminal, platform						
	, ₁ , .	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	\$
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	\$
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	\$
		Element Total	0	EA		\$0		\$
20.04	Other stations, landings, terr	ninals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		\$
20.05	Joint development							
		N/A Element Total	1	LS		\$0		\$
20.06	Automobile parking multi-sto	urv structure						
20.00	Automobilo panang mala oto	Parking Garage	0	STL	\$12,000	\$0	20%	\$(
		Element Total	1	LS	•	\$0		\$(
20.07	Elevators, escalators							
20.07	Lievators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	\$
		Escalator	0	EA	\$450,000	\$0	20%	\$
		Element Total	1	LS	ψ 100,000	\$0	2070	\$
40	SITEWORK & SPECIAL CO	NOITIONS						
	Demolition, Clearing, Earthw							
	, 0,	Demolition Allowance - Low	7,861	RF	\$30	\$235,822	30%	\$306,569
		Demolition Allowance - Median	0	RF	\$50	\$0	30%	\$
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$
		Element Total	7,861	RF		\$235,822		\$306,569
40.02	Site Utilities, Utility Relocation	on						
		Utility Relocation Allowance - Low	7,861	RF	\$140	\$1,100,504	30%	\$1,430,65
		Utility Relocation Allowance - Median	0	RF	\$340	\$0	30%	\$1,100,000
		•	0	RF	\$570	\$0	30%	\$
		Utility Relocation Allowance - High						
		Utility Relocation Allowance - High Element Total	7,861	RF	·	\$1,100,504		\$1,430,65
40.02	Haz mattl contamid on service	Element Total				\$1,100,504		\$1,430,65
40.03	Haz. mat'l, contam'd soil ren				\$20	\$1,100,504 \$157,215	30%	\$1,430,65 \$204,37

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext East of Acline to CSX main line & Yard

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	7,861	RF	\$50	\$393,037	30%	\$510,94
		Element Total	1	LS		\$393,037		\$510,948
0 05	Site structures including retai	ning walls, sound walls						
	one on actar or menaning rotal	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	786	RF	\$80	\$62,886	30%	\$81,75
		Element Total	1	LS	7.5	\$62,886		\$81,75
10 06	Pedestrian / bike access and	accommodation landscaping						
+0.00	redestrian / bike access and	Landscaping Allowance - Low	7,861	RF	\$15	\$117,911	30%	\$153,28
		Landscaping Allowance - Median	0,001	RF	\$25	\$117,911	30%	Ψ100,20 \$
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$
		Artwork (1% of Guideway & Stations)	1%		φοσο,σσο	\$65,373	30%	\$84,98
		Element Total	1	LS		\$183,284	0070	\$238,27
0.07	Automobile, bus, van access	ways including roads, parking lots Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$
		Roadway Modifications Allow AC Paving	U	EA	\$50,000	ΦΟ	30%	Φ
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$
		Parking Lots	100	STL	\$4,000	\$400,000	30%	بە \$520,000
		Element Total	100	LS	Ψ4,000	\$400,000	30 /6	\$520,000
						,,		, ,
80.04	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$126,637	25%	\$158,29
		Element Total	1	LS		\$126,637		\$158,297
50 50.01	SYSTEMS Train control and signals Single Track	Signal System	0	RF	\$240	\$0	15%	\$(
	Double Track	Signal System	7,861	RF	\$260	\$2,043,793	15%	\$2,350,362
		Element Total	7,861	RF		\$2,043,793		\$2,350,362
50 02	Traffic signals and crossing p	rotection						
JO.02	Traine digitale and drocoming p	Traffic Signal	0	EA	\$150,000	\$0	15%	\$
		Crossing Protection	4	EA	\$250,000	\$1,000,000	15%	\$1,150,000
		Element Total	4	EA	,,	\$1,000,000		\$1,150,000
50.03	Traction power supply: subst	tations						
30.00	Tradion power dappry. dabo	Traction Power, Substation	2	EA	\$1,300,000	\$2,600,000	15%	\$2,990,000
		Element Total	2	EA		\$2,600,000		\$2,990,000
50 04	Traction power distribution: of	catenary and third rail						
.0.01	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$(
	Double Track	OCS System - Standard	7,861	RF	\$260	\$2,043,793	15%	\$2,350,362
		Element Total	7,861	RF		\$0		\$(
50 05	Communications							
.5.00	SSIIIIIIIIIIIIIIII	Communication, Line	7,861	RF	\$240	\$1,886,578	15%	\$2,169,565
		Communication, Station	1	EA	\$500,000	\$500,000	15%	\$575,000
		Element Total	1	LS		\$2,386,578		\$2,744,56
50.06	Fare collection system and e	auipment						
	. a.o oonoonon ayatem and e	Fare Collection - 1 Platform	1	EA	\$220,000	\$220,000	15%	\$253,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$220,000	15%	\$255,000
		Element Total	1	LS	ψ+ου,ουο	\$220,000	10/0	\$253,000
		Z.S.I.S.I.C. FORM		-5		4_20,000		\$200,000
50.07	Central Control							
		N/A Element Total	1	LS		\$0		\$(

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext East of Acline to CSX main line & Yard

CAT	AT STATIONING					UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	STING IMP	ROVEMENTS						
30.01	Purchase or lease	of real esta	ate						
			Right of Way Allowance - At Grade	7,861	RF	\$400	\$3,144,297	50%	\$4,716,445
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	7,861	RF		\$3,144,297		\$4,716,445

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext East of CSX mainline & Yard to Kingsway

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK ELE! Guideway: At-grade exclusive							
0.01	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	9
	Double Track	At Grade - Ballasted, Open	29,525	RF	\$450	\$13,286,164	25%	\$16,607,70
	Double Hack	Element Total	29,525	RF	Ψ430	\$13,286,164	2570	\$16,607,70
0.02	Guideway: At-grade semi-exc	clusive (allows cross-traffic)						
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF	\$700	\$0	25%	
		Element Total	0	RF		\$0		
0.03	Guideway: At-grade in mixed							
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
		Element Total	U	KF		\$0		
0.04	Guideway: Aerial structure	Pridge Pollogted		DE	60.000		200/	
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0 \$0	30%	
	Single Track	Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0	RF	\$4,600 \$5,000	\$0 \$0	30%	
	Single Track		0	RF	\$5,000	\$0 \$0	30%	
	Double Track Double Track	Bridge - Ballasted Aerial - Direct Fixation	0	RF RF	\$12,200 \$5,500	\$0 \$0	30% 30%	
	Double Track Double Track	Aerial - Direct Fixation Over Water	800	RF	\$5,500 \$6.000	\$4,800,000	30%	\$6,240.0
	Double Hack	Element Total	800	RF	\$6,000	\$4,800,000	30%	\$6,240,0
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF	****	\$0		
0.06	Guideway: Underground cut	& cover						
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$15,500	\$0	35%	
		Element Total	0	RF		\$0		
0.07	Guideway: Underground tunn	nel						
	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
		Element Total	0	RF		\$0		
0.08	Guideway: Retained cut or fil							
	Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	00.000
	Double Track	Retained Fill - Ballasted Element Total	800 800	RF RF	\$3,200	\$2,560,000 \$2,560,000	30%	\$3,328,0 \$3,328,0
			230			. ,,		,3,0
v.09	Track: Direct fixation	D: 45: 4: 5: 4: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5:						
	Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	* = :=
	Double Track	Direct Fixation Track Element Total	800 800	RF RF	\$810	\$648,000 \$648,000	15%	\$745,2 \$745,2
	Track: Embedded							
1 10	Hack. Lilibedded	Embedded Track	0	RF	\$490	\$0	15%	
0.10	Single Track		U				15%	
0.10	Single Track			DE.				
0.10	Single Track Double Track	Embedded Track Element Total	0	RF RF	\$980	\$0 \$0	13 /6	
	Double Track	Embedded Track	0		\$980		13 /6	
	Double Track Track: Ballasted	Embedded Track	0	RF	·	\$0		
	Double Track	Embedded Track Element Total	0		\$240 \$480		15% 15%	\$16,739,2

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext East of CSX mainline & Yard to Kingsway

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tur	nouts)						
	(Special Trackwork (15% of Track Cost)	15%			\$2,280,586	15%	\$2,622,67
		Element Total	1	LS		\$2,280,586		\$2,622,67
0 13	Track: Vibration and noise d	ampening						
10.10	Track. Vibration and noise di	Vibration Allowance (6% of Ballasted Track Cost)	6%			\$873,354	15%	\$1,004,35
		Element Total	1	LS		\$873,354		\$1,004,35
20	STATIONS, STOPS, TERMI	NALS. INTERMODAL						
	At-grade station, stop, shelter	·						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$
		Center Platform Station	6	EA	\$3,000,000	\$18,000,000	20%	\$21,600,00
		Element Total	6	EA		\$18,000,000		\$21,600,00
0.02	Aerial station, stop, shelter, n	nall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	;
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	:
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
0.03	Underground station, stop, sh	· · · · · · · · · · · · · · · · · · ·						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA		\$0		
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		;
20.05	Joint development							
		N/A Element Total	1	LS		\$0		
00.00	Automobile newline multi atom							
0.06	Automobile parking multi-stor	Parking Garage	0	STL	\$12,000	\$0	20%	;
		Element Total	1	LS	Ψ12,000	\$0	2076	
0 07	Elevatore consisters							
0.07	Elevators, escalators	Eleavator	0	EA	\$200.000	\$0	20%	
		Escalator	0	EA	\$450,000	\$0	20%	
		Element Total	1	LS	Ψ430,000	\$0	2070	
	SITEWORK & SPECIAL CO							
ıu.U1	Demolition, Clearing, Earthwo		00 505	D=	400	# 005 74:	2001	MA 454 11
		Demolition Allowance - Low	29,525	RF	\$30	\$885,744	30%	\$1,151,4
		Demolition Allowance - Median	1,600	RF	\$50	\$80,000	30%	\$104,0
		Demolition Allowance - High Element Total	31,125	RF RF	\$90	\$965,744	30%	\$1,255,4
			31,120			ψ.00,1 1T		ψ 1, 2 00,4
0.02	Site Utilities, Utility Relocation	n Utility Relocation Allowance - Low	29,525	RF	\$140	\$4,133,473	30%	\$5,373,5
		Utility Relocation Allowance - Median	1,600	RF	\$340	\$544,000	30%	\$5,373,5 \$707,2
		Utility Relocation Allowance - High	0,000	RF	\$540 \$570	\$344,000	30%	\$101,2
		Element Total	31,125	RF	ΨΟΙΟ	\$4,677,473	30 /0	\$6,080,7
10 U3	Haz mat'l contam'd soil rem	oval/mitigation, ground water treatments						
.0.00	riaz. mati, contamu son fem	Hazardous Material Removal Allowance	31,125	RF	\$20	\$622,496	30%	\$809,2
		Element Total	1	LS	ΨΖΟ	\$622,496	00 /0	\$809,24
		Lionon rotal				ψ υ ΣΣ, 1 υυ		Ψ300,2

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext East of CSX mainline & Yard to Kingsway

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	31,125	RF	\$50	\$1,556,240	30%	\$2,023,113
		Element Total	1	LS		\$1,556,240		\$2,023,113
40.05	Site structures including retai	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	3,032	RF	\$80	\$242,598	30%	\$315,378
		Element Total	1	LS		\$242,598		\$315,378
40.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	29,525	RF	\$15	\$442,872	30%	\$575,734
		Landscaping Allowance - Median	1,600	RF	\$25	\$40,000	30%	\$52,000
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$386,462	30%	\$502,400
		Element Total	1	LS		\$869,334		\$1,130,134
40.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	2,200	STL	\$4,000	\$8,800,000	30%	\$11,440,000
		Element Total	1	LS		\$8,800,000		\$11,440,000
40.08	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$886,694	25%	\$1,108,368
		Element Total	1	LS		\$886,694		\$1,108,368
	SYSTEMS Train control and signals							
00.01	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	31,125	RF	\$260	\$8,092,450	15%	\$9,306,318
		Element Total	31,125	RF		\$8,092,450		\$9,306,318
50.02	Traffic signals and crossing p	protection						
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	15	EA	\$250,000	\$3,750,000	15%	\$4,312,500
		Element Total	15	EA		\$3,750,000		\$4,312,500
50.03	Traction power supply: subst	tations						
		Traction Power, Substation	6	EA	\$1,300,000	\$7,800,000	15%	\$8,970,000
		Element Total	6	EA		\$7,800,000		\$8,970,000
50.04	Traction power distribution: of	catenary and third rail						
	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard	31,125	RF	\$260	\$8,092,450	15%	\$9,306,318
		Element Total	31,125	RF		\$0		\$0
50.05	Communications							
		Communication, Line	31,125	RF	\$240	\$7,469,954	15%	\$8,590,447
		Communication, Station	6	EA	\$500,000	\$3,000,000	15%	\$3,450,000
		Element Total	1	LS		\$10,469,954		\$12,040,447
50.06	Fare collection system and e	quipment						
		Fare Collection - 1 Platform	6	EA	\$220,000	\$1,320,000	15%	\$1,518,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$0	15%	\$0
		Element Total	1	LS		\$1,320,000		\$1,518,000
50.07	Central Control							
		N/A		LS		\$0		
		Element Total	1					\$0

Hillsborough County MPO Transit Study System Planning LR-Brandon Ext East of CSX mainline & Yard to Kingsway

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMPR	ROVEMENTS						
60.01	Purchase or lease	e of real estat	e						
			Right of Way Allowance - At Grade	30,325	RF	\$400	\$12,129,923	50%	\$18,194,885
			Right of Way Allowance - Aerial	800	RF	\$300	\$240,000	50%	\$360,000
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	31,125	RF		\$12,369,923		\$18,554,885

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
	GUIDEWAY & TRACK ELE! Guideway: At-grade exclusive							
0.01	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track	At Grade - Ballasted, Open	0	RF	\$450	\$0 \$0	25%	\$
	Bodole Hack	Element Total	0	RF	Ψ-00	\$0	2070	\$
0.02	Guideway: At-grade semi-ex							
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	\$
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	\$
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	\$
	Double Track	At Grade - Embedded, In-Street Element Total	3,468 3,468	RF RF	\$700	\$2,427,835 \$2,427,835	25%	\$3,034,79 \$3,034,79
0.03	Guideway: At-grade in mixed	traffic						
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	\$
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	\$
		Element Total	0	RF		\$0		\$
0.04	Guideway: Aerial structure Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	9
	Single Track Single Track	Aerial - Direct Fixation	0	RF RF	\$8,200 \$4,600	\$0 \$0	30%	\$
	Single Track Single Track	Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0	RF RF	\$4,600 \$5,000	\$0 \$0	30%	\$ \$
	Double Track	Bridge - Ballasted	0	RF RF	\$5,000 \$12,200	\$0 \$0	30%	9
	Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0 \$0	30%	\$
	Double Track	Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0	30%	\$
	Journal Track	Element Total	0	RF	ψο,σσσ	\$0	0070	\$
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	\$
	Double Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$600	\$0 \$0	25%	\$ \$
			· ·			Ψ		Ψ
0.06	Guideway: Underground cut		0	DE	#40.000	ф О	0.50/	.
	Single Track Double Track	Subway - Direct Fixation Subway - Direct Fixation	0	RF RF	\$10,000 \$15,500	\$0 \$0	35% 35%	\$ \$
	Double Hack	Element Total	0	RF	\$15,500	\$0	33%	4
0.07	Guideway: Underground tunn							
	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	\$
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$20,000	\$0 \$0	35%	9
			U	KF		Φ0		Ф
10.08	Guideway: Retained cut or fil Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	\$
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	9
	Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	9
	Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	9
		Element Total	0	RF	ψ0,200	\$0	20,0	
0.09	Track: Direct fixation							
	Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	9
	Double Track	Direct Fixation Track Element Total	0	RF RF	\$810	\$0 \$0	15%	9
0.10	Track: Embedded							
	Single Track	Embedded Track	0	RF	\$490	\$0	15%	9
	Double Track	Embedded Track Element Total	3,468 3,468	RF RF	\$980	\$3,398,968 \$3,398,968	15%	\$3,908,81 \$3,908,81
0.11	Track: Ballasted							
	Single Track	Ballasted Track	0	RF	\$240	\$0	15%	Ç
	Double Track	Ballasted Track	0	RF	\$480	\$0	15%	\$
		Element Total	0	RF	· · · · · · · · · · · · · · · · · · ·	\$0		\$

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
			-					
10.12	Track: Special (switches, tu	rnouts) Special Trackwork (15% of Track Cost)	15%			\$509,845	15%	\$586,322
		Element Total	1	LS		\$509,845	1070	\$586,322
10.13	Track: Vibration and noise	dampening Vibration Allowance (6% of Ballasted Track	6%			\$0	15%	\$(
		Cost)	0 /8			ΨΟ	1376	Ψ
		Element Total	1	LS		\$0		\$
••	074710N0 070D0 77DM	N						
	STATIONS, STOPS, TERM At-grade station, stop, shelt	-						
	9	Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,00
		Element Total	1	EA		\$3,000,000		\$3,600,00
20.02	Aerial station, stop, shelter,	mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	\$
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	\$
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		\$
20.03	Underground station, stop, s	shelter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	\$
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	\$
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	\$
		Element Total	0	EA		\$0		\$
20.04	Other stations, landings, ter	minals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		\$(
20.05	Joint development							
		N/A Element Total	1	LS		\$0		\$(
		Elonone Total	·	20		Ψ		v
20.06	Automobile parking multi-sto	ory structure Parking Garage	0	STL	\$12,000	\$0	20%	\$
		Element Total	1	LS	Φ12,000	\$0	2076	\$(
20.07	Elevators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	\$
		Escalator	0	EA	\$450,000	\$0 \$0	20%	\$
		Element Total	1	LS	ψ100,000	\$0	2070	\$
40	SITEWORK & SPECIAL CO	ONDITIONS						
	Demolition, Clearing, Earthy							
	-	Demolition Allowance - Low	0	RF	\$30	\$0	30%	\$
		Demolition Allowance - Median	3,468	RF	\$50	\$173,417	30%	\$225,44
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$
		Element Total	3,468	RF		\$173,417		\$225,44
10.02	Site Utilities, Utility Relocation	on						
		Utility Relocation Allowance - Low	0	RF	\$140	\$0	30%	\$
		Utility Relocation Allowance - Median	3,468	RF	\$340	\$1,179,234	30%	\$1,533,00
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$
		Element Total	3,468	RF		\$1,179,234		\$1,533,00
40.03	Haz. mat'l, contam'd soil rer	noval/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	3,468	RF	\$20	\$69,367	30%	\$90,17
		Element Total	1	LS		\$69,367		\$90,17

CAT	STATIONING	DESCRIPTION	OTV	LINUT	UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION i. wetlands, historic/archeologic, parks	QTY	UNIT	COST	COST	CONTGY	COST
40.04	Environmental miligation, e.g	Enviromental Mitigation Allowance	3,468	RF	\$50	\$173,417	30%	\$225,442
		Element Total	1	LS	ΨΟΟ	\$173,417	0070	\$225,442
40.05	Site structures including retain	=						
		Retaining & Sound Wall Allowance (10% of				•	222/	
		Ballasted Track Length)	0	RF LS	\$80	\$0 \$0	30%	\$0 \$0
		Element Total	1	LS		Φ0		\$(
40.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	0	RF	\$15	\$0	30%	\$0
		Landscaping Allowance - Median	3,468	RF	\$25	\$86,708	30%	\$112,721
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%	1.0		\$54,278	30%	\$70,562
		Element Total	1	LS		\$140,987		\$183,283
40.07	Automobile bus van access	ways including roads, parking lots						
40.07	Automobile, bus, van access	Roadway Modifications Allow Full						
		Intersection	3	EA	\$50,000	\$150,000	30%	\$195,000
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	83,240	SF	\$30	\$2,497,201	30%	\$3,246,362
		Parking Lots	2,200	STL	\$4,000	\$8,800,000	30%	\$11,440,000
		Element Total	1	LS		\$11,447,201		\$14,881,362
40 08	Temporary Facilities and other	er indirect costs during construction						
40.00	remperary r demines and our	Temporary Facilities (5% of Category 40)	5.0%			\$659,181	25%	\$823,976
		Element Total	1	LS		\$659,181	2070	\$823,976
50	SYSTEMS							
50.01	Train control and signals Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	3,468	RF	\$260	\$901,767	15%	\$1,037,032
		Element Total	3,468	RF	•	\$901,767		\$1,037,032
50.02	Traffic signals and crossing p		•		0450.000	#450.000	450/	Ø547.500
		Traffic Signal Crossing Protection	3	EA EA	\$150,000 \$250,000	\$450,000 \$0	15% 15%	\$517,500 \$0
		Element Total	3	EA	\$250,000	\$450,000	15%	\$517,500
		Elomont Fotal	Ü			ψ100,000		ψο 17,000
50.03	Traction power supply: subs	tations						
		Traction Power, Substation	1	EA	\$1,300,000	\$1,300,000	15%	\$1,495,000
		Element Total	1	EA		\$1,300,000		\$1,495,000
E0 04	Traction newer distribution:	notonon, and third roil						
50.04	Traction power distribution: Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard	3,468	RF	\$260	\$901,767	15%	\$1,037,032
		Element Total	3,468	RF	\$255	\$0	1070	\$0
50.05	Communications							
		Communication, Line	3,468	RF	\$240	\$832,400	15%	\$957,260
		Communication, Station	1 1	EA LS	\$500,000	\$500,000 \$1,332,400	15%	\$575,000 \$1,532,260
		Element Total	ı	LO		ψ1,332,400		ψ1,JJZ,Z0U
50.06	Fare collection system and e	quipment						
	•	Fare Collection - 1 Platform	1	EA	\$220,000	\$220,000	15%	\$253,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$0	15%	\$0
		Element Total	1	LS		\$220,000		\$253,000
50.07	Central Control	N/A						
50.07	Central Control	N/A Element Total	1	LS		\$0		\$0

CAT	STATIO	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMPR	ROVEMENTS						
60.01	Purchase or lease	of real estat	e						
			Right of Way Allowance - At Grade	3,468	RF	\$400	\$1,387,334	50%	\$2,081,001
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	3,468	RF		\$1,387,334		\$2,081,001

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	COST
	GUIDEWAY & TRACK ELE!							
	Guideway: At-grade exclusive							
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	
	Double Track	At Grade - Ballasted, Open	0	RF	\$450	\$0	25%	
		Element Total	0	RF		\$0		
	Guideway: At-grade semi-ex	,						
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	929 929	RF RF	\$700	\$650,432 \$650,432	25%	\$813,0 \$813,0
n na .	Guideway: At-grade in mixed	traffic						
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	
	Double Hack	Element Total	0	RF	Φ000	\$0	2376	
0 04	Guideway: Aerial structure							
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	700	RF	\$5,500	\$3,850,000	30%	\$5,005,0
	Double Track	Aerial - Direct Fixation Over Water	400	RF	\$6,000	\$2,400,000	30%	\$3,120,0
	2000.0 1100.0	Element Total	1,100	RF	φο,σσσ	\$6,250,000	0070	\$8,125,0
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		
	Guideway: Underground cut							
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0.07	Guideway: Underground tunr							
	Single Track	Subway - Direct Fixation	0	RF	642.000	ቀለ	250/	
	Double Track	Subway - Direct Fixation	0	RF	\$12,000 \$20,000	\$0 \$0	35% 35%	
	Double Hack	Element Total	0	RF	\$20,000	\$0	33 /6	
0.08	Guideway: Retained cut or fil	I						
	Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
	Double Track	Retained Fill - Ballasted	600	RF	\$3,200	\$1,920,000	30%	\$2,496,0
		Element Total	600	RF	**,-**	\$1,920,000		\$2,496,0
0.09	Track: Direct fixation							
	Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
Ī	Double Track	Direct Fixation Track	1,100	RF	\$810	\$891,000	15%	\$1,024,6
		Element Total	1,100	RF		\$891,000		\$1,024,6
0.10	Track: Embedded							
	Single Track	Embedded Track	0		\$490	\$0	15%	
Ī	Double Track	Embedded Track Element Total	929 929	RF RF	\$980	\$910,605 \$910,605	15%	\$1,047, ² \$1,047, ²
0.44	Tanala Dall 1		320	==		, 2 . 3,000		+ ., • ,
	Track: Ballasted	Delle steed Treels	_		A 2 4 2	A =	4501	
	Single Track	Ballasted Track	0		\$240	\$0	15%	
	Double Track	Ballasted Track	600	RF	\$480	\$288,000	15%	\$331,2
		Element Total	600	RF		\$288,000		\$331,2

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tu	rnouts)						
		Special Trackwork (15% of Track Cost)	15%			\$313,441	15%	\$360,45
		Element Total	1	LS		\$313,441		\$360,45
0 13	Track: Vibration and noise of	lampening						
10.15	Track. Vibration and noise C	Vibration Allowance (6% of Ballasted Track	6%			\$17,280	15%	\$19,87
		Cost)		1.0		£47.000		£40.07
		Element Total	1	LS		\$17,280		\$19,872
20	STATIONS, STOPS, TERM	NALS, INTERMODAL						
20.01	At-grade station, stop, shelte	er, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$
		Center Platform Station	2	EA	\$3,000,000	\$6,000,000	20%	\$7,200,00
		Element Total	2	EA		\$6,000,000		\$7,200,00
20.02	Aerial station, stop, shelter, i	mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	\$
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	\$
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		\$
20.03	Underground station, stop, s	helter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	\$
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	\$
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	9
		Element Total	0	EA		\$0		Ç
20.04	Other stations, landings, terr	ninals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		\$
20.05	Joint development	N/A						
		N/A Element Total	1	LS		\$0		\$
20.06	Automobile parking multi-sto	rv structure						
	,. , , , , , , , , , , , , , ,	Parking Garage	0	STL	\$12,000	\$0	20%	\$
		Element Total	1	LS		\$0		\$
20.07	Elevators, escalators							
	,	Eleavator	0	EA	\$200,000	\$0	20%	\$
		Escalator	0	EA	\$450,000	\$0	20%	\$
		Element Total	1	LS		\$0		\$
40	SITEWORK & SPECIAL CO							
1	g, Clouring, Luttin	Demolition Allowance - Low	0	RF	\$30	\$0	30%	\$
		Demolition Allowance - Median	2,629	RF	\$50 \$50	\$131,459	30%	\$170,89
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$170,05
		Element Total	2,629	RF	Ψ00	\$131,459	0070	\$170,89
U U2	Site Utilities Utility Balacetic	on.						
+0.02	Site Utilities, Utility Relocation	utility Relocation Allowance - Low	0	RF	\$140	\$0	30%	9
		Utility Relocation Allowance - Median	2,629	RF	\$340	\$893,924	30%	\$1,162,10
		· ·	0	RF	\$570	\$0	30%	\$1,102,10
		Utility Relocation Allowance - High						4
		Utility Relocation Allowance - High Element Total	2,629	RF	Ψ0.0	\$893,924		\$1,162,10
10 03	Haz mat'l contam'd coil	Element Total			Ψ0.0			\$1,162,10
40.03	Haz. mat'l, contam'd soil rem				\$20		30%	\$1,162,10 \$68,35

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	2,629	RF	\$50	\$131,459	30%	\$170,897
		Element Total	1	LS		\$131,459		\$170,897
40.05	Site structures including retai	ning walls, sound walls						
	·	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	60	RF	\$80	\$4,800	30%	\$6,240
		Element Total	1	LS		\$4,800		\$6,240
40.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	0	RF	\$15	\$0	30%	\$0
		Landscaping Allowance - Median	2,629	RF	\$25	\$65,730	30%	\$85,449
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$148,204	30%	\$192,666
		Element Total	1	LS		\$213,934		\$278,114
40.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	1	EA	\$50,000	\$50,000	30%	\$65,000
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	22,301	SF	\$30	\$669,016	30%	\$869,721
		Parking Lots	0	STL	\$4,000	\$0	30%	\$0
		Element Total	1	LS		\$719,016		\$934,721
40.08	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$107,359	25%	\$134,199
		Element Total	1	LS		\$107,359		\$134,199
50	SYSTEMS							
50.01	Train control and signals							
	Single Track Double Track	Signal System Signal System	2,629	RF RF	\$240 \$260	\$0 \$683,589	15% 15%	\$0 \$786,127
	Double Hack	Element Total	2,629	RF	\$200	\$683,589	13%	\$786,127
50.02	Traffic signals and crossing p				0.150.000	4450.000	4.50/	6.1 70.500
		Traffic Signal	1	EA	\$150,000	\$150,000	15%	\$172,500
		Crossing Protection Element Total	0	EA EA	\$250,000	\$0 \$150,000	15%	\$0 \$172,500
		Liement Total		LA		ψ130,000		Ψ172,500
50.03	Traction power supply: subst							
		Traction Power, Substation	1	EA	\$1,300,000	\$1,300,000	15%	\$1,495,000
		Element Total	1	EA		\$1,300,000		\$1,495,000
50.04	Traction power distribution: of	catenary and third rail						
	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard	2,629	RF	\$260	\$683,589	15%	\$786,127
		Element Total	2,629	RF		\$0		\$0
50 05	Communications							
		Communication, Line	2,629	RF	\$240	\$631,005	15%	\$725,656
		Communication, Station	2	EA	\$500,000	\$1,000,000	15%	\$1,150,000
		Element Total	1	LS		\$1,631,005		\$1,875,656
50 NA	Fare collection system and e	quinment						
50.00	r are collection system and e	quipment Fare Collection - 1 Platform	2	EA	\$220,000	\$440,000	15%	\$506,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$440,000	15%	\$300,000
		Element Total	1	LS	ψ του,ουο	\$440,000	1070	\$506,000
			•			+ ,		+ 500,000
50.07	Central Control							
		N/A		1.0		Φ.		**
		Element Total	1	LS		\$0		\$0

TOTAL	ALLCTD	BASE	UNIT				NING	STATIC	CAT
COST	CONTGY	COST	COST	UNIT	QTY	DESCRIPTION	END	BEGIN	NO.
						PROVEMENTS	STING IMPROVE	W, LAND, EX	60
						ate	of real estate	rchase or lease	60.01
\$917,513	50%	\$611,676	\$400	RF	1,529	Right of Way Allowance - At Grade	Rigl		
\$495,000	50%	\$330,000	\$300	RF	1,100	Right of Way Allowance - Aerial	Rigl		
\$0	50%	\$0	\$250	RF	0	Right of Way Allowance - Underground	Rigl		
\$1,412,513		\$941,676		RF	2,629	Element Total			
		\$941,676		RF	2,629	Element Total			

10.01 Gui Sin Doi 10.02 Gui Sin Doi 10.03 Gui Sin Doi 10.04 Gui Sin Doi 10.05 Gui Sin Doi 10.05 Gui	JIDEWAY & TRACK ELEM JIDEWAY & TRACK ELEM JIDEWAY: At-grade exclusive JIDEWAY: At-grade semi-exclusive JIDEWAY: At-grade semi-exclusive JIDEWAY: At-grade semi-exclusive JIDEWAY: At-grade in mixed JIDEWAY: At-grade semi-exclusion JIDEWAY: At-grade exclusive JIDEWAY: At-grade exclusive JIDEWAY: At-grade exclusive JIDEWAY: At-grade semi-exclusion JIDEWAY: At-grade semi-exclusion JIDEWAY: At-grade exclusive JIDEWAY: At-grade exclusive JIDEWAY: At-grade exclusive JIDEWAY: At-grade semi-exclusion J	At Grade - Ballasted, Open At Grade - Ballasted, Open Element Total Clusive (allows cross-traffic) At Grade - Ballasted, In-Street At Grade - Embedded, In-Street At Grade - Ballasted, In-Street At Grade - Ballasted, In-Street Element Total	0 0 0 0 0 0 2,294 2,294 0 0 0 0 0	RF R	\$350 \$450 \$440 \$580 \$530 \$700 \$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0 \$0 \$0 \$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0	25% 25% 25% 25% 25% 25% 25% 25% 30% 30% 30% 30%	\$ \$ \$ \$ \$2,007,45 \$2,007,45
Sin Dol	ngle Track buble Track uideway: At-grade semi-exc ngle Track puble Track buble Track buble Track uideway: At-grade in mixed ngle Track buble Track	At Grade - Ballasted, Open At Grade - Ballasted, Open Element Total Clusive (allows cross-traffic) At Grade - Ballasted, In-Street At Grade - Embedded, In-Street At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation ver Water	0 0 0 0 2,294 2,294 0 0 0 0	RF R	\$450 \$440 \$580 \$530 \$700 \$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0 \$0 \$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0	25% 25% 25% 25% 25% 25% 25% 30% 30% 30% 30% 30%	\$ \$ \$ \$2,007,45 \$2,007,45
0.02 Gui Sin Sin Doi 0.03 Gui Sin Doi 0.04 Gui Sin Sin Doi 0.05 Gui Sin Doi	suble Track uideway: At-grade semi-exc ngle Track ngle Track suble Track uideway: At-grade in mixed ngle Track uideway: Aerial structure ngle Track	At Grade - Ballasted, Open Element Total Clusive (allows cross-traffic) At Grade - Ballasted, In-Street At Grade - Embedded, In-Street At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation ver Water	0 0 0 0 2,294 2,294 0 0 0 0	RF R	\$450 \$440 \$580 \$530 \$700 \$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0 \$0 \$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0	25% 25% 25% 25% 25% 25% 25% 30% 30% 30% 30% 30%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
10.02 Gui Sin Doi 10.03 Gui Sin Doi 10.04 Gui Sin Doi Doi 10.05 Gui Sin Doi	uideway: At-grade semi-exc ngle Track ngle Track puble Track uideway: At-grade in mixed ngle Track uideway: Aerial structure ngle Track ngle Track ngle Track ngle Track ngle Track buble Track buble Track puble Track	Element Total clusive (allows cross-traffic) At Grade - Ballasted, In-Street At Grade - Embedded, In-Street At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation ver Water	0 0 0 2,294 2,294 0 0 0	RF R	\$440 \$580 \$530 \$700 \$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0	25% 25% 25% 25% 25% 25% 30% 30% 30% 30%	\$ \$ \$2,007,45 \$2,007,45 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
0.03 Gui Sin Doi 0.04 Gui Sin Sin Doi 0.05 Gui Sin Doi 0.05 Gui	ngle Track ngle Track buble Track	At Grade - Ballasted, In-Street At Grade - Embedded, In-Street At Grade - Ballasted, In-Street At Grade - Embedded, In-Street Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Over Water	0 0 2,294 2,294 0 0 0 0 0 0 0	RF R	\$580 \$530 \$700 \$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$1,605,964 \$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0 \$0 \$0	25% 25% 25% 25% 25% 25% 30% 30% 30% 30%	\$2,007,45 \$2,007,45 \$2,007,45 \$ \$ \$ \$ \$ \$
0.03 Gui Sin Doi 0.04 Gui Sin Sin Doi 0.05 Gui Sin Doi 0.05 Gui	ngle Track ngle Track buble Track	At Grade - Ballasted, In-Street At Grade - Embedded, In-Street At Grade - Ballasted, In-Street At Grade - Embedded, In-Street Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Over Water	0 0 2,294 2,294 0 0 0 0 0 0 0	RF R	\$580 \$530 \$700 \$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$1,605,964 \$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0 \$0 \$0	25% 25% 25% 25% 25% 25% 30% 30% 30% 30%	\$2,007,45 \$2,007,45
Sin Dou	ngle Track buble Track	At Grade - Ballasted, In-Street At Grade - Embedded, In-Street Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Over Water	0 2,294 2,294 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF RF	\$530 \$700 \$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25% 25% 25% 25% 25% 25% 30% 30% 30% 30%	\$2,007,45 \$2,007,45 \$2,007,45
0.03 Gui Sin Doi 0.04 Gui Sin Sin Doi Doi 0.05 Gui Sin Doi	puble Track uideway: At-grade in mixed angle Track puble Track uideway: Aerial structure angle Track angle Track angle Track angle Track buble Track buble Track buble Track buble Track buble Track	At Grade - Embedded, In-Street Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Over Water	2,294 2,294 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$1,605,964 \$1,605,964 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25% 25% 25% 30% 30% 30% 30%	\$2,007,45 \$2,007,45
10.03 Gui Sin Doo 10.04 Gui Sin Sin Doo Doo 10.05 Gui Sin Doo	uideway: At-grade in mixed ngle Track puble Track uideway: Aerial structure ngle Track ngle Track ngle Track buble Track buble Track buble Track buble Track	Element Total traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Aerial - Direct Fixation Aerial - Direct Fixation Over Water	2,294 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF	\$560 \$680 \$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$1,605,964 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25% 25% 30% 30% 30% 30%	\$2,007,45
Sin Doi Sin Doi Doi Sin Doi	ngle Track buble Track uideway: Aerial structure ngle Track ngle Track ngle Track buble Track buble Track buble Track buble Track	traffic At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF	\$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25% 30% 30% 30% 30%	\$ \$
Sin Doi Sin Doi Doi Sin Doi	ngle Track buble Track uideway: Aerial structure ngle Track ngle Track ngle Track buble Track buble Track buble Track buble Track	At Grade - Embedded, In-Street At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0 \$0 \$0 \$0	25% 30% 30% 30% 30%	
Doi 0.04 Gui Sin Sin Doi Doi 0.05 Gui Sin Doi	uideway: Aerial structure ngle Track ngle Track ngle Track ngle Track buble Track buble Track buble Track buble Track	At Grade - Embedded, In-Street Element Total Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0 \$0 \$0 \$0	25% 30% 30% 30% 30%	
0.04 Gui Sin Sin Doi Doi 0.05 Gui Sin	uideway: Aerial structure ngle Track ngle Track ngle Track buble Track buble Track buble Track buble Track buble Track	Element Total Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0 0 0	RF RF RF RF RF RF	\$8,200 \$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0 \$0	30% 30% 30% 30%	\$ \$
Sin Sin Doi Doi Doi Sin Doi Sin Doi Sin Doi Sin Doi	ngle Track ngle Track ngle Track buble Track buble Track buble Track buble Track	Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0 0	RF RF RF RF RF	\$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0 \$0	30% 30% 30%	9
Sin Sin Doi Doi Doi Doi Sin Doi	ngle Track ngle Track ngle Track buble Track buble Track buble Track buble Track	Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0	RF RF RF RF	\$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0	30% 30% 30%	9
Sin Sin Doi Doi 0.05 Gui Sin Doi	ngle Track ngle Track buble Track buble Track buble Track buble Track uideway: Built-up fill	Aerial - Direct Fixation Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0	RF RF RF RF	\$4,600 \$5,000 \$12,200 \$5,500	\$0 \$0 \$0	30% 30% 30%	
Sin Doi Doi 0.05 Gui Sin Doi	ngle Track puble Track puble Track puble Track puble Track uideway: Built-up fill	Aerial - Direct Fixation Over Water Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0 0	RF RF RF RF	\$5,000 \$12,200 \$5,500	\$0 \$0	30% 30%	9
Doi Doi 0.05 Gui Sin Doi	ouble Track ouble Track ouble Track uideway: Built-up fill	Bridge - Ballasted Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0 0 0	RF RF RF	\$12,200 \$5,500	\$0	30%	;
Doi Doi 0.05 Gui <mark>Sin</mark> Doi	ouble Track ouble Track uideway: Built-up fill	Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0	RF RF	\$5,500			
0.05 Gui Sin Doi	ouble Track uideway: Built-up fill	Aerial - Direct Fixation Over Water	0	RF		φU		
0.05 Gui <mark>Sin</mark> Doi	uideway: Built-up fill				\$6,000	\$0	30% 30%	
Sin Do				RF	ψ0,000	\$0	30 /0	
Sin Do								
		At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	ouble Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	:
		Element Total	0	RF		\$0		Ş
0.06 Gu	uideway: Underground cut ઠ	& cover						
Sin	ngle Track	Subway - Direct Fixation	0		\$10,000	\$0	35%	9
Do	ouble Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
		Element Total	U	KF		Φυ		
	uideway: Underground tunn							
	ngle Track	Subway - Direct Fixation	0		\$12,000	\$0	35%	
Doi	ouble Track	Subway - Direct Fixation Element Total	0	RF RF	\$20,000	\$0 \$0	35%	
0.00.0	ridovenu Dotoino d'out ou fill							
	uideway: Retained cut or fill ngle Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
	ngle Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	ouble Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
Do	ouble Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	
		Element Total	0	RF	. ,	\$0		
0.09 Tr <i>a</i>	ack: Direct fixation							
Sin	ngle Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
Do	ouble Track	Direct Fixation Track Element Total	0		\$810	\$0 \$0	15%	
		Liement (Old)	U	IM		φυ		
	ack: Embedded							
	ngle Track	Embedded Track	0		\$490	\$0	15%	
Doi	ouble Track	Embedded Track Element Total	2,294 2,294		\$980	\$2,248,349 \$2,248,349	15%	\$2,585,6 \$2,585,6
–			2,231	÷ ==		ţ_,0,0 .0		,000,0
	ack: Ballasted ngle Track	Ballasted Track	0	RF	\$240	\$0	15%	
	ouble Track	Ballasted Track Ballasted Track	0		\$240 \$480	\$0 \$0	15% 15%	
וטם	JUDIO TIAUN	Element Total	0		Ψ400	\$0 \$0	10/0	

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tur	nouts)						
	(*,	Special Trackwork (15% of Track Cost)	15%			\$337,252	15%	\$387,84
		Element Total	1	LS		\$337,252		\$387,84
0.13	Track: Vibration and noise d	ampening						
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$0	15%	\$
		Element Total	1	LS		\$0		\$
20	STATIONS, STOPS, TERMI	NALS, INTERMODAL						
0.01	At-grade station, stop, shelter	r, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	;
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	:
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,0
		Element Total	1	EA	, , , , , , , , , , , , , , , , , , , ,	\$3,000,000		\$3,600,00
0.02	Aerial station, stop, shelter, n	nall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
0.03	Underground station, stop, sh	· · · · · · · · · · · · · · · · · · ·						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA		\$0		
0.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		;
0.05	Joint development							
		N/A Element Total	1	LS		\$0		
0.00	A							
0.06	Automobile parking multi-stor	ry structure Parking Garage	0	СТІ	¢42.000	Φ0	20%	
		Element Total	1	STL LS	\$12,000	\$0 \$0	2076	
0 07	Elevators, escalators							
0.07	Lievators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator	0	EA	\$450,000	\$0	20%	
		Element Total	1	LS	ψ+00,000	\$0	2070	
	SITEWORK & SPECIAL CO							
U.U I	Demolition, Clearing, Earthwo	ork Demolition Allowance - Low	0	PЕ	_ው	60	300/	
		Demolition Allowance - Low Demolition Allowance - Median	0 2,294	RF RF	\$30 \$50	\$0 \$114 712	30% 30%	¢440.4
		Demolition Allowance - Median Demolition Allowance - High				\$114,712		\$149,1
		Element Total	2,294	RF RF	\$90	\$0 \$114,712	30%	\$149,1
າດວ	Site Litilities Litility Delegation	2						
0.02	Site Utilities, Utility Relocation	n Utility Relocation Allowance - Low	0	RF	\$140	\$0	30%	
		Utility Relocation Allowance - Median	2,294	RF	\$140 \$340	\$780,040	30%	\$1,014,0
		Utility Relocation Allowance - Median Utility Relocation Allowance - High	2,294	RF	\$570	\$780,040	30%	\$1,014,0
		Element Total	2,294	RF	φυτυ	\$780,040	JU /0	\$1,014,0
U U3	Haz mat'l contam'd soil rom	oval/mitigation, ground water treatments						
.U.J	riaz. mati, contam d son fem	ovai/mitigation, ground water treatments Hazardous Material Removal Allowance	2,294	RF	\$20	\$45,885	30%	\$59,6
		Element Total	2,294	LS	Φ∠∪	\$45,885	30 %	\$59,6 \$59,6
		Liement Total	1	LO		φ 4 0,000		φυ9,

	STATIONING	D-00-::	<u></u>		UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
40.04	Environmental mitigation, e.	g. wetlands, historic/archeologic, parks	0.004	DE	\$50	¢444.740	200/	£440.40E
		Enviromental Mitigation Allowance Element Total	2,294	RF LS	\$50	\$114,712 \$114,712	30%	\$149,125 \$149,125
						. ,		, .
40.05	Site structures including reta	•						
		Retaining & Sound Wall Allowance (10% of Ballasted Track Length)	0	DE	\$80	¢0	30%	C O
		Element Total	0	RF LS	\$60	\$0 \$0	30%	\$0 \$0
		Zionioni rotai	•			Ψ.		40
40.06	Pedestrian / bike access and	d accommodation, landscaping						
		Landscaping Allowance - Low	0	RF	\$15	\$0	30%	\$0
		Landscaping Allowance - Median	2,294	RF RF	\$25	\$57,356	30%	\$74,563
		Landscaping Allowance - High Pedestrain Overpasses	0	EA	\$40 \$800,000	\$0 \$0	30% 30%	\$0 \$0
		Artwork (1% of Guideway & Stations)	1%	LA	\$600,000	\$46,060	30%	\$59,878
		Element Total	1	LS		\$103,415		\$134,440
40 07	Automobile bus van access	sways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	2	EA	\$50,000	\$100,000	30%	\$130,000
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	55,062	SF	\$30	\$1,651,849	30%	\$2,147,403
		Parking Lots	0	STL	\$4,000	\$0	30%	\$0
		Element Total	1	LS		\$1,751,849		\$2,277,403
40.08	Temporary Facilities and oth	ner indirect costs during construction						
	, , , , , , , , , , , , , , , , , , ,	Temporary Facilities (5% of Category 40)	5.0%			\$145,531	25%	\$181,913
		Element Total	1	LS		\$145,531		\$181,913
50	SYSTEMS							
50 50.01								
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	2,294	RF	\$260	\$596,501	15%	\$685,976
		Element Total	2,294	RF		\$596,501		\$685,976
50.02	Traffic signals and crossing	protection						
30.02	Traffic signals and crossing	Traffic Signal	2	EA	\$150,000	\$300,000	15%	\$345,000
		•		EA			1070	φο 10,000
		Crossing Protection	0		\$250.000	\$0	15%	\$0
		Crossing Protection Element Total	2	EA	\$250,000	\$0 \$300,000	15%	\$0 \$345,000
		Element Total			\$250,000		15%	
50.03	Traction power supply: subs	Element Total stations	2	EA		\$300,000		\$345,000
50.03	Traction power supply: subs	Element Total stations Traction Power, Substation	2	EA EA	\$250,000 \$1,300,000	\$300,000 \$1,300,000	15%	\$345,000 \$1,495,000
50.03	Traction power supply: sub-	Element Total stations	2	EA		\$300,000		\$345,000
	Traction power distribution:	Element Total stations Traction Power, Substation Element Total	2	EA EA		\$300,000 \$1,300,000		\$345,000 \$1,495,000
	, ,,,	Element Total stations Traction Power, Substation Element Total	2	EA EA		\$300,000 \$1,300,000		\$345,000 \$1,495,000
	Traction power distribution:	Element Total stations Traction Power, Substation Element Total catenary and third rail	1 1	EA EA EA RF	\$1,300,000	\$300,000 \$1,300,000 \$1,300,000	15%	\$345,000 \$1,495,000 \$1,495,000
	Traction power distribution: Single Track	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard	1 1	EA EA EA	\$1,300,000 \$240	\$300,000 \$1,300,000 \$1,300,000	15% 15%	\$345,000 \$1,495,000 \$1,495,000
50.04	Traction power distribution: Single Track Double Track	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard	2 1 1 0 2,294	EA EA EA RF	\$1,300,000 \$240	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501	15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$0 \$685,976
50.04	Traction power distribution: Single Track	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total	2 1 1 0 2,294 2,294	EA EA EA RF RF RF	\$1,300,000 \$240 \$260	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0	15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$0 \$685,976 \$0
50.04	Traction power distribution: Single Track Double Track	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	2 1 1 0 2,294 2,294	EA EA RF RF RF	\$1,300,000 \$240 \$260 \$240	\$300,000 \$1,300,000 \$1,300,000 \$596,501 \$0 \$550,616	15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$0 \$685,976 \$0 \$633,209
50.04	Traction power distribution: Single Track Double Track	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total	2 1 1 0 2,294 2,294	EA EA EA RF RF RF	\$1,300,000 \$240 \$260	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0	15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$0 \$685,976 \$0
50.04 50.05	Traction power distribution: Single Track Double Track Communications	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	2 1 1 0 2,294 2,294 2,294	EA EA RF RF RF RF EA	\$1,300,000 \$240 \$260 \$240	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0 \$550,616 \$500,000	15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$685,976 \$0 \$633,209 \$575,000
50.04 50.05	Traction power distribution: Single Track Double Track	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	2 1 1 0 2,294 2,294 2,294	EA EA EA RF RF RF LS	\$1,300,000 \$240 \$260 \$240	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0 \$550,616 \$500,000 \$1,050,616	15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$685,976 \$0 \$633,209 \$575,000 \$1,208,209
50.04 50.05	Traction power distribution: Single Track Double Track Communications	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total equipment Fare Collection - 1 Platform	2 1 1 0 2,294 2,294 2,294 1 1	EA EA EA RF RF RF LS EA	\$1,300,000 \$240 \$260 \$240 \$500,000	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0 \$550,616 \$500,000 \$1,050,616	15% 15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$685,976 \$0 \$633,209 \$575,000 \$1,208,209
50.04 50.05	Traction power distribution: Single Track Double Track Communications	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 1 1 0 2,294 2,294 2,294 1 1	EA EA EA RF RF RF LS EA EA EA	\$1,300,000 \$240 \$260 \$240 \$500,000	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0 \$550,616 \$500,000 \$1,050,616	15% 15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$0 \$685,976 \$0 \$633,209 \$575,000 \$1,208,209
50.04 50.05	Traction power distribution: Single Track Double Track Communications	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total equipment Fare Collection - 1 Platform	2 1 1 0 2,294 2,294 2,294 1 1	EA EA EA RF RF RF LS EA	\$1,300,000 \$240 \$260 \$240 \$500,000	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0 \$550,616 \$500,000 \$1,050,616	15% 15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$685,976 \$0 \$633,209 \$575,000 \$1,208,209
50.04 50.05 50.06	Traction power distribution: Single Track Double Track Communications Fare collection system and 6	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 1 1 0 2,294 2,294 2,294 1 1	EA EA EA RF RF RF LS EA EA EA	\$1,300,000 \$240 \$260 \$240 \$500,000	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0 \$550,616 \$500,000 \$1,050,616	15% 15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$0 \$685,976 \$0 \$633,209 \$575,000 \$1,208,209
50.04 50.05 50.06	Traction power distribution: Single Track Double Track Communications	Element Total stations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 1 1 0 2,294 2,294 2,294 1 1	EA EA EA RF RF RF LS EA EA EA	\$1,300,000 \$240 \$260 \$240 \$500,000	\$300,000 \$1,300,000 \$1,300,000 \$0 \$596,501 \$0 \$550,616 \$500,000 \$1,050,616	15% 15% 15% 15%	\$345,000 \$1,495,000 \$1,495,000 \$0 \$685,976 \$0 \$633,209 \$575,000 \$1,208,209

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMPI	ROVEMENTS						
60.01	Purchase or lease	e of real esta	te						
			Right of Way Allowance - At Grade	2,294	RF	\$400	\$917,694	50%	\$1,376,540
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	2,294	RF		\$917,694		\$1,376,540

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
	UIDEWAY & TRACK ELEN							
	ngle Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	ouble Track	At Grade - Ballasted, Open	1,105	RF	\$450	\$497,127	25%	\$621,40
		Element Total	1,105	RF	7.22	\$497,127		\$621,40
	uideway: At-grade semi-exc							
	ngle Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	\$
	ngle Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	\$
	ouble Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	\$
Do	ouble Track	At Grade - Embedded, In-Street Element Total	1,105 1,105	RF RF	\$700	\$773,309 \$773,309	25%	\$966,63 \$966,63
0.03 Gu	uideway: At-grade in mixed	traffic						
	ngle Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	\$
	ouble Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	\$
		Element Total	0	RF		\$0		\$
	uideway: Aerial structure							
	ngle Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	\$
	ngle Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	\$
	ngle Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	\$
	ouble Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	\$
	ouble Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	\$
Do	ouble Track	Aerial - Direct Fixation Over Water Element Total	0	RF RF	\$6,000	\$0 \$0	30%	9
0.05 Gu	uideway: Built-up fill							
	ngle Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	\$
Do	ouble Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	\$
		Element Total	0	RF		\$0		\$
	uideway: Underground cut 8				0.000	^	0.50/	
	ngle Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	9
Do	ouble Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	\$ \$
0.07 Gu	uideway: Underground tunn	el						
Sir	ngle Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	\$
Do	ouble Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	\$
		Element Total	0	RF		\$0		\$
	uideway: Retained cut or fill			DE .	00.000	40	000/	
	ngle Track	Retained Cut - Direct Fixation	0	RF RF	\$6,800	\$0 \$0	30%	9
	ngle Track ouble Track	Retained Fill - Ballasted Retained Cut - Direct Fixation	0		\$2,800	\$0 \$0	30%	9
		Retained Cut - Direct Fixation Retained Fill - Ballasted	0	RF	\$8,000	\$0	30%	9
Do	ouble Track	Element Total	0	RF RF	\$3,200	\$0 \$0	30%	;
0.09 Tra	ack: Direct fixation							
	ngle Track	Direct Fixation Track	0	RF	\$405	\$0	15%	Ç
Do	ouble Track	Direct Fixation Track Element Total	0	RF RF	\$810	\$0 \$0	15%	9
0.40 =		Elomont Total	Ü	131		ΨΟ		•
	ack: Embedded	Freehood dood Trook		DE		Φ.	450/	
	ngle Track	Embedded Track	1 105	RF	\$490	\$0 \$1,093,633	15%	¢4 045 00
Do	ouble Track	Embedded Track Element Total	1,105 1,105	RF RF	\$980	\$1,082,633 \$1,082,633	15%	\$1,245,02 \$1,245,02
0.11 Tra	ack: Ballasted							
Sir	ngle Track	Ballasted Track	0	RF	\$240	\$0	15%	\$
Do	ouble Track	Ballasted Track	1,105	RF	\$480	\$530,269	15%	\$609,81
		Element Total	1,105	RF		\$530,269		\$609,81

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tur	nouts)						
	(,	Special Trackwork (15% of Track Cost)	15%			\$241,935	15%	\$278,22
		Element Total	1	LS		\$241,935		\$278,22
N 13	Track: Vibration and noise d	ampening						
10.13	Track. Vibration and noise da	Vibration Allowance (6% of Ballasted Track Cost)	6%			\$31,816	15%	\$36,58
		Element Total	1	LS		\$31,816		\$36,58
20	STATIONS, STOPS, TERMI	NALS INTERMODAL						
	At-grade station, stop, shelter	-						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	;
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	:
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,0
		Element Total	1	EA		\$3,000,000		\$3,600,00
0.02	Aerial station, stop, shelter, n	nall, terminal, platform						
	, ,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
0 03	Underground station, stop, sh	nelter mall terminal platform						
	этгэг дэг гэж гэж хэн хуус г	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA	ψ 10,000,000	\$0	00,0	
J.U4	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		
0.05	Joint development	N/A						
		Element Total	1	LS		\$0		
0.06	Automobile parking multi-stor	ry structure						
		Parking Garage	0	STL	\$12,000	\$0 \$0	20%	
		Element Total	į	LS		ΦU		
0.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	
		Element Total	0	EA LS	\$450,000	\$0 \$0	20%	
		Element Total		LO		ΨΟ		
	SITEWORK & SPECIAL CO Demolition, Clearing, Earthwo							
		Demolition Allowance - Low	1,105	RF	\$30	\$33,142	30%	\$43,0
		Demolition Allowance - Median	1,105	RF	\$50	\$55,236	30%	\$71,8
		Demolition Allowance - High	0	RF	\$90	\$0	30%	
		Element Total	2,209	RF		\$88,378		\$114,8
0.02	Site Utilities, Utility Relocation	n						
0.02	Site Utilities, Utility Relocation	n Utility Relocation Allowance - Low	1,105	RF	\$140	\$154,662	30%	\$201,0
0.02	Site Utilities, Utility Relocation		1,105 1,105	RF RF	\$140 \$340	\$154,662 \$375,607	30% 30%	. ,
0.02	Site Utilities, Utility Relocation	Utility Relocation Allowance - Low						. ,
0.02	Site Utilities, Utility Relocation	Utility Relocation Allowance - Low Utility Relocation Allowance - Median	1,105	RF	\$340	\$375,607	30%	\$488,2
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	1,105 0	RF RF	\$340	\$375,607 \$0	30%	\$201,0 \$488,2 \$689,3
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	1,105 0	RF RF	\$340	\$375,607 \$0	30%	\$488,2

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		u. wetlands, historic/archeologic, parks						
	3,.	Environmental Mitigation Allowance	2,209	RF	\$50	\$110,473	30%	\$143,615
		Element Total	1	LS		\$110,473		\$143,615
40.05	Site structures including reta	ining walls, sound walls					CONTGY 3 30% 3 30	
	· ·	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	110	RF	\$80	\$8,838	30%	\$11,489
		Element Total	1	LS		\$8,838		\$11,489
40.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	1,105	RF	\$15	\$16,571	30%	\$21,542
		Landscaping Allowance - Median	1,105	RF	\$25	\$27,618	30%	\$35,904
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$42,704	30%	\$55,516
		Element Total	1	LS		\$86,893		\$112,962
40 O7	Automobile hus van access	ways including roads, parking lots						
	, laterilezile, zue, van deesee	Roadway Modifications Allow Full						
		Intersection	1	EA	\$50,000	\$50,000	30%	\$65,000
		Roadway Modifications Allow AC Paving			,			. ,
		(incl. Curb & Sidewalk)	26,513	SF	\$30	\$795,404	30%	\$1,034,025
		Parking Lots	0	STL	\$4,000	\$0	30%	\$0
		Element Total	1	LS		\$845,404		\$1,099,025
40 08	Temporary Facilities and oth	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$85,722	25%	\$107,153
		Element Total	1	LS		\$85,722		\$107,153
50	SYSTEMS							
50.01	Train control and signals	Circular Customs		DE	#040	00	450/	40
	Single Track Double Track	Signal System Signal System	0 2,209	RF RF	\$240 \$260	\$0 \$574,458		\$660,627
	Double Truck	Element Total	2,209	RF	ΨΣοσ	\$574,458	1070	\$660,627
50 O2	Traffic signals and crossing p	protection						
30.02	Trailic signals and crossing p	Traffic Signal	1	EA	\$150,000	\$150,000	15%	\$172,500
		Crossing Protection	1	EA	\$250,000	\$250,000		\$287,500
		Element Total	2	EA	Ψ200,000	\$400,000	1070	\$460,000
FO 00	To the second second second	A-4:						
50.03	Traction power supply: subs	Traction Power, Substation	1	EA	\$1,300,000	\$1,300,000	15%	\$1,495,000
		Element Total	1	EA	ψ1,000,000	\$1,300,000	1070	\$1,495,000
		2.66.11						
50 04	Traction power distribution:							
50.04	Traction power distribution:	catenary and third rail		RF	\$240	\$0	15%	.\$0
50.04	Traction power distribution: Single Track Double Track		0	RF RF	\$240 \$260	\$0 \$574,458		
50.04	Single Track	catenary and third rail OCS System - Standard		RF RF RF	\$240 \$260	\$0 \$574,458 \$0		\$660,627
	Single Track Double Track	catenary and third rail OCS System - Standard OCS System - Standard	0 2,209	RF		\$574,458		\$660,627
	Single Track	catenary and third rail OCS System - Standard OCS System - Standard	0 2,209	RF		\$574,458	15%	\$660,627 \$0
	Single Track Double Track	catenary and third rail OCS System - Standard OCS System - Standard Element Total	2,209 2,209	RF RF	\$260	\$574,458 \$0 \$530,269	15% 15%	\$660,627 \$0 \$609,810
	Single Track Double Track	catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	0 2,209 2,209 2,209	RF RF	\$260 \$240	\$574,458 \$0	15% 15%	\$660,627 \$0 \$609,810 \$575,000
50.05	Single Track Double Track Communications	Communication, Station Communication, Station Element Total	2,209 2,209 2,209 2,209 1	RF RF RF EA	\$260 \$240	\$574,458 \$0 \$530,269 \$500,000	15% 15%	\$660,627 \$0 \$609,810 \$575,000
50.05	Single Track Double Track	Communication, Station Communication, Station Element Total	2,209 2,209 2,209 2,209 1	RF RF RF EA	\$260 \$240	\$574,458 \$0 \$530,269 \$500,000	15% 15%	\$660,627 \$0 \$609,810 \$575,000 \$1,184,810
50.05	Single Track Double Track Communications	Catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	2,209 2,209 2,209 1	RF RF RF EA LS	\$260 \$240 \$500,000	\$574,458 \$0 \$530,269 \$500,000 \$1,030,269	15% 15% 15%	\$609,810 \$575,000 \$1,184,810 \$253,000
50.05	Single Track Double Track Communications	Catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform	2,209 2,209 2,209 1 1	RF RF RF EA LS	\$260 \$240 \$500,000 \$220,000	\$574,458 \$0 \$530,269 \$500,000 \$1,030,269	15% 15% 15%	\$660,627 \$0 \$609,810 \$575,000 \$1,184,810 \$253,000 \$0
50.05 50.06	Single Track Double Track Communications Fare collection system and e	Catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2,209 2,209 2,209 1 1 1	RF RF RF EA LS	\$260 \$240 \$500,000 \$220,000	\$574,458 \$0 \$530,269 \$500,000 \$1,030,269 \$220,000 \$0	15% 15% 15%	\$660,627 \$0 \$609,810 \$575,000 \$1,184,810
50.05 50.06	Single Track Double Track Communications	Catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2,209 2,209 2,209 1 1 1	RF RF RF EA LS	\$260 \$240 \$500,000 \$220,000	\$574,458 \$0 \$530,269 \$500,000 \$1,030,269 \$220,000 \$0	15% 15% 15%	\$660,627 \$0 \$609,810 \$575,000 \$1,184,810 \$253,000 \$0

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMF	PROVEMENTS						
30.01	Purchase or lease	e of real esta	ate						
			Right of Way Allowance - At Grade	2,209	RF	\$400	\$883,782	50%	\$1,325,673
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	2,209	RF		\$883,782		\$1,325,673

Hillsborough County MPO Transit Study System Planning LR-I275

Armenia Ave to West Shore Dr.

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NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	TOTAL COST
10 (GUIDEWAY & TRACK ELEI	MENTS						
0.01	Guideway: At-grade exclusive	e right-of-way						
(Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	
[Double Track	At Grade - Ballasted, Open	12,027	RF	\$450	\$5,412,111	25%	\$6,765,1
		Element Total	12,027	RF		\$5,412,111		\$6,765,1
0.02	Guideway: At-grade semi-ex	,						
5	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
5	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
[Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
			·			45		
	Guideway: At-grade in mixed							
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
[Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
						•		
	Guideway: Aerial structure	Dil Dil di			A	_	0.05	
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	1,200	RF	\$5,500	\$6,600,000	30%	\$8,580,0
[Double Track	Aerial - Direct Fixation Over Water Element Total	1 200	RF RF	\$6,000	\$0	30%	CO FOO
		Element Total	1,200	KF		\$6,600,000		\$8,580,0
	Guideway: Built-up fill	At Conde - Dellasted Built up		DE	# 400	0.0	050/	
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
l	Double Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$600	\$0 \$0	25%	
	Guideway: Underground cut				A 40.000		0=0/	
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
l	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0.07.	O.::d	1						
	Guideway: Underground tunn			D.E.	#40.000	40	0.50/	
	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
ı	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$20,000	\$0 \$0	35%	
	Guideway: Retained cut or fil	ı						
በ በደ ሳ		D 4 1 10 4 D1 4 E1 4		DE	<u></u>	\$0	30%	
	Single Track		0					
Ş	Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted	0	RF PF	\$6,800 \$2,800		30%	
9	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
[Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0	RF RF	\$2,800 \$8,000	\$0 \$0	30%	
[Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0		
[<mark>Single Track</mark> Double Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30%	
]] [] []	Single Track Double Track Double Track Track Track: Direct fixation	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0	30% 30%	
]] [0.09	Single Track Double Track Double Track Track: Direct fixation Single Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track	0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405	\$0 \$0 \$0 \$0 \$0	30% 30% 15%	\$1 117 <i>1</i>
1 1 1 2 2 8 8 9 9 9 9	Single Track Double Track Double Track Track Track: Direct fixation	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0	30% 30%	
2 1 1 1 2 2 3 1 1 1	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track	0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405	\$0 \$0 \$0 \$0 \$0 \$0	30% 30% 15%	
0.09 - I	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 1,200 1,200	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$972,000 \$972,000	30% 30% 15% 15%	
0.09 - E	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track	0 0 0 0 1,200 1,200	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$972,000 \$972,000	30% 30% 15% 15%	
0.09 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 0 0 1,200 1,200	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$972,000 \$972,000	30% 30% 15% 15%	
0.09 - E	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 1,200 1,200	RF RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$972,000 \$972,000 \$972,000	30% 30% 15% 15%	
5	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track Track: Embedded Single Track Track: Ballasted	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Element Total	0 0 0 0 1,200 1,200	RF RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810 \$490 \$980	\$0 \$0 \$0 \$0 \$0 \$972,000 \$972,000 \$972,000	30% 30% 15% 15%	
0.009 - 1000 - 1	Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 1,200 1,200	RF RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$972,000 \$972,000 \$972,000	30% 30% 15% 15%	\$1,117,8 \$1,117,8 \$6,638,8

Hillsborough County MPO Transit Study System Planning LR-I275 Armenia Ave to West Shore Dr.

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tu	rnouts)						
	(, , , , , , , , , , , , , , , , , , ,	Special Trackwork (15% of Track Cost)	15%			\$1,011,738	15%	\$1,163,49
		Element Total	1	LS		\$1,011,738		\$1,163,49
0 13	Track: Vibration and noise	dampening						
10.10	Track. Vibraion and noice	Vibration Allowance (6% of Ballasted Track	6%			\$346,375	15%	\$398,33
		Cost) Element Total	1	LS		\$346,375		\$398,33
						*****		7,
20	STATIONS, STOPS, TERM	INALS, INTERMODAL						
20.01	At-grade station, stop, shelt	er, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$
		Center Platform Station	2	EA	\$3,000,000	\$6,000,000	20%	\$7,200,00
		Element Total	2	EA		\$6,000,000		\$7,200,00
20.02	Aerial station, stop, shelter,	· · · · · · · · · · · · · · · · · · ·						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	Ş
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	Ş
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	5
		Element Total	0	EA		\$0		(
0.03	Underground station, stop, s	shelter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA		\$0		
20.04	Other stations, landings, ter	minals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		\$
20.05	Joint development							
		N/A		1.0				4
		Element Total	1	LS		\$0		\$
20.06	Automobile parking multi-sto		0	CTI	¢42.000	¢o.	200/	
		Parking Garage Element Total	1	STL LS	\$12,000	\$0 \$0	20%	\$
00.07	Elevatore appalatore							
10.07	Elevators, escalators	Eleavator	2	EA	\$200,000	\$400,000	20%	\$480,00
		Escalator	1	EA	\$450,000	\$450,000	20%	\$540,00
		Element Total	1	LS	ψ+30,000	\$850,000	2070	\$1,020,00
40	SITEWORK & SPECIAL CO	ONDITIONS						
	Demolition, Clearing, Earthy							
	-	Demolition Allowance - Low	12,027	RF	\$30	\$360,807	30%	\$469,0
		Demolition Allowance - Median	1,200	RF	\$50	\$60,000	30%	\$78,0
		Demolition Allowance - High	0	RF	\$90	\$0	30%	
		Element Total	13,227	RF		\$420,807		\$547,0
0.02	Site Utilities, Utility Relocation	on						
	•	Utility Relocation Allowance - Low	12,027	RF	\$140	\$1,683,768	30%	\$2,188,8
		Utility Relocation Allowance - Median	1,200	RF	\$340	\$408,000	30%	\$530,4
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	, ,
		Element Total	13,227	RF		\$2,091,768		\$2,719,2
	Haz mat'l contam'd soil ren	noval/mitigation, ground water treatments						
10.03								
40.03	riaz. mati, contama son for	Hazardous Material Removal Allowance	13,227	RF	\$20	\$264,538	30%	\$343,9

Hillsborough County MPO Transit Study System Planning LR-I275 Armenia Ave to West Shore Dr.

CAT	STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
0.04	Environmental mitigation, e.g	y. wetlands, historic/archeologic, parks	40.007	DE	# 50	0004.040	000/	0050 740
		Enviromental Mitigation Allowance Element Total	13,227	RF LS	\$50	\$661,346 \$661.346	30%	\$859,749 \$859,749
		Element Total	1	LS		\$661,346		\$659,749
0.05	Site structures including reta	ining walls, sound walls						
	· ·	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	1,203	RF	\$80	\$96,215	30%	\$125,080
		Element Total	1	LS		\$96,215		\$125,080
	Dadashias / bibs assessed	Landan da Kara Tandan aring						
0.06	Pedesinan / bike access and	accommodation, landscaping Landscaping Allowance - Low	12,027	RF	\$15	\$180,404	30%	\$234,525
		Landscaping Allowance - Median	1,200	RF	\$25	\$30,000	30%	\$39,000
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	2	EA	\$800,000	\$1,600,000	30%	\$2,080,000
		Artwork (1% of Guideway & Stations)	1%			\$180,121	30%	\$234,157
		Element Total	1	LS		\$1,990,525		\$2,587,682
40.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	0	STL	\$4,000	\$0	30%	\$0
		Element Total	1	LS		\$0		\$0
40 N8	Temporary Facilities and oth	er indirect costs during construction						
+0.00	remporary racilities and our	Temporary Facilities (5% of Category 40)	5.0%			\$276,260	25%	\$345,325
		Element Total	1	LS		\$276,260	2070	\$345,325
		2.56.1. 1.514.	•			42.0,200		\$0.0,020
50	SYSTEMS							
50.01	Train control and signals							
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	13,227	RF	\$260	\$3,438,998	15%	\$3,954,847
		Element Total	13,227	RF		\$3,438,998		\$3,954,847
50.02	Traffic signals and crossing	protection						
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	6	EA	\$250,000	\$1,500,000	15%	\$1,725,000
		Element Total	6	EA		\$1,500,000		\$1,725,000
FO 00	-							
50.03	Traction power supply: subs	tations Traction Power, Substation	3	EA	\$1,300,000	\$3,900,000	15%	\$4,485,000
		Element Total	3	EA	\$1,300,000	\$3,900,000	1376	\$4,485,000
		Elomont Fotal	· ·			ψο,σσσ,σσσ		ψ1,100,000
E0 04	Traction power distribution:	catenary and third rail						
50.04					\$240	\$0	15%	\$0
50.04	Single Track	OCS System - Standard	0	RF	Φ 240			
50.04		OCS System - Standard	13,227	RF	\$260	\$3,438,998	15%	\$3,954,847
50.04	Single Track					\$3,438,998 \$0	15%	\$3,954,847 \$0
	Single Track Double Track	OCS System - Standard	13,227	RF		. , ,	15%	
	Single Track	OCS System - Standard Element Total	13,227 13,227	RF RF	\$260	\$0		\$0
	Single Track Double Track	OCS System - Standard Element Total Communication, Line	13,227 13,227 13,227	RF RF	\$260 \$240	\$0 \$3,174,459	15%	\$0 \$3,650,628
	Single Track Double Track	OCS System - Standard Element Total	13,227 13,227	RF RF	\$260	\$0		\$0
50.05	Single Track Double Track Communications	OCS System - Standard Element Total Communication, Line Communication, Station Element Total	13,227 13,227 13,227 2	RF RF RF EA	\$260 \$240	\$0 \$3,174,459 \$1,000,000	15%	\$0 \$3,650,628 \$1,150,000
50.05	Single Track Double Track	OCS System - Standard Element Total Communication, Line Communication, Station Element Total	13,227 13,227 13,227 2 1	RF RF RF EA LS	\$260 \$240 \$500,000	\$3,174,459 \$1,000,000 \$4,174,459	15% 15%	\$3,650,628 \$1,150,000 \$4,800,628
50.05	Single Track Double Track Communications	OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform	13,227 13,227 13,227 2 1	RF RF RF EA LS	\$260 \$240 \$500,000 \$220,000	\$3,174,459 \$1,000,000 \$4,174,459 \$440,000	15% 15% 15%	\$3,650,628 \$1,150,000 \$4,800,628
50.05	Single Track Double Track Communications	OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	13,227 13,227 13,227 2 1	RF RF RF EA LS	\$260 \$240 \$500,000	\$3,174,459 \$1,000,000 \$4,174,459 \$440,000 \$0	15% 15%	\$3,650,628 \$1,150,000 \$4,800,628 \$506,000 \$0
50.05	Single Track Double Track Communications	OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform	13,227 13,227 13,227 2 1	RF RF RF EA LS	\$260 \$240 \$500,000 \$220,000	\$3,174,459 \$1,000,000 \$4,174,459 \$440,000	15% 15% 15%	\$3,650,628 \$1,150,000 \$4,800,628 \$506,000 \$0
50.05 50.06	Single Track Double Track Communications	OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	13,227 13,227 13,227 2 1	RF RF RF EA LS	\$260 \$240 \$500,000 \$220,000	\$3,174,459 \$1,000,000 \$4,174,459 \$440,000 \$0	15% 15% 15%	\$3,650,628 \$1,150,000 \$4,800,628
50.05 50.06	Single Track Double Track Communications Fare collection system and e	OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	13,227 13,227 13,227 2 1	RF RF RF EA LS	\$260 \$240 \$500,000 \$220,000	\$3,174,459 \$1,000,000 \$4,174,459 \$440,000 \$0	15% 15% 15%	\$3,650,628 \$1,150,000 \$4,800,628 \$506,000 \$0

Hillsborough County MPO Transit Study System Planning LR-I275

Armenia Ave to West Shore Dr.

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMF	PROVEMENTS						
60.01	Purchase or lease	e of real est	ate						
			Right of Way Allowance - At Grade	12,027	RF	\$400	\$4,810,766	50%	\$7,216,148
			Right of Way Allowance - Aerial	1,200	RF	\$300	\$360,000	50%	\$540,000
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	13,227	RF		\$5,170,766		\$7,756,148
1									
i									

Hillsborough County MPO Transit Study System Planning LR-I275

N Boulevard to Armenia Ave.

NO.	BEGIN	NING END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	COST
10	GUIDEWAY & TRA								
0.01	Guideway: At-grade	e exclusive							
	Single Track		At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track		At Grade - Ballasted, Open	4,566	RF	\$450	\$2,054,921	25%	\$2,568,65
			Element Total	4,566	RF		\$2,054,921		\$2,568,65
0.02		e semi-ex	clusive (allows cross-traffic)						
	Single Track		At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	\$
	Single Track		At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	\$
	Double Track		At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	\$
	Double Track		At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	9
U U3	Guideway: At-grade	a in mivad	traffic						
0.03	Single Track	e III IIIIxeu	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	9
	Double Track		At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	4
	Double Hack		Element Total	0	RF	Φ000	\$0	23%	\$
0 04	Guideway: Aerial st	tructure							
	Single Track		Bridge - Ballasted	0	RF	\$8,200	\$0	30%	9
	Single Track		Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	9
	Single Track		Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	9
	Double Track		Bridge - Ballasted	0	RF	\$12,200	\$0	30%	9
	Double Track		Aerial - Direct Fixation	800	RF	\$5,500	\$4,400,000	30%	\$5,720,00
	Double Track		Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0	30%	5
			Element Total	800	RF	**,***	\$4,400,000		\$5,720,00
0.05	Guideway: Built-up	fill							
	Single Track		At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	9
	Dauble Treels								
	Double Track		At Grade - Ballasted, Built-up Element Total	0	RF RF	\$600	\$0 \$0	25%	
10.06	Guideway: Undergr Single Track Double Track	round cut	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation	0 0 0	RF RF RF	\$600 \$10,000 \$15,500	\$0 \$0 \$0	25% 35% 35%	\$ \$ \$ \$
0.06	Guideway: Undergr Single Track	round cut	Element Total & cover Subway - Direct Fixation	0	RF RF	\$10,000	\$0 \$0	35%	9
	Guideway: Undergr Single Track Double Track Guideway: Undergr		Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0 0	RF RF RF RF	\$10,000 \$15,500	\$0 \$0 \$0 \$0	<mark>35%</mark> 35%	\$
	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track		Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation	0 0 0	RF RF RF RF	\$10,000 \$15,500 \$12,000	\$0 \$0 \$0 \$0	35% 35% 35%	\$ \$ \$
	Guideway: Undergr Single Track Double Track Guideway: Undergr		Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0 0	RF RF RF RF	\$10,000 \$15,500	\$0 \$0 \$0 \$0	<mark>35%</mark> 35%	Ş
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track	round tunr	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0 0 0	RF RF RF RF	\$10,000 \$15,500 \$12,000	\$0 \$0 \$0 \$0 \$0	35% 35% 35%	\$ \$ \$
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track	round tunr	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0 0 0	RF RF RF RF	\$10,000 \$15,500 \$12,000	\$0 \$0 \$0 \$0 \$0	35% 35% 35%	
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track	round tunr	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total	0 0 0 0	RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000	\$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 35%	
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track	round tunr	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation	0 0 0 0	RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000	\$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 35%	
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track	round tunr	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0 0	RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 35% 30%	
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track	round tunr	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0 0	RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 35% 30% 30% 30%	
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted	0 0 0 0 0 0	RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 35% 30% 30% 30%	
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted	0 0 0 0 0 0	RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 35% 30% 30% 30%	
0.07 0.08	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total mel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Element Total Element Total	0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 30% 30% 30% 30%	
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total mel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Retained Fill - Ballasted	0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 35% 35% 35% 30% 30% 30% 30%	\$745,20
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 35% 30% 30% 30% 30% 15%	\$745,20 \$745,20
0.07 0.08 0.09	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Double Track Double Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 35% 30% 30% 30% 30% 15%	\$745,2i
0.07	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Single Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 35% 30% 30% 30% 30% 15%	\$745,2i
0.07 0.08 0.09	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Track: Direct fixatic Single Track Double Track Double Track Double Track Double Track Double Track Double Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 35% 30% 30% 30% 30% 15%	\$745,2i
0.07 0.08 0.09	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Track: Direct fixatic Single Track Double Track Double Track Track: Embedded Single Track Double Track Track: Embedded Single Track Track: Ballasted	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Element Total	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$20,000 \$8,000 \$3,200 \$405 \$810 \$490 \$980	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 35% 30% 30% 30% 30% 15% 15%	\$745,20 \$745,20
0.09	Guideway: Undergr Single Track Double Track Guideway: Undergr Single Track Double Track Guideway: Retaine Single Track Single Track Double Track Track: Direct fixatic Single Track Double Track Double Track Double Track Double Track Double Track Double Track Double Track	d cut or fil	Element Total & cover Subway - Direct Fixation Subway - Direct Fixation Element Total nel Subway - Direct Fixation Subway - Direct Fixation Subway - Direct Fixation Element Total I Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF RF RF RF	\$10,000 \$15,500 \$12,000 \$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 35% 35% 35% 30% 30% 30% 30% 15%	\$745,20

Hillsborough County MPO Transit Study System Planning LR-I275 N Boulevard to Armenia Ave.

CAT NO.	STATIONING Begin end	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tur	nouts)						
	(,	Special Trackwork (15% of Track Cost)	15%			\$425,987	15%	\$489,88
		Element Total	1	LS		\$425,987		\$489,88
0 13	Track: Vibration and noise d	ampening						
10.10	Track. Vibration and noise di	Vibration Allowance (6% of Ballasted Track Cost)	6%			\$131,515	15%	\$151,24
		Element Total	1	LS		\$131,515		\$151,24
20	STATIONS, STOPS, TERMI	NALS. INTERMODAL						
	At-grade station, stop, shelter	•						
	, ,	Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,00
		Element Total	1	EA	***************************************	\$3,000,000		\$3,600,00
20.02	Aerial station, stop, shelter, n	nall, terminal, platform						
	•	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	\$
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	9
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		Ç
0.03	Underground station, stop, sh	nelter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	5
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	:
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	:
		Element Total	0	EA		\$0		;
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		\$
20.05	Joint development							
		N/A Element Total	1	LS		\$0		\$
20 06	Automobile parking multi-stor	ny structure						
-0.00	Automobile parking multi-stor	Parking Garage	0	STL	\$12,000	\$0	20%	\$
		Element Total	1	LS	Ψ12,000	\$0	2070	\$
0 07	Elevators, escalators							
.0.0.		Eleavator	2	EA	\$200,000	\$400,000	20%	\$480,00
		Escalator	1	EA	\$450,000	\$450,000	20%	\$540,00
		Element Total	1	LS	* ,	\$850,000		\$1,020,00
	SITEWORK & SPECIAL CO							
.U.U I	Demolition, Clearing, Earthwo	ork Demolition Allowance - Low	A ECC	DE	_ው ያር	\$136.995	300/	\$178,09
		Demolition Allowance - Low Demolition Allowance - Median	4,566 800	RF DE	\$30 \$50	,	30%	\$178,09 \$52,00
		Demolition Allowance - Median Demolition Allowance - High	0	RF RF	\$50 \$00	\$40,000	30%	\$52,00
		Element Total	5,366	RF	\$90	\$0 \$176,995	30%	\$230,0
0.00	Otto Hallaco - Hallaco Dolocotico	_						
U.U2	Site Utilities, Utility Relocation	n Utility Relocation Allowance - Low	4,566	RF	\$140	\$639,309	30%	\$831,1
		Utility Relocation Allowance - Median	800	RF	\$340	\$272,000	30%	\$353,60
		Utility Relocation Allowance - Median Utility Relocation Allowance - High	0	RF	\$570	\$272,000	30%	\$353,01 (
		Element Total	5,366	RF	φυιυ	\$911,309	JU /0	\$1,184,7
N 03	Haz mat'l contam'd soil rom	oval/mitigation, ground water treatments						
₊ U.U3	riaz. mari, comantu son fem	Hazardous Material Removal Allowance	5,366	RF	\$20	\$107,330	30%	\$139,52
		Element Total	5,300	LS	Φ∠∪	\$107,330	JU /0	\$139,52
		Lionidii Totai		_0		ψ 101,000		ψ 100,0

Hillsborough County MPO Transit Study System Planning LR-I275 N Boulevard to Armenia Ave.

CAT	STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
0.04	Environmental mitigation, e.	g. wetlands, historic/archeologic, parks	F 000	DE	# 50	# 000 005	000/	#0.40.000
		Environmental Mitigation Allowance	5,366 1	RF LS	\$50	\$268,325 \$268.325	30%	\$348,822 \$348,822
		Element Total	1	LS		\$200,325		\$340,0ZZ
0.05	Site structures including reta	ining walls, sound walls						
	· ·	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	457	RF	\$80	\$36,532	30%	\$47,492
		Element Total	1	LS		\$36,532		\$47,492
40.00	B 1 (1 (1)							
10.06	Pedestrian / bike access and	I accommodation, landscaping	4 566	DE	\$15	¢69.407	30%	\$89,047
		Landscaping Allowance - Low Landscaping Allowance - Median	4,566 800	RF RF	\$15 \$25	\$68,497 \$20,000	30%	\$26,000
		Landscaping Allowance - High	0	RF	\$40	\$0,000	30%	\$20,000
		Pedestrain Overpasses	1	EA	\$800,000	\$800,000	30%	\$1,040,000
		Artwork (1% of Guideway & Stations)	1%		4000,000	\$94,549	30%	\$122,914
		Element Total	1	LS		\$983,047		\$1,277,961
40 07	Automobile bus van access	ways including roads, parking lots						
	,,	Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	0	STL	\$4,000	\$0	30%	\$0
		Element Total	1	LS		\$0		\$0
40 OO	Tomporary Equilities and oth	er indirect costs during construction						
+0.00	remporary racilities and our	Temporary Facilities (5% of Category 40)	5.0%			\$124,177	25%	\$155,221
		Element Total	3.0 //	LS		\$124,177	2570	\$155,221
		Element Total	•			Ψ121,177		ψ100,EE1
50	SYSTEMS							
50.01								
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	5,366	RF	\$260	\$1,395,288	15%	\$1,604,581
		Element Total	5,366	RF		\$1,395,288		\$1,604,581
50 02	Traffic signals and crossing	protection						
00.02	Traine eignale and ereceing	Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	2	EA	\$250,000	\$500,000	15%	\$575,000
		Element Total	2	EA	,	\$500,000		\$575,000
50.03	Traction power supply: subs	tations						
			0	_^	£4 000 000	CO COO COO	4.50/	#0.000.000
		Traction Power, Substation	2	EΑ	\$1,300,000	\$2,600,000	15%	\$2,990,000
			2	EA EA	\$1,300,000	\$2,600,000 \$2,600,000	15%	
50.04	Traction power distribution:	Traction Power, Substation Element Total			\$1,300,000		15%	\$2,990,000 \$2,990,000
50.04	Traction power distribution: Single Track	Traction Power, Substation Element Total			\$1,300,000 \$240		15% 15%	
50.04		Traction Power, Substation Element Total catenary and third rail	2	EA	. , ,	\$2,600,000		\$2,990,000
50.04	Single Track	Traction Power, Substation Element Total catenary and third rail OCS System - Standard	2	EA RF	\$240	\$2,600,000	15%	\$2,990,000
	Single Track Double Track	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard	0 5,366	EA RF RF	\$240	\$2,600,000 \$0 \$1,395,288	15%	\$2,990,000 \$0 \$1,604,581
	Single Track	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total	0 5,366 5,366	RF RF RF	\$240 \$260	\$2,600,000 \$0 \$1,395,288 \$0	<mark>15%</mark> 15%	\$2,990,000 \$0 \$1,604,581 \$0
	Single Track Double Track	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	0 5,366 5,366 5,366	RF RF RF	\$240 \$260 \$240	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958	15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152
	Single Track Double Track	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total	0 5,366 5,366	RF RF RF	\$240 \$260	\$2,600,000 \$0 \$1,395,288 \$0	<mark>15%</mark> 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152 \$575,000
50.05	Single Track Double Track Communications	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	0 5,366 5,366 5,366 1	RF RF RF RF	\$240 \$260 \$240	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958 \$500,000	15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0
50.05	Single Track Double Track	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	0 5,366 5,366 5,366 1	RF RF RF RF LS	\$240 \$260 \$240 \$500,000	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958 \$500,000 \$1,787,958	15% 15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152 \$575,000 \$2,056,152
50.05	Single Track Double Track Communications	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total cquipment Fare Collection - 1 Platform	2 0 5,366 5,366 5,366 1 1	RF RF RF RF LS	\$240 \$260 \$240 \$500,000 \$220,000	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958 \$500,000 \$1,787,958 \$220,000	15% 15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152 \$575,000 \$2,056,152
50.05	Single Track Double Track Communications	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total cquipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 0 5,366 5,366 5,366 1 1 1	RF RF RF RF LS	\$240 \$260 \$240 \$500,000	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958 \$500,000 \$1,787,958 \$220,000 \$0	15% 15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152 \$575,000 \$2,056,152 \$253,000 \$0
50.05	Single Track Double Track Communications	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total cquipment Fare Collection - 1 Platform	2 0 5,366 5,366 5,366 1 1	RF RF RF RF LS	\$240 \$260 \$240 \$500,000 \$220,000	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958 \$500,000 \$1,787,958 \$220,000	15% 15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152 \$575,000 \$2,056,152 \$253,000 \$0
50.05 50.06	Single Track Double Track Communications Fare collection system and 6	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total cquipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 0 5,366 5,366 5,366 1 1 1	RF RF RF RF LS	\$240 \$260 \$240 \$500,000 \$220,000	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958 \$500,000 \$1,787,958 \$220,000 \$0	15% 15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152 \$575,000 \$2,056,152
50.05 50.06	Single Track Double Track Communications	Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total cquipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 0 5,366 5,366 5,366 1 1 1	RF RF RF RF LS	\$240 \$260 \$240 \$500,000 \$220,000	\$2,600,000 \$0 \$1,395,288 \$0 \$1,287,958 \$500,000 \$1,787,958 \$220,000 \$0	15% 15% 15% 15%	\$2,990,000 \$0 \$1,604,581 \$0 \$1,481,152 \$575,000 \$2,056,152 \$253,000 \$0

Hillsborough County MPO Transit Study System Planning LR-I275

N Boulevard to Armenia Ave.

CAT	STATIC	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ETING IMPRO	VEMENTS						
			VENIENTS						
60.01	Purchase or lease	of real estate							
		F	Right of Way Allowance - At Grade	4,566	RF	\$400	\$1,826,597	50%	\$2,739,895
		R	tight of Way Allowance - Aerial	800	RF	\$300	\$240,000	50%	\$360,000
		F	tight of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
		_	Element Total	5,366	RF		\$2,066,597		\$3,099,895
A									

	STATIONING BEGIN ENI	D DESCRIPTION	QTY	UNIT	COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK E							
0.01	Guideway: At-grade exclu							
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track	At Grade - Ballasted, Open	37,463	RF	\$450	\$16,858,268	25%	\$21,072,83
		Element Total	37,463	RF		\$16,858,268		\$21,072,83
0.02		-exclusive (allows cross-traffic)						
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	;
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
n na	Cuidoway At grada in m	ived traffic						
0.03	Guideway: At-grade in m	At Grade - Embedded, In-Street	0	RF	\$ ECO	የ ለ	25%	
	Single Track Double Track	At Grade - Embedded, In-Street At Grade - Embedded, In-Street	0	RF	\$560 \$680	\$0 \$0	25%	
	Double Track	Element Total	0	RF	\$000	\$0	25%	
n na	Guidoway: Aorial structur							
0.04	Guideway: Aerial structur Single Track	e Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track Single Track	Aerial - Direct Fixation	0	RF	\$6,200 \$4,600	\$0 \$0	30%	
	Single Track Single Track	Aerial - Direct Fixation Over Water	0	RF	\$4,600 \$5,000	\$0 \$0	30%	
	Double Track	Bridge - Ballasted	0	RF		\$0 \$0	30%	
	Double Track	Aerial - Direct Fixation	0	RF	\$12,200 \$5,500	\$0 \$0	30%	
	Double Track	Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0 \$0	30%	
	Double Hack	Element Total	0	RF	φ0,000	\$0	30 /6	
0.5	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		
0.06	Guideway: Underground	cut & cover						
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$15,500	\$0	35%	
		Element Total	0	RF		\$0		
0.07	Guideway: Underground	tunnel Subway - Direct Fixation	0	DE	#40.000	ФО.	0.50/	
	Single Track Double Track	•	0	RF	\$12,000	\$0 \$0	35%	
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$20,000	\$0 \$0	35%	
n na	Guideway: Retained cut of	or fill						
	Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
	Double Track	Retained Fill - Ballasted Element Total	0	RF RF	\$3,200	\$0 \$0	30%	
		Liement Total	U	IXI		ΨΟ		
0.09	Track: Direct fixation							
.09	Single Track	Direct Fixation Track	0		\$405	\$0	15%	
0.09		Direct Fixation Track	0 0 0	RF	\$405 \$810	\$0	15% 15%	
	Single Track Double Track		0					
	Single Track Double Track Track: Embedded	Direct Fixation Track Element Total	0	RF RF	\$810	\$0 \$0	15%	
	Single Track Double Track Track: Embedded Single Track	Direct Fixation Track Element Total Embedded Track	0	RF RF	\$810 \$490	\$0 \$0 \$0	15% 15%	
	Single Track Double Track Track: Embedded	Direct Fixation Track Element Total	0	RF RF	\$810	\$0 \$0	15%	
0.10	Single Track Double Track Track: Embedded Single Track Double Track	Direct Fixation Track Element Total Embedded Track Embedded Track	0 0 0	RF RF RF RF	\$810 \$490	\$0 \$0 \$0 \$0 \$0	15% 15%	
0.10	Single Track Double Track Track: Embedded Single Track Double Track Track: Ballasted	Direct Fixation Track Element Total Embedded Track Embedded Track Element Total	0 0 0 0	RF RF RF RF RF	\$810 \$490 \$980	\$0 \$0 \$0 \$0 \$0 \$0	15% 15% 15%	
0.10	Single Track Double Track Track: Embedded Single Track Double Track	Direct Fixation Track Element Total Embedded Track Embedded Track	0 0 0	RF RF RF RF	\$810 \$490	\$0 \$0 \$0 \$0 \$0	15% 15%	\$20,679,4

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tur	nouts)						
	(Special Trackwork (15% of Track Cost)	15%			\$2,697,323	15%	\$3,101,92
		Element Total	1	LS		\$2,697,323		\$3,101,92
0 13	Track: Vibration and noise d	ampening						
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$1,078,929	15%	\$1,240,76
		Element Total	1	LS		\$1,078,929		\$1,240,76
20	STATIONS, STOPS, TERMI	NALS. INTERMODAL						
	At-grade station, stop, shelte	•						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	(
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	(
		Center Platform Station	8	EA	\$3,000,000	\$24,000,000	20%	\$28,800,00
		Element Total	8	EA		\$24,000,000		\$28,800,00
0.02	Aerial station, stop, shelter, n	nall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	:
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	:
		Element Total	0	EA		\$0		
0.03	Underground station, stop, sl	nelter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA		\$0		
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		\$
0.05	Joint development							
		N/A Element Total	1	LS		\$0		;
0 06	Automobile parking multi-stor	v structure						
.0.00	, tateeze partingatt etc.	Parking Garage	0	STL	\$12,000	\$0	20%	;
		Element Total	1	LS	¥ 1=,000	\$0		
0.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	:
					A . = 0 000	\$0	20%	
		Escalator	0	EA	\$450,000			
		Escalator Element Total	1	LS	\$450,000	\$0		
	SITEWORK & SPECIAL CO Demolition, Clearing, Earthwa	Element Total	1		\$450,000			
	SITEWORK & SPECIAL CO Demolition, Clearing, Earthwo	Element Total NDITIONS ork	1	LS		\$0	30%	
		Element Total NDITIONS ork Demolition Allowance - Low	37,463	LS RF	\$30	\$0 \$1,123,885	30% 30%	\$1,461,0
		Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median	37,463 0	LS RF RF	\$30 \$50	\$0 \$1,123,885 \$0	30%	\$1,461,0
		Element Total NDITIONS ork Demolition Allowance - Low	37,463	LS RF	\$30	\$0 \$1,123,885		\$1,461,0
0.01	Demolition, Clearing, Earthwe	Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total	37,463 0 0	RF RF RF	\$30 \$50	\$0 \$1,123,885 \$0 \$0	30%	\$1,461,0
0.01		Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total	37,463 0 0 37,463	RF RF RF RF	\$30 \$50 \$90	\$1,123,885 \$0 \$0 \$1,123,885	30% 30%	\$1,461,0 \$1,461,0
0.01	Demolition, Clearing, Earthwe	Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total Utility Relocation Allowance - Low	37,463 0 0 37,463	RF RF RF RF	\$30 \$50 \$90	\$1,123,885 \$0 \$0 \$1,123,885 \$5,244,794	30% 30%	\$1,461,0 \$1,461,0 \$6,818,2
0.01	Demolition, Clearing, Earthwe	Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total Outility Relocation Allowance - Low Utility Relocation Allowance - Median	37,463 0 0 37,463	RF RF RF RF	\$30 \$50 \$90 \$140 \$340	\$1,123,885 \$0 \$0 \$1,123,885 \$5,244,794 \$0	30% 30% 30%	\$1,461,0 \$1,461,0 \$6,818,2
0.01	Demolition, Clearing, Earthwe	Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total Utility Relocation Allowance - Low	37,463 0 0 37,463 37,463	RF RF RF RF	\$30 \$50 \$90	\$1,123,885 \$0 \$0 \$1,123,885 \$5,244,794	30% 30%	\$1,461,0 \$1,461,0 \$6,818,2
0.01	Demolition, Clearing, Earthwell Site Utilities, Utility Relocation	Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	37,463 0 0 37,463 37,463 0	RF RF RF RF RF	\$30 \$50 \$90 \$140 \$340	\$1,123,885 \$0 \$1,123,885 \$1,123,885 \$5,244,794 \$0 \$0	30% 30% 30%	\$1,461,0 \$1,461,0 \$6,818,2
10.01 10.02	Demolition, Clearing, Earthwell Site Utilities, Utility Relocation	Element Total NDITIONS ork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total Outility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	37,463 0 0 37,463 37,463 0	RF RF RF RF RF	\$30 \$50 \$90 \$140 \$340	\$1,123,885 \$0 \$1,123,885 \$1,123,885 \$5,244,794 \$0 \$0	30% 30% 30%	\$1,461,0

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	37,463	RF	\$50	\$1,873,141	30%	\$2,435,083
		Element Total	1	LS		\$1,873,141		\$2,435,083
40.05	Site structures including retai	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	3,746	RF	\$80	\$299,703	30%	\$389,613
		Element Total	1	LS		\$299,703		\$389,613
40.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	37,463	RF	\$15	\$561,942	30%	\$730,525
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	\$0
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$408,583	30%	\$531,157
		Element Total	1	LS		\$970,525		\$1,261,682
40.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	1,000	STL	\$4,000	\$4,000,000	30%	\$5,200,000
		Element Total	1	LS		\$4,000,000		\$5,200,000
40.08	Temporary Facilities and other	er indirect costs during construction						
	, , , , , , , , , , , , , , , , , , , ,	Temporary Facilities (5% of Category 40)	5.0%			\$713,065	25%	\$891,331
		Element Total	1	LS		\$713,065	==,,	\$891,331
50	SYSTEMS							
50.01	Train control and signals Single Track	Signal System	0	RF	\$240	\$0	150/	<u></u>
	Double Track	Signal System	37,463	RF	\$240	\$9,740,332	15% 15%	\$0 \$11,201,382
	Double Hadin	Element Total	37,463	RF	Ψ200	\$9,740,332	1070	\$11,201,382
50.02	Traffic signals and crossing p	protection						
30.02	Traffic signals and crossing p	Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	19	EA	\$250,000	\$4,750,000	15%	\$5,462,500
		Element Total	19	EA	Ψ230,000	\$4,750,000	1370	\$5,462,500
F0 00	-							
50.03	Traction power supply: subs	tations Traction Power, Substation	8	EA	\$1,300,000	\$10,400,000	15%	\$11,960,000
		Element Total	8	EA	Ψ1,000,000	\$10,400,000	1070	\$11,960,000
EO 04	Traction normal distributions	natarany, and third will						
50.04	Traction power distribution: o	OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard	37,463	RF	\$260	\$9,740,332	15%	\$11,201,382
	Bouble Hack	Element Total	37,463	RF	ΨΖΟΟ	\$0	1070	\$0
E0 0E	Communications							
30.05	Communications	Communication, Line	37,463	RF	\$240	\$8,991,076	15%	\$10,339,737
		Communication, Station	8	EA	\$500,000	\$4,000,000	15%	\$4,600,000
		Element Total	1	LS	7777,777	\$12,991,076		\$14,939,737
50 NB	Fare collection system and e	quinment						
50.00	i are collection system and e	quipment Fare Collection - 1 Platform	8	EA	\$220,000	\$1,760,000	15%	\$2,024,000
		Fare Collection - 1 Platform	0	EA	\$400,000	\$1,760,000	15%	\$2,024,000
		Element Total	1	LS	ψ-του,υσο	\$1,760,000	10/0	\$2,024,000
		Lionidit Total	'	LO		ψ1,700,000		Ψ2,024,000
50.07	Central Control							
		N/A						
		Element Total	1	LS		\$0		\$0

IIVAIN	SII WODE. LKI								
CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMF	PROVEMENTS						
60.01	Purchase or lease	e of real est	ate						
			Right of Way Allowance - At Grade	37,463	RF	\$400	\$14,985,127	50%	\$22,477,690
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	37,463	RF		\$14,985,127		\$22,477,690
l									

Hillsborough County MPO Transit Study System Planning LR-Mac Dill AFB

E Polk/ N Marion to N Boulevard/ Tampa Prep Pl

NO. BEGIN	ATIONING N END	DESCRIPTION	QTY	UNIT	UNIT	BASE COST	ALLCTD CONTGY	COST
	& TRACK ELE							
0.01 Guideway: A	-		_					
Single Track		At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	04.000.4
Double Track	(At Grade - Ballasted, Open Element Total	3,360 3,360	RF RF	\$450	\$1,512,128 \$1,512,128	25%	\$1,890,1 \$1,890,1
n no Guideway: A	t-arade semi-ev	clusive (allows cross-traffic)						
Single Track	-	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
Single Track		At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
Double Track		At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
Double Track	(At Grade - Embedded, In-Street	0	RF	\$700	\$0	25%	
		Element Total	0	RF		\$0		
0.03 Guideway: A	-							
Single Track		At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
Double Track	(At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
		Liement Total	Ü	IXI		ΨΟ		
0.04 Guideway: A Single Track		Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
Single Track		Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
Single Track		Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0 \$0	30%	
Double Track		Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
Double Track	<	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	
Double Track		Aerial - Direct Fixation Over Water	400	RF	\$6,000	\$2,400,000	30%	\$3,120,
		Element Total	400	RF	, , , , , ,	\$2,400,000		\$3,120,
0.05 Guideway: B	uilt-up fill							
Single Track		At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
Double Track	<	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		
0.06 Guideway: U Single Track		& cover Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
Double Track		Subway - Direct Fixation	0	RF	\$15,500	\$0 \$0	35%	
Double Hack		Element Total	0	RF	φ13,300	\$0	33 /6	
0.07 Guideway: U	nderground tuni	nel						
	-	nel Subway - Direct Fixation	0	RF	\$12.000	\$0	35%	
0.07 Guideway: U Single Track Double Track			0	RF RF	\$12,000 \$20,000	\$0 \$0	35% 35%	
Single Track		Subway - Direct Fixation						
Single Track Double Track 0.08 Guideway: R	k letained cut or fil	Subway - Direct Fixation Subway - Direct Fixation Element Total	0	RF		\$0		
Single Track Double Track 0.08 Guideway: R Single Track	ketained cut or fil	Subway - Direct Fixation Subway - Direct Fixation Element Total Il Retained Cut - Direct Fixation	0	RF RF	\$20,000 \$6,800	\$0 \$0 \$0	35%	
Single Track Double Track 0.08 Guideway: R Single Track Single Track	k letained cut or fil	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0	RF RF RF RF	\$20,000 \$6,800 \$2,800	\$0 \$0 \$0 \$0 \$0	35% 30% 30%	
Single Track Double Track D.08 Guideway: R Single Track Single Track Double Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0 0 0	RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30%	
Single Track Double Track 0.08 Guideway: R Single Track Single Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0 0 0	RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800	\$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30%	
Single Track Double Track D.08 Guideway: R Single Track Single Track Double Track Double Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0 0 0	RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30%	
Single Track Double Track 0.08 Guideway: R Single Track Single Track Double Track Double Track Double Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0 0 0 0	RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30%	
Single Track Double Track Double Track Single Track Single Track Double Track Double Track Double Track Single Track	t fixation	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track	0 0 0 0 0 0	RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 30%	
Single Track Double Track 0.08 Guideway: R Single Track Single Track Double Track Double Track Double Track	t fixation	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track	0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30%	
Single Track Double Track Double Track Single Track Single Track Double Track Double Track Double Track Double Track Direct Single Track	t fixation	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track	0 0 0 0 0 0	RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	35% 30% 30% 30% 30% 30%	
Single Track Double Track Double Track Single Track Single Track Double Track Double Track Double Track Double Track Double Track Double Track	tetained cut or files	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 30% 30% 30% 30% 15%	
Single Track Double Track Single Track Single Track Double Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 30% 30% 30% 30% 15%	
Single Track Double Track 0.08 Guideway: R Single Track Single Track Double Track Double Track Double Track 0.09 Track: Direct Single Track Double Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 0	RF RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 30% 30% 30% 30% 15%	
Single Track Double Track Single Track Single Track Single Track Double Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 0 0 400 400	RF RF RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 30% 30% 30% 30% 15%	
Single Track Double Track Single Track Single Track Single Track Double Track	detained cut or file	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Element Total	0 0 0 0 0 0 0 0 400 400	RF RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$324,000 \$324,000 \$0 \$0	35% 30% 30% 30% 30% 15% 15% 15%	
Double Track 0.08 Guideway: R Single Track Single Track Double Track Double Track 0.09 Track: Direct Single Track Double Track Double Track Double Track Single Track Single Track	detained cut or files	Subway - Direct Fixation Subway - Direct Fixation Element Total Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 0 0 400 400	RF RF RF RF RF RF RF RF RF	\$20,000 \$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	35% 30% 30% 30% 30% 15%	\$372,6 \$372,6

Hillsborough County MPO Transit Study System Planning LR-Mac Dill AFB E Polk/ N Marion to N Boulevard/ Tampa Prep Pl

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12	Track: Special (switches, tur	moute)						
10.12	Track. Opecial (Switches, tal	Special Trackwork (15% of Track Cost)	15%			\$290,540	15%	\$334,122
		Element Total	13 / 1	LS		\$290,540	1370	\$334,122
		Element Total		LS		\$290,340		Φ334,122
10.13	Track: Vibration and noise da							
		Vibration Allowance (6% of Ballasted Track	6%			\$96,776	15%	\$111,293
		Cost) Element Total	1	LS		\$96,776		\$111,293
		Liement Total	'	LS		φ 9 0,770		φ111,290
20	STATIONS, STOPS, TERMI	NALS, INTERMODAL						
20.01	At-grade station, stop, shelter	r, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$(
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	\$(
		Center Platform Station	0	EA	\$3,000,000	\$0	20%	\$(
		Element Total	0	EA		\$0		\$0
0.02	Aerial station, stop, shelter, n	nall, terminal, platform						
	,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	\$
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	\$
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$(
		Element Total	0	EA	, ,,,,,,,,,	\$0		\$
0.00	Undergroup detetion atom of	ashan madil tannainal mlatfarms						
0.03	Underground station, stop, sh	Side Platform Station - 1 Platform	0	ΕΛ.	000 000 909	0.9	200/	e
		Side Platform Station - 2 Platforms	0	EA	\$28,000,000	\$0	30%	\$
			0	EA	\$52,000,000	\$0	30%	\$
		Center Platform Station Element Total	0	EA EA	\$45,000,000	\$0 \$0	30%	\$
		Element Total	U	EA		ΦU		\$(
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc.						
		Element Total	1	LS		\$0		\$0
)n n5	Joint development							
.0.03	Joint development	N/A						
		Element Total	1	LS		\$0		\$0
20.06	Automobile parking multi-stor	ry structure						
.0.00	ratemeste parting mate etc.	Parking Garage	0	STL	\$12,000	\$0	20%	\$0
		Element Total	1	LS	*,	\$0		\$0
n n7	Elevators, escalators							
.0.01	LICYALOIS, ESCAIALUIS	Eleavator	0	EA	\$200,000	\$0	20%	\$0
		Escalator	0	EA	\$450,000	\$0 \$0	20%	\$(
		Element Total	1	LS	ψ 100,000	\$0	20 /0	\$(
40	SITEWORK & SPECIAL CO	NDITIONS						
	Demolition, Clearing, Earthwe							
		Demolition Allowance - Low	3,360	RF	\$30	\$100,809	30%	\$131,05
		Demolition Allowance - Median	400	RF	\$50	\$20,000	30%	\$26,00
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$
		Element Total	3,760	RF		\$120,809		\$157,05 ²
0.02	Site Utilities, Utility Relocation	n						
	•	Utility Relocation Allowance - Low	3,360	RF	\$140	\$470,440	30%	\$611,572
		Utility Relocation Allowance - Median	400	RF	\$340	\$136,000	30%	\$176,800
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$(
		Element Total	3,760	RF	,	\$606,440		\$788,372
เป บร	Haz mat'l contam'd soil rom	oval/mitigation, ground water treatments						
v.U3	riaz. mati, contamu soil rem	oval/mitigation, ground water treatments Hazardous Material Removal Allowance	3,760	RF	\$20	\$75,206	30%	\$97,76
		Element Total	1	LS	ΨΖΟ	\$75,206	30 /0	\$97,767
		Liement Total	'			Ψ1 0,200		ψ31,10

Hillsborough County MPO Transit Study System Planning LR-Mac Dill AFB E Polk/ N Marion to N Boulevard/ Tampa Prep Pl

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	3,760	RF	\$50	\$188,014	30%	\$244,418
		Element Total	1	LS		\$188,014		\$244,418
40.05	Site structures including retai	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	336	RF	\$80	\$26,882	30%	\$34,947
		Element Total	1	LS		\$26,882		\$34,947
40 06	Pedestrian / bike access and	accommodation, landscaping						
.0.00	Todostian / Sino dossos and	Landscaping Allowance - Low	3,360	RF	\$15	\$50,404	30%	\$65,526
		Landscaping Allowance - Median	400	RF	\$25	\$10,000	30%	\$13,000
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%		. ,	\$39,121	30%	\$50,858
		Element Total	1	LS		\$99,526		\$129,383
40.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	0	STL	\$4,000	\$0	30%	\$0
		Element Total	1	LS		\$0		\$0
40.08	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$55,844	25%	\$69,805
		Element Total	1	LS		\$55,844		\$69,805
5 0	SYSTEMS							
50 50.01	Train control and signals							
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	3,760	RF	\$260	\$977,674	15%	\$1,124,325
		Element Total	3,760	RF		\$977,674		\$1,124,325
50.02	Traffic signals and crossing p	protection						
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	2	EA	\$250,000	\$500,000	15%	\$575,000
		Element Total	2	EA		\$500,000		\$575,000
50.03	Traction power supply: subst	tations						
	, ,,,	Traction Power, Substation	1	EA	\$1,300,000	\$1,300,000	15%	\$1,495,000
		Element Total	1	EA		\$1,300,000		\$1,495,000
50 04	Traction power distribution: of	catenary and third rail						
00.04	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard	3,760	RF	\$260	\$977,674	15%	\$1,124,325
		Element Total	3,760	RF	•	\$0		\$0
FO 0F	Oiti							
50.05	Communications	Communication, Line	3,760	RF	\$240	\$902,468	15%	\$1,037,838
		Communication, Station	3,760	EA	\$500,000	\$902,466 \$0	15%	\$1,037,030 \$0
		Element Total	1	LS	ψ300,000	\$902,468	1370	\$1,037,838
50.06	Fare collection system and e	• •	^	- ^	#000 000	0.0	450/	^~
		Fare Collection - 1 Platform	0	EA	\$220,000	\$0	15%	\$0
		Fare Collection - 2 Platform	0 1	EA LS	\$400,000	\$0 \$0	15%	\$0
				1.8		.5()		\$0
		Element Total	'	20		ΨΟ		•-
50.07	Central Control	Element lotal	ı	20		Ψ		
50.07	Central Control	N/A Element Total	1	LS		\$0		\$0

Hillsborough County MPO Transit Study System Planning LR-Mac Dill AFB

LR-Mac Dill AFB E Polk/ N Marion to N Boulevard/ Tampa Prep Pl

CAT	STATIONING					UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMP	ROVEMENTS						
60.01	Purchase or lease	of real esta	ite						
			Right of Way Allowance - At Grade	3,360	RF	\$400	\$1,344,114	50%	\$2,016,171
			Right of Way Allowance - Aerial	400	RF	\$300	\$120,000	50%	\$180,000
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	3,760	RF		\$1,464,114		\$2,196,171

Hillsborough County MPO Transit Study System Planning LR-NE Ext

Bruce B Downs/ 37th to Pebble Creek (east of I-75)

TRANSII	г моі	DE: I	DT

CAT NO.	STATIONING BEGIN EN	D DESCRIPTION	QTY	UNIT	UNIT	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK I							
0.01	Guideway: At-grade exc				4050	0.0	0=0/	
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track	At Grade - Ballasted, Open Element Total	0	RF RF	\$450	\$0 \$0	25%	\$ \$
0.02	P Guideway: At-grade sem	ni-exclusive (allows cross-traffic)						
0.02	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	9
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	24,373	RF	\$700	\$17,061,041	25%	\$21,326,3
		Element Total	24,373	RF		\$17,061,041		\$21,326,30
0.03	Guideway: At-grade in m	nixed traffic						
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	;
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	(
		Element Total	0	RF		\$0		5
0.04	Guideway: Aerial structu				40		6004	
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
	Single Track Double Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000 \$12,200	\$0 \$0	30%	
	Double Track Double Track	Bridge - Ballasted Aerial - Direct Fixation	0	RF RF	\$12,200	\$0 \$0	30% 30%	
	Double Track Double Track	Aerial - Direct Fixation Over Water	0	RF	\$5,500 \$6,000	\$0 \$0	30%	
	Double Track	Element Total	0	RF	φ0,000	\$0	30 /6	
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		;
0.06	Guideway: Underground							
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	:
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0 03	7 Cuidannan I Indamenan	I home al						
0.07	Guideway: Underground Single Track	Subway - Direct Fixation	0	RF	¢42.000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$12,000 \$20,000	\$0	35%	
	Double Track	Element Total	0	RF	Φ20,000	\$0	35%	
0.08	3 Guideway: Retained cut	or fill						
	Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
	Double Track	Retained Fill - Ballasted Element Total	0	RF RF	\$3,200	\$0 \$0	30%	
200	Trooks Diseast Frontier							
J.U9	Track: Direct fixation	Direct Fivation Track		DE	- 640 E	<u> </u>	150/	
	Single Track Double Track	Direct Fixation Track Direct Fixation Track	0	RF RF	\$405 \$810	\$0 \$0	15% 15%	
	Double Track	Element Total	0	RF	\$010	\$0	15%	
),10	Track: Embedded							
	Single Track	Embedded Track	0	RF	\$490	\$0	15%	
	Double Track	Embedded Track	24,373	RF	\$980	\$23,885,457	15%	\$27,468,2
		Element Total	24,373			\$23,885,457	/ •	\$27,468,2
).11	Track: Ballasted							
	Single Track	Ballasted Track	0	RF	\$240	\$0	15%	
	Double Track	Ballasted Track	0	RF	\$480	\$0	15%	
		Element Total	0	RF		\$0		

Hillsborough County MPO Transit Study System Planning LR-NE Ext

Bruce B Downs/ 37th to Pebble Creek (east of I-75)

CAT NO.	CTATIONING				LIMIT	DACE	ALLCTD	TOTAL
	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
<u></u>	BEGIN END	DESCRIPTION	QII	UNIT	CO31	CO31	CONTGT	CO31
0.12	Track: Special (switches, tu	urnouts)						
	,	Special Trackwork (15% of Track Cost)	15%			\$3,582,819	15%	\$4,120,24
		Element Total	1	LS		\$3,582,819		\$4,120,24
0.13	Track: Vibration and noise	dampening						
		Vibration Allowance (6% of Ballasted Track	6%			\$0	15%	\$
		Cost)						
		Element Total	1	LS		\$0		\$
20	STATIONS, STOPS, TERM	IINALS, INTERMODAL						
	At-grade station, stop, shelt							
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	5
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	Š
		Center Platform Station	4	EA	\$3,000,000	\$12,000,000	20%	\$14,400,00
		Element Total	4	EA		\$12,000,000		\$14,400,00
0.02	Aerial station, stop, shelter,	mall. terminal. platform						
_	, , , , , , , , , , , , , , , , , , , ,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	:
		Element Total	0	EA		\$0		
0.03	Underground station, stop.	shelter, mall, terminal, platform						
	onaoigiouna otation, otop,	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA	+ 10,122,22	\$0		
n n4	Other stations, landings, tel	rminals: Intermodal, ferry, trolley, etc.						
.0.04	Other stations, landings, ter	N/A						
		Element Total	1	LS		\$0		5
0.05	Joint development							
	·	N/A						
		Element Total	1	LS		\$0		;
0.06	Automobile parking multi-ste	ory structure						
		Parking Garage	0	STL	\$12,000	\$0	20%	
		Element Total	1	LS		\$0		;
0.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator	0	EA	\$450,000	\$0	20%	
		Element Total	1	LS		\$0		
40	SITEWORK & SPECIAL CO	ONDITIONS						
	SITEWORK & SPECIAL Co							
			0	RF	\$30	\$0	30%	
		work	0 24,373	RF RF	\$30 \$50	\$0 \$1,218,646	30% 30%	
		work Demolition Allowance - Low	24,373 0	RF RF		\$1,218,646 \$0		\$1,584,2
		work Demolition Allowance - Low Demolition Allowance - Median	24,373	RF	\$50	\$1,218,646	30%	\$1,584,2
0.01		work Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total	24,373 0	RF RF	\$50	\$1,218,646 \$0	30%	\$1,584,2
0.01	Demolition, Clearing, Earth	work Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total	24,373 0	RF RF	\$50	\$1,218,646 \$0	30%	\$1,584,2 \$1,584,2
0.01	Demolition, Clearing, Earth	work Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total	24,373 0 24,373	RF RF RF	\$50 \$90	\$1,218,646 \$0 \$1,218,646	30% 30%	\$1,584,2 \$1,584,2
0.01	Demolition, Clearing, Earth	work Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total On Utility Relocation Allowance - Low	24,373 0 24,373	RF RF RF	\$50 \$90 \$140	\$1,218,646 \$0 \$1,218,646 \$0	30% 30%	\$1,584,2 \$1,584,2 \$10,772,8
0.01	Demolition, Clearing, Earth	work Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total On Utility Relocation Allowance - Low Utility Relocation Allowance - Median	24,373 0 24,373 0 24,373	RF RF RF	\$50 \$90 \$140 \$340	\$1,218,646 \$0 \$1,218,646 \$0 \$8,286,791	30% 30% 30%	\$1,584,2 \$1,584,2
0.01	Demolition, Clearing, Earth Site Utilities, Utility Relocation	Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total On Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	24,373 0 24,373 0 24,373 0	RF RF RF RF RF	\$50 \$90 \$140 \$340	\$1,218,646 \$0 \$1,218,646 \$0 \$1,218,646 \$0 \$8,286,791 \$0	30% 30% 30%	\$1,584,2 \$1,584,2 \$10,772,8
0.01	Demolition, Clearing, Earth Site Utilities, Utility Relocation	Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total On Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	24,373 0 24,373 0 24,373 0	RF RF RF RF RF	\$50 \$90 \$140 \$340	\$1,218,646 \$0 \$1,218,646 \$0 \$1,218,646 \$0 \$8,286,791 \$0	30% 30% 30%	\$1,584,2 \$1,584,2 \$10,772,8

Hillsborough County MPO Transit Study System Planning LR-NE Ext

Bruce B Downs/ 37th to Pebble Creek (east of I-75)

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	g. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	24,373	RF	\$50	\$1,218,646	30%	\$1,584,240
		Element Total	1	LS		\$1,218,646		\$1,584,240
10.05	Site structures including reta	ining walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	0	RF	\$80	\$0	30%	\$(
		Element Total	1	LS		\$0		\$0
10.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	0	RF	\$15	\$0	30%	\$
		Landscaping Allowance - Median	24,373	RF	\$25	\$609,323	30%	\$792,120
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$(
		Artwork (1% of Guideway & Stations) Element Total	1% 1	LS		\$290,610 \$899,933	30%	\$377,794 \$1,169,913
		Element Total	'	LS		фоээ,эээ		\$1,109,91
40.07	Automobile, bus, van access	sways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	24	EA	\$50,000	\$1,200,000	30%	\$1,560,000
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	584,950	SF	\$30	\$17,548,499	30%	\$22,813,049
		Parking Lots	2,000	STL	\$4,000	\$8,000,000	30%	\$10,400,000
		Element Total	1	LS		\$26,748,499		\$34,773,049
10.08	Temporary Facilities and oth	er indirect costs during construction						
	, , , , , , , , , , , , , , , , , , , ,	Temporary Facilities (5% of Category 40)	5.0%			\$1,942,999	25%	\$2,428,748
		Element Total	1	LS		\$1,942,999		\$2,428,748
50 50.01	SYSTEMS Train control and signals							
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	24,373	RF	\$260	\$6,336,958	15%	\$7,287,502
		Element Total	24,373	RF		\$6,336,958		\$7,287,502
50.02	Traffic signals and crossing	protection						
		Traffic Signal	24	EA	\$150,000	\$3,600,000	15%	\$4,140,000
		Crossing Protection	0	EA	\$250,000	\$0	15%	\$0
		Element Total	24	EA		\$3,600,000		\$4,140,000
50.03	Traction power supply: subs	stations						
		Traction Power, Substation	5	EA	\$1,300,000	\$6,500,000	15%	\$7,475,000
		Element Total	5	EA		\$6,500,000		\$7,475,000
50.04	Traction power distribution:	catenary and third rail						
	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard	24,373	RF	\$260	\$6,336,958	15%	\$7,287,502
		Element Total	24,373	RF		\$0		\$0
50.05	Communications							
		Communication, Line	24,373	RF	\$240	\$5,849,500	15%	\$6,726,925
		Communication, Station	4	EA	\$500,000	\$2,000,000	15%	\$2,300,000
		Element Total	1	LS		\$7,849,500		\$9,026,925
50.06	Fare collection system and e	equipment						
_ 0.00	5 concollen cyclom and c	Fare Collection - 1 Platform	4	EA	\$220,000	\$880,000	15%	\$1,012,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$0	15%	\$1,012,000
		Element Total	1	LS	+ .00,000	\$880,000	, .	\$1,012,000
			·	-		,,		. ,,500
50.07	Central Control	NVA						
		N/A Element Total	1	LS		\$0		\$0
		Liement rotal	1	LO		φυ		φu

Hillsborough County MPO Transit Study System Planning LR-NE Ext

Bruce B Downs/ 37th to Pebble Creek (east of I-75)

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
	DOW 1 411D EV		DOVEMENTO						
60	ROW, LAND, EX								
60.01	Purchase or lease	e of real esta	ate						
			Right of Way Allowance - At Grade	24,373	RF	\$400	\$9,749,166	50%	\$14,623,749
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	24,373	RF		\$9,749,166		\$14,623,749

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
	GUIDEWAY & TRACK ELEM Guideway: At-grade exclusive							
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track	At Grade - Ballasted, Open	27,581	RF	\$450	\$12,411,668	25%	\$15,514,58
	Double Truck	Element Total	27,581	RF	Ψίου	\$12,411,668	2070	\$15,514,58
	Guideway: At-grade semi-exc							
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	9
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	(
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
0.03(Guideway: At-grade in mixed	traffic						
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
Ī	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	\$
		Element Total	0	RF		\$0		9
	Guideway: Aerial structure	Pridge Pollogted		DE	#0.000		0.00/	
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0 \$0	30%	
	Single Track	Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0	RF	\$4,600 \$5,000	\$0 \$0	30%	
	<mark>Single Track</mark> Double Track	Bridge - Ballasted	0	RF RF	\$5,000 \$12,200	\$0 \$0	30% 30%	
	Double Track Double Track	Aerial - Direct Fixation	0	RF RF		\$0 \$0	30%	;
	Double Track Double Track	Aerial - Direct Fixation Over Water	150	RF	\$5,500 \$6.000	\$900,000	30%	\$1,170,0
,	Double Track	Element Total	150	RF	\$6,000	\$900,000	30%	\$1,170,0
	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	;
ı	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		\$
0.06	Guideway: Underground cut a	& cover						
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	:
ı	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0.07	Guideway: Underground tunr	nel						
	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
	Journal Track	Element Total	0	RF	Ψ20,000	\$0	3070	
	Guideway: Retained cut or fill							
	Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
I	Double Track	Retained Fill - Ballasted Element Total	0	RF RF	\$3,200	\$0 \$0	30%	
0.09	Track: Direct fixation							
	Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
	Double Track	Direct Fixation Track	150	RF	\$810	\$121,500	15%	\$139,7
		Element Total	150	RF	•••	\$121,500		\$139,7
	Track: Embedded							
	Single Track	Embedded Track	0	RF	\$490	\$0	15%	
I	Double Track	Embedded Track Element Total	0	RF RF	\$980	\$0 \$0	15%	
).11 ⁻	Track: Ballasted							
	Single Track	Ballasted Track	0	RF	\$240	\$0	15%	
	Double Track	Ballasted Track	27,581	RF	\$480	\$13,239,113	15%	\$15,224,9
•		Element Total	27,581	RF	+	\$13,239,113	- 74	\$15,224,9

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, t	urnouts) Special Trackwork (15% of Track Cost)	15%			\$2,004,092	15%	\$2,304,70
		Element Total	1370	LS		\$2,004,092	1370	\$2,304,70
		Element Total				Ψ2,004,032		Ψ2,004,70
0.13	Track: Vibration and noise						. = 4.	
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$794,347	15%	\$913,4
		Element Total	1	LS		\$794,347		\$913,49
	07.17.0NO 070D0 TED							
	STATIONS, STOPS, TERM At-grade station, stop, shell							
0.0.	, a grade etalieri, etep, erre.	Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	
		Center Platform Station	5	EA	\$3,000,000	\$15,000,000	20%	\$18,000,0
		Element Total	5	EA	ψο,σσσ,σσσ	\$15,000,000	2070	\$18,000,0
0.02	Aerial station, stop, shelter	. mall. terminal. platform						
0.02	rional diation, stop, enough	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA	+ · · · · · · · · · · · · · · · · · · ·	\$0		
n n3	Underground station ston	shelter, mall, terminal, platform						
.0.00	onderground station, stop,	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0 \$0	30%	
		Element Total	0	EA	Ψ+3,000,000	\$0 \$0	30 /0	
20.04	Other stations, landings, te	rminals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		5
20.05	Joint development							
		N/A Element Total	1	LS		\$0		
		Element Total	'	LS		Φυ		
20.06	Automobile parking multi-st	*	0	ОТ	#40.000	r.o.	000/	
		Parking Garage Element Total	1	STL LS	\$12,000	\$0 \$0	20%	
20.07	Elevators, escalators	Floristan			Фоод оод	0.0	000/	
		Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator Element Total	1	EA LS	\$450,000	\$0 \$0	20%	
			·			Ψū		
	SITEWORK & SPECIAL C							
10.01	Demolition, Clearing, Earth		.=		***	4007.445	000/	A== .
		Demolition Allowance - Low	27,581	RF	\$30	\$827,445	30%	\$1,075,6
		Demolition Allowance - Median	150	RF	\$50	\$7,500	30%	\$9,7
		Demolition Allowance - High Element Total	27,731	RF RF	\$90	\$0 \$834,945	30%	\$1,085,4
		Element Total	21,131	KF		ФОЗ4,94 3		φ1,065, 4
0.02	Site Utilities, Utility Relocat							
		Utility Relocation Allowance - Low	27,581	RF	\$140	\$3,861,408	30%	\$5,019,8
		Utility Relocation Allowance - Median	150	RF	\$340	\$51,000	30%	\$66,3
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	
		Element Total	27,731	RF		\$3,912,408		\$5,086,1
10.03	Haz. mat'l, contam'd soil re	moval/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	27,731	RF	\$20	\$554,630	30%	\$721,0

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		. wetlands, historic/archeologic, parks	٠					
10.04	Environmental magation, c.g	Enviromental Mitigation Allowance	27,731	RF	\$50	\$1,386,574	30%	\$1,802,54
		Element Total	1	LS	ΨΟΟ	\$1,386,574	0070	\$1,802,54
10.05	Site structures including retai	9						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	2,758	RF	\$80	\$220,652	30%	\$286,84
		Element Total	1	LS		\$220,652		\$286,84
10.06	Dedestrian / hills assess and	accommodation, landscaping						
+0.06	redestrial / bike access and	Landscaping Allowance - Low	27,581	RF	\$15	\$413,722	30%	\$537,83
		Landscaping Allowance - Low Landscaping Allowance - Median	150	RF	\$25	\$3,750	30%	\$337,63 \$4,87
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$
		Pedestrain Overpasses	0	EA	\$800,000	\$0 \$0	30%	\$
		Artwork (1% of Guideway & Stations)	1%	LA	ψ000,000	\$283,117	30%	\$368,05
		Element Total	1 /0	LS		\$700,589	3070	\$910,76
						,,		, , , ,
40.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$
		Parking Lots	300	STL	\$4,000	\$1,200,000	30%	\$1,560,00
		Element Total	1	LS		\$1,200,000		\$1,560,00
40.08	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$440,490	25%	\$550,61
		Element Total	1	LS		\$440,490		\$550,61
50	SYSTEMS							
50.01	Train control and signals	Oleman I Overhame			40.10		4.50/	•
	Single Track Double Track	Signal System Signal System	0 27 721	RF	\$240 \$260	\$0 \$7,210,196	15% 15%	\$0 201 71
	Double Track	Element Total	27,731 27,731	RF RF	\$260	\$7,210,186 \$7,210,186	15%	\$8,291,714 \$8,291,714
		Element Fotal	21,701	141		ψ1,210,100		ψ0,231,71
50.02	Traffic signals and crossing p	protection						
	-	Traffic Signal	0	EA	\$150,000	\$0	15%	\$
		Crossing Protection	14	EA	\$250,000	\$3,500,000	15%	\$4,025,00
		Element Total	14	EA		\$3,500,000		\$4,025,00
50.03	Traction power supply: subst							
		Traction Power, Substation	6	EA	\$1,300,000	\$7,800,000	15%	\$8,970,00
		Element Total	6	EA		\$7,800,000		\$8,970,00
50.04	Traction power distribution: of	catenary and third rail						
	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$
	Double Track	OCS System - Standard	27,731	RF	\$260	\$7,210,186	15%	\$8,291,71
		Element Total	27,731	RF		\$0		\$(
-0.0-	0							
50.05	Communications	Communication Line	07.704	DE	CO40	* C CEE EE7	450/	#7.050.00
		Communication, Line	27,731	RF	\$240	\$6,655,557	15%	\$7,653,89
		Communication, Station	5 1	EA LS	\$500,000	\$2,500,000 \$9,155,557	15%	\$2,875,00 \$10,528,89
		Flement Total				ψυ, 100,001		ψ10,020,03
		Element Total						
50.06	Fare collection system and e							
50.06	Fare collection system and e		5	EA	\$220,000	\$1,100,000	15%	\$1,265,00
50.06	Fare collection system and e	quipment	5 0	EA EA	\$220,000 \$400,000	\$1,100,000 \$0	15% 15%	
50.06	Fare collection system and e	quipment Fare Collection - 1 Platform						\$(
50.06	Fare collection system and e	quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	0	EA		\$0		\$
	Fare collection system and e	quipment Fare Collection - 1 Platform Fare Collection - 2 Platform Element Total	0	EA		\$0		\$
	·	quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	0	EA		\$0		\$1,265,000 \$1,265,000

CAT	STATIO	DNING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMP	PROVEMENTS						
60.01	Purchase or lease	of real est	ate						
			Right of Way Allowance - At Grade	27,581	RF	\$400	\$11,032,594	50%	\$16,548,891
			Right of Way Allowance - Aerial	150	RF	\$300	\$45,000	50%	\$67,500
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	27,731	RF		\$11,077,594		\$16,616,391

NO. BEG	TATIONING IN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	ALLCTD CONTGY	COST
	& TRACK ELE							
0.01 Guideway:					40.50		0=0/	
Single Track		At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$0.404.07
Double Trac	CK	At Grade - Ballasted, Open Element Total	14,462 14,462	RF RF	\$450	\$6,507,977 \$6,507,977	25%	\$8,134,97 \$8,134,97
0.02 Guideway:	At-arade semi-ex	clusive (allows cross-traffic)						
Single Trac	-	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	Q
Single Trac		At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	Ş
Double Trad		At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	;
Double Trac	ck	At Grade - Embedded, In-Street	0	RF	\$700	\$0	25%	;
		Element Total	0	RF		\$0		
	At-grade in mixed							
Single Trac		At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
Double Trac	ck	At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
		Liement Total	U	IXI		ΨΟ		•
0.04 Guideway:		Pridge Pallacted		DE	<u> </u>		306/	
Single Track		Bridge - Ballasted Aerial - Direct Fixation	0	RF	\$8,200 \$4,600	\$0 \$0	30%	
Single Track Single Track		Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0	RF RF	\$4,600 \$5,000	\$0 \$0	30% 30%	
Double Trace		Bridge - Ballasted	0	RF	\$12,200	\$0 \$0	30%	
Double Trac		Aerial - Direct Fixation	0	RF	\$5,500	\$0 \$0	30%	
Double Trac		Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0 \$0	30%	
Double Had	JK.	Element Total	0	RF	φ0,000	\$0	30 /6	
0.05 Guideway: I	Built-un fill							
Single Track		At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
Double Trad		At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		
0.06 Guideway:	Underground cut	& cover						
Single Track		Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
Double Trad		Subway - Direct Fixation	0	RF	\$15,500	\$0	35%	
		Element Total	0	RF		\$0		
0.07 Guideway: I	Underground tuni							
Single Trac		Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
Double Trac	ck	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
		Element Total	0	RF		\$0		
,	Retained cut or fil				40.000	0.0	000/	
	k	Retained Cut - Direct Fixation		RF	\$6,800 \$3,800	\$0 \$0	30%	
Single Track		Retained Fill - Ballasted	0	RF	\$2,800	\$0 \$0	30%	
Double Trac		Retained Cut - Direct Fixation Retained Fill - Ballasted	0	RF	\$8,000	\$0 \$0	30% 30%	
Double Trac	JK.	Element Total	0	RF RF	\$3,200	\$0	30%	
0.09 Track: Dire	ct fivation							
Single Track		Direct Fixation Track	0	RF	\$405	\$0	15%	
Double Trace		Direct Fixation Track Direct Fixation Track	0	RF	\$810	\$0 \$0	15%	
Double Trac	ж	Element Total	0	RF	φοτο	\$0	1070	
0.10 Track: Emb	pedded							
Single Trac		Embedded Track	0	RF	\$490	\$0	15%	
Double Trad		Embedded Track	0	RF	\$980	\$0	15%	
		Element Total	0	RF		\$0		
	asted							
0.11 Track: Balla					-			
0.11 Track: Balla Single Trac	k	Ballasted Track	0	RF	\$240	\$0	15%	
		Ballasted Track Ballasted Track	0 14,462	RF RF	\$240 \$480	\$0 \$6,941,842	15% 15%	\$7,983,1 \$7,983,1

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12	Track: Special (switches, tu	rnouts)						
	Traditi Opediai (ornidired) ta	Special Trackwork (15% of Track Cost)	15%			\$1,041,276	15%	\$1,197,46
		Element Total	1	LS		\$1,041,276		\$1,197,46
10.13	Track: Vibration and noise	dampening Vibration Allowance (6% of Ballasted Track	6%			\$416,511	15%	\$478,98
		Cost)				,.		
		Element Total	1	LS		\$416,511		\$478,98
20	STATIONS, STOPS, TERM	INALS. INTERMODAL						
20.01	At-grade station, stop, shelte	er, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	\$
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	9
		Center Platform Station	2	EA	\$3,000,000	\$6,000,000	20%	\$7,200,00
		Element Total	2	EA		\$6,000,000		\$7,200,00
:0.02	Aerial station, stop, shelter,	mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	;
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	;
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
0.03	Underground station, stop, s	helter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA		\$0		
20.04	Other stations, landings, terr	minals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		5
20.05	Joint development							
		N/A Element Total	1	LS		\$0		
						**		
20.06	Automobile parking multi-sto	ry structure Parking Garage	0	STL	\$12,000	\$0	20%	Ş
		Element Total	1	LS	Ψ12,000	\$0	2070	
n n7	Elevators, escalators							
.0.01	Elovatoro, educatoro	Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator	0	EA	\$450,000	\$0	20%	,
		Element Total	1	LS	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$0		
40	SITEWORK & SPECIAL CO							
0.01	Demolition, Clearing, Earthw						0001	A
		Demolition Allowance - Low	14,462	RF	\$30	\$433,865	30%	\$564,0
		Demolition Allowance - Median	0	RF	\$50	\$0	30%	
		Demolition Allowance - High Element Total	14,462	RF RF	\$90	\$0 \$433,865	30%	\$564,0
		2.6.1.5.11. 1.614.	,			Ψ.00,000		ψου .,ο
0.02	Site Utilities, Utility Relocation	on Utility Relocation Allowance - Low	14,462	RF	\$140	\$2,024,704	30%	\$2,632,1
		Utility Relocation Allowance - Median	14,462	RF	\$340	\$2,024,704	30%	φ2,032, i
		Utility Relocation Allowance - High	0	RF	\$570	\$0 \$0	30%	
				RF	ψυιυ	\$2,024,704	30 /0	\$2,632,1
		Element Total	14,462	KE		Ψ2,024,104		ΨΖ,00Ζ, Ι
10 O.3	Haz mat'l contam'd soil ren		14,462	KF		Ψ2,024,704		Ψ2,002,1
40.03	Haz. mat'l, contam'd soil ren	Element Total noval/mitigation, ground water treatments Hazardous Material Removal Allowance	14,462	RF	\$20	\$289,243	30%	\$376,0

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	14,462	RF	\$50	\$723,109	30%	\$940,04°
		Element Total	1	LS		\$723,109		\$940,04
0.05	Site structures including retai	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	1,446	RF	\$80	\$115,697	30%	\$150,40
		Element Total	1	LS		\$115,697		\$150,40
10.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	14,462	RF	\$15	\$216,933	30%	\$282,01
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	\$
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$
		Artwork (1% of Guideway & Stations)	1%			\$125,080	30%	\$162,60
		Element Total	1	LS		\$342,012		\$444,61
10.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$
		Parking Lots	600	STL	\$4,000	\$2,400,000	30%	\$3,120,000
		Element Total	1	LS	•	\$2,400,000		\$3,120,000
10.08	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$316,432	25%	\$395,53
		Element Total	1	LS		\$316,432		\$395,539
50	SYSTEMS							
50.01	Train control and signals Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	14,462	RF	\$260	\$3,760,164	15%	\$4,324,189
		Element Total	14,462	RF		\$3,760,164		\$4,324,189
50.02	Traffic signals and crossing p	protection						
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$(
		Crossing Protection	7	EA	\$250,000	\$1,750,000	15%	\$2,012,500
		Element Total	7	EA	·	\$1,750,000		\$2,012,500
50.03	Traction power supply: subst	tations						
	,	Traction Power, Substation	3	EA	\$1,300,000	\$3,900,000	15%	\$4,485,000
		Element Total	3	EA		\$3,900,000		\$4,485,000
50.04	Traction power distribution: of	catenary and third rail						
	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$(
	Double Track	OCS System - Standard	14,462	RF	\$260	\$3,760,164	15%	\$4,324,189
		Element Total	14,462	RF		\$0		\$(
50.05	Communications							
		Communication, Line	14,462	RF	\$240	\$3,470,921	15%	\$3,991,559
		Communication, Station	2	EA	\$500,000	\$1,000,000	15%	\$1,150,000
		Element Total	1	LS		\$4,470,921		\$5,141,559
50.06	Fare collection system and e	quipment						
		Fare Collection - 1 Platform	2	EA	\$220,000	\$440,000	15%	\$506,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$0	15%	\$0
		Element Total	1	LS		\$440,000		\$506,000
50.07	Central Control							
50.07	Central Control	N/A Element Total	1	LS		\$0		\$(

CAT	STATIC	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
	DOW AND EV								
60	ROW, LAND, EXI		EMENIS						
60.01	Purchase or lease	of real estate							
		Ri	ght of Way Allowance - At Grade	14,462	RF	\$400	\$5,784,868	50%	\$8,677,302
		Ri	ght of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
		Ri	ght of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	14,462	RF		\$5,784,868		\$8,677,302
ĺ									

_	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	COST
10	GUIDEWAY & TRACK ELE							
0.01	Guideway: At-grade exclusiv							
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	
	Double Track	At Grade - Ballasted, Open Element Total	0	RF RF	\$450	\$0 \$0	25%	
0.02	Guideway: At-grade semi-ex	,		D.E.	0.4.40	Φ0	050/	
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
n n3	Guideway: At-grade in mixed	I traffic						
0.03	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	
	Double Truck	Element Total	0	RF	Ψοσο	\$0	2070	
0.04	Guideway: Aerial structure							
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	1,900	RF	\$5,500	\$10,450,000	30%	\$13,585,0
	Double Track	Aerial - Direct Fixation Over Water	16,000	RF	\$6,000	\$96,000,000	30%	\$124,800,0
		Element Total	17,900	RF	•	\$106,450,000		\$138,385,0
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		
0.06	Guideway: Underground cut							
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0.07	Guideway: Underground tuni			5.5	# 40.000	Φ0	0.50/	
	Single Track	Subway - Direct Fixation Subway - Direct Fixation	0	RF RF	\$12,000	\$0	35%	
	Double Track	Element Total	0		\$20,000	\$0	35%	
		2.0	0	RF		\$0		
0.08	Guideway: Retained cut or fil		0	RF		\$0		
0.08	Guideway: Retained cut or fil	I			\$6.800		30%	
0.08	Guideway: Retained cut or fil Single Track Single Track		0 0	RF	\$6,800 \$2,800	\$0 \$0 \$0	30% 30%	
0.08	Single Track Single Track	Retained Cut - Direct Fixation	0	RF RF	\$2,800	\$0 \$0	30%	
0.08	Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30% 30%	\$102.051.6
0.08	Single Track Single Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0	RF RF	\$2,800	\$0 \$0	30%	\$102,051,6 \$102,051,6
	Single Track Single Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0 24,532	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$78,501,299	30% 30%	
	Single Track Single Track Double Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0 24,532	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$78,501,299	30% 30%	
	Single Track Single Track Double Track Double Track Track: Direct fixation	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0 24,532 24,532	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$78,501,299 \$78,501,299	30% 30% 30%	
	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track	0 0 0 24,532 24,532	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405	\$0 \$0 \$0 \$78,501,299 \$78,501,299	30% 30% 30% 15%	\$102,051,6 \$16,673,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 24,532 24,532 0 17,900	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$78,501,299 \$78,501,299 \$0 \$14,499,000 \$14,499,000	30% 30% 30% 30% 15%	\$102,051,6
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 24,532 24,532 0 17,900	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$78,501,299 \$78,501,299 \$0 \$14,499,000 \$14,499,000	30% 30% 30% 30% 15%	\$102,051,6 \$16,673,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 24,532 24,532 24,532 0 17,900 17,900	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$78,501,299 \$78,501,299 \$14,499,000 \$14,499,000 \$14,499,000	30% 30% 30% 30% 15%	\$102,051,6 \$16,673,8
0.09 0.10	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 24,532 24,532 0 17,900	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$78,501,299 \$78,501,299 \$0 \$14,499,000 \$14,499,000	30% 30% 30% 30% 15%	\$102,051,6 \$16,673,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track Track: Embedded Single Track Track: Embedded Single Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Gut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Element Total	0 0 0 24,532 24,532 0 17,900 17,900	RF RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810 \$490 \$980	\$0 \$0 \$0 \$78,501,299 \$78,501,299 \$14,499,000 \$14,499,000 \$0 \$0 \$0	30% 30% 30% 15% 15% 15%	\$102,051,6 \$16,673,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 24,532 24,532 24,532 0 17,900 17,900	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$78,501,299 \$78,501,299 \$14,499,000 \$14,499,000 \$14,499,000	30% 30% 30% 30% 15%	\$102,051,6 \$16,673,8

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tu	rnouts)						
	oposiai (omionos, tu	Special Trackwork (15% of Track Cost)	15%			\$3,941,129	15%	\$4,532,29
		Element Total	1	LS		\$3,941,129	,	\$4,532,29
0.40	T 1 10 0 0 1 1							
0.13	Track: Vibration and noise	dampening Vibration Allowance (6% of Ballasted Track	6%			\$706,512	15%	\$812,48
		Cost)				ψ. σσ,σ.2	.070	Ψ3. <u>2</u> ,.
		Element Total	1	LS		\$706,512		\$812,4
20	STATIONS, STOPS, TERM	INALS, INTERMODAL						
	At-grade station, stop, shelte							
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	
		Center Platform Station	0	EA	\$3,000,000	\$0	20%	
		Element Total	0	EA		\$0		
0.02	Aerial station, stop, shelter,	mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
0.03	Underground station, stop, s	helter, mall, terminal, platform						
	, , ,	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA		\$0		
0.04	Other stations, landings, teri	ninals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		
0.05	Joint development	NA						
		N/A Element Total	1	LS		\$0		
0.06	Automobile parking multi-sto	ry structure						
		Parking Garage	0	STL	\$12,000	\$0	20%	
		Element Total	1	LS		\$0		
0.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator	0	EA	\$450,000	\$0	20%	
			U		\$450,000			
		Element Total	1	LS	φ430,000	\$0		
40 0.01	SITEWORK & SPECIAL CO	Element Total	1		\$450,000			
	SITEWORK & SPECIAL CO Demolition, Clearing, Earthw	Element Total ONDITIONS oork		LS		\$0	30%	
		Element Total ONDITIONS vork Demolition Allowance - Low	0	LS RF	\$30	\$0 \$0	30% 30%	\$2 75 8 (
		Element Total ONDITIONS Fork Demolition Allowance - Low Demolition Allowance - Median	0 42,432	LS RF RF	\$30 \$50	\$0 \$0 \$2,121,583	30%	\$2,758,C
		Element Total ONDITIONS vork Demolition Allowance - Low	0	LS RF	\$30	\$0 \$0		\$2,758,0
0.01	Demolition, Clearing, Earthw	Element Total ONDITIONS Fork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total	0 42,432 0	RF RF RF	\$30 \$50	\$0 \$0 \$2,121,583 \$0	30%	
0.01		Element Total ONDITIONS Fork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total	0 42,432 0 42,432	RF RF RF RF	\$30 \$50 \$90	\$0 \$0 \$2,121,583 \$0 \$2,121,583	30% 30%	
0.01	Demolition, Clearing, Earthw	Element Total ONDITIONS Fork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total On Utility Relocation Allowance - Low	0 42,432 0 42,432	RF RF RF RF	\$30 \$50 \$90	\$0 \$0 \$2,121,583 \$0 \$2,121,583	30% 30%	\$2,758,0
0.01	Demolition, Clearing, Earthw	Element Total ONDITIONS Fork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total ON Utility Relocation Allowance - Low Utility Relocation Allowance - Median	0 42,432 0 42,432	RF RF RF RF	\$30 \$50 \$90 \$140 \$340	\$0 \$2,121,583 \$0 \$2,121,583 \$0 \$14,426,763	30% 30% 30%	\$2,758,0
0.01	Demolition, Clearing, Earthw	Element Total ONDITIONS Fork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total On Utility Relocation Allowance - Low	0 42,432 0 42,432	RF RF RF RF	\$30 \$50 \$90	\$0 \$0 \$2,121,583 \$0 \$2,121,583	30% 30%	\$2,758,0 \$18,754,7
0.01	Demolition, Clearing, Earthwest Site Utilities, Utility Relocation	DIDITIONS Vork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total On Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	0 42,432 0 42,432 0 42,432 0	RF RF RF RF	\$30 \$50 \$90 \$140 \$340	\$0 \$2,121,583 \$0 \$2,121,583 \$0 \$14,426,763 \$0	30% 30% 30%	\$2,758,0 \$18,754,7
10.01 10.02	Demolition, Clearing, Earthwest Site Utilities, Utility Relocation	Element Total ONDITIONS Fork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - High Element Total ON Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	0 42,432 0 42,432 0 42,432 0	RF RF RF RF	\$30 \$50 \$90 \$140 \$340	\$0 \$2,121,583 \$0 \$2,121,583 \$0 \$14,426,763 \$0	30% 30% 30%	

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	42,432	RF	\$50	\$2,121,583	30%	\$2,758,05
		Element Total	1	LS	<u> </u>	\$2,121,583		\$2,758,058
n n5	Site structures including retai	ning walls sound walls						
10.00	One structures including retai	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	2,453	RF	\$80	\$196,253	30%	\$255,12
		Element Total	1	LS	φου	\$196,253	0070	\$255,12
10.00	D 1 (* /1")							
10.06	Pedestrian / bike access and	, , ,	0	DE	C1 E	\$ 0	200/	•
		Landscaping Allowance - Low	40.400	RF	\$15	\$0 \$1,000,701	30%	\$ \$4.270.02
		Landscaping Allowance - Median	42,432	RF	\$25	\$1,060,791	30%	\$1,379,02
		Landscaping Allowance - High	0	RF	\$40	\$0 \$0	30%	\$
		Pedestrain Overpasses	0	EA	\$800,000	\$0 \$1,840,513	30%	\$2 404 26
		Artwork (1% of Guideway & Stations) Element Total	1% 1	LS		\$1,849,513 \$2,910,304	30%	\$2,404,36° \$3,783,39°
						, ,, ,,,,,		, ,
10.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$
		Parking Lots	0	STL	\$4,000	\$0	30%	\$
		Element Total	1	LS		\$0		\$
เก กล	Temporary Facilities and other	er indirect costs during construction						
10.00	Tomporary Ladmidos and our	Temporary Facilities (5% of Category 40)	5.0%			\$1,131,256	25%	\$1,414,07
		Element Total	1	LS		\$1,131,256	2070	\$1,414,07
50	SYSTEMS Train control and signals							
30.01	Single Track	Signal System	0	RF	\$240	\$0	15%	\$(
	Double Track	Signal System	42,432	RF	\$260	\$11,032,231	15%	\$12,687,06
		Element Total	42,432	RF		\$11,032,231		\$12,687,065
50.02	Traffic signals and crossing p	protection						
	0	Traffic Signal	0	EA	\$150,000	\$0	15%	\$
		Crossing Protection	0	EA	\$250,000	\$0	15%	\$(
		Element Total	0	EA	, ,,,,,,,,	\$0		\$(
50 03	Traction power supply: subst	tations						
30.00	Tradition power dappry. dabo	Traction Power, Substation	9	EA	\$1,300,000	\$11.700.000	15%	\$13,455,000
		Element Total	9	EA		\$11,700,000		\$13,455,000
50.04	Traction power distribution: of	catenary and third rail						
	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$(
	Double Track	OCS System - Standard	42,432	RF	\$260	\$11,032,231	15%	\$12,687,06
		Element Total	42,432	RF	·	\$0		\$
50.05	Communications							
2.00		Communication, Line	42,432	RF	\$240	\$10,183,597	15%	\$11,711,13
		Communication, Station	0	EA	\$500,000	\$0	15%	\$(
		Element Total	1	LS		\$10,183,597		\$11,711,13
50.06	Fare collection system and e	quipment						
		Fare Collection - 1 Platform	0	EA	\$220,000	\$0	15%	\$
		Fare Collection - 2 Platform	0	EA	\$400,000	\$0	15%	\$(
		Element Total	1	LS	+ . 50,000	\$0	. = /٧	\$(
	0 1 10 1 1							
50.07	Central Control	N/A						
50.07	Central Control	N/A Element Total	1	LS		\$0		\$

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMPR	ROVEMENTS						
60.01	Purchase or lease	e of real estat	te						
			Right of Way Allowance - At Grade	24,532	RF	\$400	\$9,812,662	50%	\$14,718,993
			Right of Way Allowance - Aerial	17,900	RF	\$300	\$5,370,000	50%	\$8,055,000
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	42,432	RF		\$15,182,662		\$22,773,993
l									
İ									

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
	GUIDEWAY & TRACK ELEN Guideway: At-grade exclusive							
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track	At Grade - Ballasted, Open	0	RF	\$450	\$0	25%	\$
	Bouble Track	Element Total	0	RF	Ψ+00	\$0	2070	\$
	Guideway: At-grade semi-ex							
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	\$
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	9
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	\$
	Double Track	At Grade - Embedded, In-Street Element Total	17,212 17,212	RF RF	\$700	\$12,048,380 \$12,048,380	25%	\$15,060,47 \$15,060,47
0.03	Guideway: At-grade in mixed	traffic						
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF RF	\$680	\$0 \$0	25%	\$ \$
		Element Total	U	KF		\$0		Þ
	Guideway: Aerial structure							
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	\$
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	\$
	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	\$
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	\$
	Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	\$
	Double Track	Aerial - Direct Fixation Over Water Element Total	0	RF RF	\$6,000	\$0 \$0	30%	9
	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	\$
	Double Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$600	\$0 \$0	25%	<u> </u>
			U	KI		ΨΟ		Ψ
	Guideway: Underground cut		2	DE	# 40.000	Φ0	0.50/	
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	9
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	\$
0.07	Guideway: Underground tunr	nel						
	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	Ç
	Double Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	9
		Element Total	0	RF		\$0		\$
	Guideway: Retained cut or fil		0	DE	#C 000	\$ 0	200/	
	Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted	0	RF RF	\$6,800 \$3,800	\$0 \$0	30%	
	Single Track Double Track	Retained Fill - Ballasted Retained Cut - Direct Fixation	0	RF RF	\$2,800 \$8,000	\$0 \$0	30%	
	Double Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted	0	RF	\$8,000 \$3,200	\$0 \$0	30% 30%	;
	Double Hack	Element Total	0	RF	φ3,200	\$0	30%	
0.09	Track: Direct fixation							
	Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
	Double Track	Direct Fixation Track	0	RF	\$810	\$0	15%	;
		Element Total	0	RF		\$0		;
0.10	Track: Embedded							
	Single Track	Embedded Track	0	RF	\$490	\$0	15%	(
-	Double Track	Embedded Track	17,212	RF	\$980	\$16,867,732	15%	\$19,397,89
		Element Total	17,212	RF		\$16,867,732		\$19,397,8
	Track: Ballasted	Dallastad Track	_	DE	40.15		4504	
	Single Track	Ballasted Track	0	RF	\$240	\$0	15%	
	Double Track	Ballasted Track Element Total	0	RF RF	\$480	\$0 \$0	15%	

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12	Track: Special (switches, tur	nouts)						
	(*,	Special Trackwork (15% of Track Cost)	15%			\$2,530,160	15%	\$2,909,68
		Element Total	1	LS		\$2,530,160		\$2,909,68
0.13	Track: Vibration and noise d	ampening						
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$0	15%	\$
		Element Total	1	LS		\$0		\$
20	STATIONS, STOPS, TERMI	NALS. INTERMODAL						
20.01	At-grade station, stop, shelter	r, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	(
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	
		Center Platform Station	3	EA	\$3,000,000	\$9,000,000	20%	\$10,800,00
		Element Total	3	EA	, , , , , , , , , , , , , , , , , , , ,	\$9,000,000		\$10,800,00
0.02	Aerial station, stop, shelter, n	nall, terminal, platform						
	,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
0.03	Underground station, stop, sh	nelter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA		\$0		
0.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		
		Element Total	'	LS		ΨΟ		•
0.05	Joint development	N/A						
		Element Total	1	LS		\$0		;
0.06	Automobile parking multi-stor	ry structure						
		Parking Garage Element Total	0	STL	\$12,000	\$0 \$0	20%	:
		Element Total	'	LS		Φυ		
0.07	Elevators, escalators	Classistan	0	- ^	#000.000	ΦO	000/	
		Eleavator	0	EΑ	\$200,000	\$0	20%	
		Escalator Element Total	0 1	LS	\$450,000	\$0 \$0	20%	
40	SITEWORK & SPECIAL CO	NDITIONS						
	Demolition, Clearing, Earthwe							
		Demolition Allowance - Low	0	RF	\$30	\$0	30%	
		Demolition Allowance - Median	17,212	RF	\$50	\$860,599	30%	\$1,118,7
		Demolition Allowance - High	0	RF	\$90	\$0	30%	
		Element Total	17,212	RF		\$860,599		\$1,118,7
0.02	Site Utilities, Utility Relocation	n						
		Utility Relocation Allowance - Low	0	RF	\$140	\$0	30%	
		Utility Relocation Allowance - Median	17,212	RF	\$340	\$5,852,070	30%	\$7,607,6
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	
		Element Total	17,212	RF		\$5,852,070		\$7,607,6
0.03	Haz. mat'l, contam'd soil rem	oval/mitigation, ground water treatments						
10.03	Haz. mat'l, contam'd soil rem	oval/mitigation, ground water treatments Hazardous Material Removal Allowance	17,212	RF	\$20	\$344,239	30%	\$447,5

CAT	STATIONING REGIN END	DESCRIPTION	OTV	LINIT	UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
10.04	Environmental mitigation, e.g	g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance	17.010	RF	¢.co	\$860,599	30%	¢4 440 770
		Element Total	17,212	LS	\$50	\$860,599	30%	\$1,118,778 \$1,118,778
40.05	Site structures including reta	ining walls, sound walls Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	0	RF	\$80	\$0	30%	\$0
		Element Total	1	LS	ΨΟΟ	\$0	3070	\$0
40.06	Pedestrian / bike access and	d accommodation, landscaping	0	DE	¢4 <i>E</i>		200/	0.0
		Landscaping Allowance - Low Landscaping Allowance - Median	0 17,212	RF RF	\$15 \$25	\$0 \$430,299	30% 30%	\$0 \$559,389
		Landscaping Allowance - Median Landscaping Allowance - High	0	RF	\$40	\$0 \$0	30%	ψυυσ,υσο \$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%		ψοσο,σσο	\$210,484	30%	\$273,629
		Element Total	1	LS		\$640,783		\$833,018
40.07	Automobile, bus, van access	sways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	17	EA	\$50,000	\$850,000	30%	\$1,105,000
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	413,087	SF	\$30	\$12,392,619	30%	\$16,110,405
		Parking Lots	900	STL	\$4,000	\$3,600,000	30%	\$4,680,000
		Element Total	1	LS		\$16,842,619		\$21,895,405
10 08	Temporary Facilities and oth	er indirect costs during construction						
10.00	remporary r demines and our	Temporary Facilities (5% of Category 40)	5.0%			\$1,270,045	25%	\$1,587,557
		Element Total	3.0 /0	LS		\$1,270,045	2070	\$1,587,557
						* -,		* 1,221,221
50	SYSTEMS							
	Train control and signals							
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System Element Total	17,212 17,212	RF RF	\$260	\$4,475,112 \$4,475,112	15%	\$5,146,379 \$5,146,379
		Cientent Total	17,212	KI		φ4,475,112		φ3, 140,379
50.02	Traffic signals and crossing p	protection						
		Traffic Signal	17	EA	\$150,000	\$2,550,000	15%	\$2,932,500
		Crossing Protection	0	EA	\$250,000	\$0	15%	\$0
		Element Total	17	EA		\$2,550,000		\$2,932,500
50.03	Traction power supply: subs	stations						
		Traction Power, Substation	4	EA	\$1,300,000	\$5,200,000	15%	\$5,980,000
		Element Total	4	EA		\$5,200,000		\$5,980,000
FO 04	T							
50.04	Traction power distribution: Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard	17,212	RF	\$240	\$4,475,112	15%	\$5,146,379
	Double Track	Element Total	17,212	RF	ΨΖΟΟ	\$0	1370	\$0
50.05	Communications		.=				, == ,	. ·
		Communication, Line	17,212	RF	\$240	\$4,130,873	15%	\$4,750,504
		Communication, Station	<u>3</u>	EA	\$500,000	\$1,500,000	15%	\$1,725,000
		Element Total	1	LS		\$5,630,873		\$6,475,504
50.06	Fare collection system and e	equipment						
	•	Fare Collection - 1 Platform	3	EA	\$220,000	\$660,000	15%	\$759,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$0	15%	\$0
		Element Total	1	LS		\$660,000		\$759,000
50.07	Central Control	N/A						
		Element Total	1	LS		\$0		\$0
						ΨΟ		ΨΟ

ANCIT MODE. LOT

TRAN	1SIT	MOI	DE: I	LR
IRAN	ISIT	MOI	DE: I	LR

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60 RC	OW, LAND, EX	ISTING IMP	ROVEMENTS						
60.01 Pu	urchase or lease	e of real esta	ate						
			Right of Way Allowance - At Grade	17,212	RF	\$400	\$6,884,788	50%	\$10,327,183
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	17,212	RF		\$6,884,788		\$10,327,183

CAT STATIO NO. BEGIN	END	DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	TOTAL COST
10 GUIDEWAY & TR								
0.01 Guideway: At-grad		•	_					_
Single Track		ade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
Double Track	At Gr	ade - Ballasted, Open Element Total	0	RF RF	\$450	\$0 \$0	25%	\$
0.02 Guideway: At-grad	te semi-exclusive (allows cross-traffic)						
Single Track		ade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
Single Track		ade - Embedded, In-Street	0	RF	\$580	\$0	25%	
Double Track		ade - Ballasted, In-Street	0	RF	\$530	\$0	25%	Ş
Double Track		ade - Embedded, In-Street	6,282	RF	\$700	\$4,397,740	25%	\$5,497,1
		Element Total	6,282	RF	•	\$4,397,740		\$5,497,1
0.03 Guideway: At-grad	de in mixed traffic							
Single Track	At Gr	ade - Embedded, In-Street	0	RF	\$560	\$0	25%	
Double Track	At Gr	ade - Embedded, In-Street	0	RF	\$680	\$0	25%	:
		Element Total	0	RF		\$0		;
0.04 Guideway: Aerial					_			
Single Track		e - Ballasted	0	RF	\$8,200	\$0	30%	
Single Track		I - Direct Fixation	0	RF	\$4,600	\$0	30%	
Single Track		I - Direct Fixation Over Water	0	RF	\$5,000	\$0 ©0	30%	
Double Track Double Track		e - Ballasted I - Direct Fixation	0	RF	\$12,200	\$0 \$0	30%	
Double Track Double Track		I - Direct Fixation I - Direct Fixation Over Water	0	RF RF	\$5,500 \$6,000	\$0 \$0	30% 30%	
Double Track	Aeria	Element Total	0	RF	\$6,000	\$0	30%	
0.05 Guideway: Built-u	o fill							
Single Track		ade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
Double Track	At Gr	ade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		;
0.06 Guideway: Underg								
Single Track		yay - Direct Fixation	0	RF	\$10,000	\$0	35%	
Double Track	Subv	yay - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0.07 Guideway: Underg	around tunnel							
Single Track		vay - Direct Fixation	0	RF	\$12,000	\$0	35%	
Double Track		yay - Direct Fixation	0	RF	\$20,000	\$0	35%	
Bouble Huck		Element Total	0	RF	Ψ20,000	\$0	0070	
0.08 Guideway: Retain	ed cut or fill							
Single Track	Retai	ned Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
Single Track	Retai	ned Fill - Ballasted	0	RF	\$2,800	\$0	30%	
Double Track		ned Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
Double Track	Retai	ned Fill - Ballasted	0	RF	\$3,200	\$0	30%	
		Element Total	0	RF		\$0		
0.09 Track: Direct fixat	ion							
Single Track	Direc	t Fixation Track	0	RF	\$405	\$0	15%	
Double Track	Direc	t Fixation Track Element Total	0	RF RF	\$810	\$0 \$0	15%	
10 Track Fort at	ı							
0.10 Track: Embedded		edded Track	0	RF	\$400	60	150/	
Single Track Double Track		edded Track edded Track	6,282	RF RF	\$490 \$980	\$0 \$6,156,837	15% 15%	\$7,080,3
Double Hack	LIIDE	Element Total	6,282	RF	φαου	\$6,156,837	13 /0	\$7,080,3
0.11 Track: Ballasted								
Single Track	Balla	sted Track	0	RF	\$240	\$0	15%	
Double Track		sted Track	0	RF	\$480	\$0	15%	
		Element Total	0	RF		\$0		

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.12 Trac	ck: Special (switches, tur	nouts)						
	,	Special Trackwork (15% of Track Cost)	15%			\$923,526	15%	\$1,062,0
		Element Total	15%	LS		\$923,526	1070	\$1,062,0
			'	_0		4020,020		Ψ.,ΟΟΣ,Ο
0.13 Trac	ck: Vibration and noise da	. •	==:			*	4=0/	
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$0	15%	
		Element Total	1	LS		\$0		
20 STA	ATIONS, STOPS, TERMII	NALS, INTERMODAL						
20.01 At-g	grade station, stop, shelter	· · · · · · · · · · · · · · · · · · ·						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,0
		Element Total	1	EA		\$3,000,000		\$3,600,0
20.02 Aeri	ial station, stop, shelter, m	· · · · · · · · · · · · · · · · · · ·						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
20.03 Und	lerground station, stop, sh	nelter, mall, terminal, platform						
	,	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	0	EA	\$45,000,000	\$0	30%	
		Element Total	0	EA	·	\$0		
20.04 Othe	er stations, landings, term	inals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		
		Lionone Total	'	LO		Ψ		
20.05 Join	t development	NI/A						
		N/A Element Total	1	LS		\$0		
00.00								
20.06 Auto	omobile parking multi-stor	y structure Parking Garage	0	QT!	\$12,000	\$0	20%	
		Element Total	<u>0</u> 1	STL LS	φ 1∠,000	\$0 \$0	∠U70	
20.07 Elev	vators, escalators	Florish	_		# 000 000	* -	0001	
		Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator Element Total	0 1	EA LS	\$450,000	\$0 \$0	20%	
		Liement Total	ı	LO		φυ		
	EWORK & SPECIAL CO							
	. ,	Demolition Allowance - Low	0	RF	\$30	\$0	30%	
		Demolition Allowance - Median	6,282	RF	\$50	\$314,124	30%	\$408,3
		Demolition Allowance - High	0,202	RF	\$90	\$0	30%	ψ.00,0
		Element Total	6,282	RF	400	\$314,124	/0	\$408,3
40.00.0:	Hellition Delice							
40.02 Site	Utilities, Utility Relocation	n Utility Relocation Allowance - Low	0	RF	\$140	\$0	30%	
		Utility Relocation Allowance - Median	6,282	RF	\$340	\$2,136,045	30%	\$2,776,8
		Utility Relocation Allowance - High	0,202	RF	\$570	\$0	30%	Ψ=,110,0
		Element Total	6,282	RF	ΨΟΙΟ	\$2,136,045	0070	\$2,776,8
40.00.11		Mariki a - Ataur						
40.03 Haz	mat'l, contam'd soil rem	oval/mitigation, ground water treatments	6.000	DE	600	¢40E 0E0	200/	0400
		Hazardous Material Removal Allowance	6,282	RF	\$20	\$125,650	30%	\$163,3 \$163.3
		Element Total	1	LS		\$125,650		\$163,

NO.	STATIONING BEGIN EN	D DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		n, e.g. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	6,282	RF	\$50	\$314,124	30%	\$408,362
		Element Total	1	LS		\$314,124		\$408,362
10.05	Site structures including	retaining walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	0	RF	\$80	\$0	30%	\$0
		Element Total	1	LS		\$0		\$0
10.06	Pedestrian / bike access	and accommodation, landscaping						
		Landscaping Allowance - Low	0	RF	\$15	\$0	30%	\$0
		Landscaping Allowance - Median	6,282	RF	\$25	\$157,062	30%	\$204,181
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$73,977	30%	\$96,171
		Element Total	1	LS		\$231,040		\$300,351
40.07	Automobile, bus, van acc	cessways including roads, parking lots						
		Roadway Modifications Allow Full			450.000	****	200/	4000.000
		Intersection	6	EA	\$50,000	\$300,000	30%	\$390,000
		Roadway Modifications Allow AC Paving	150 700	C.F.	#20	£4 E22 200	200/	ΦE 000 403
		(incl. Curb & Sidewalk) Parking Lots	150,780	SF	\$30	\$4,523,390 \$1,200,000	30% 30%	\$5,880,407 \$4,560,000
		Element Total	300	STL LS	\$4,000	\$6,023,390	30%	\$1,560,000 \$7,830,407
		Liement Total	'	LO		φ0,023,390		ψ1,030,40 <i>1</i>
10.08	Temporary Facilities and	I other indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$457,219	25%	\$571,523
		Element Total	1	LS		\$457,219		\$571,523
	0.4075140							
50 50.01	SYSTEMS Train control and signals							
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	6,282	RF	\$260	\$1,633,446	15%	\$1,878,463
		Element Total	6,282	RF		\$1,633,446		\$1,878,463
50.02	Traffic signals and crossi	ing protection						
		Traffic Signal	6	EA	\$150,000	\$900,000	15%	\$1,035,000
		Crossing Protection	^	EA	\$250,000	^	15%	\$0
			0		\$250,000	\$0	1370	
		Element Total	6	EA	\$230,000	\$900,000	1376	\$1,035,000
50.03	Traction power supply: s			EA	\$250,000		1376	
50.03	Traction power supply: s			EA EA	\$1,300,000		15%	\$1,035,000
50.03	Traction power supply: s	substations	6		,	\$900,000		\$1,035,000 \$2,990,000
		substations Traction Power, Substation	6	EA	,	\$900,000 \$2,600,000		\$1,035,000 \$2,990,000
		substations Traction Power, Substation Element Total	6	EA	,	\$900,000 \$2,600,000		\$1,035,000 \$2,990,000 \$2,990,000
	Traction power distribution	substations Traction Power, Substation Element Total on: catenary and third rail	6 2 2	EA EA	\$1,300,000	\$900,000 \$2,600,000 \$2,600,000	15%	\$1,035,000 \$2,990,000 \$2,990,000
	Traction power distribution	substations Traction Power, Substation Element Total on: catenary and third rail OCS System - Standard	2 2	EA EA	\$1,300,000 \$240	\$900,000 \$2,600,000 \$2,600,000	15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$0 \$1,878,463
50.04	Traction power distribution	substations Traction Power, Substation Element Total on: catenary and third rail OCS System - Standard OCS System - Standard	6 2 2 2 0 6,282	EA EA RF RF	\$1,300,000 \$240	\$900,000 \$2,600,000 \$2,600,000 \$0 \$1,633,446	15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$0 \$1,878,463
50.04	Traction power distribution Single Track Double Track	substations Traction Power, Substation Element Total on: catenary and third rail OCS System - Standard OCS System - Standard	6 2 2 2 0 6,282	EA EA RF RF	\$1,300,000 \$240	\$900,000 \$2,600,000 \$2,600,000 \$0 \$1,633,446	15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$0 \$1,878,463
50.04	Traction power distribution Single Track Double Track	substations Traction Power, Substation Element Total on: catenary and third rail OCS System - Standard OCS System - Standard Element Total	6 2 2 2 0 6,282 6,282	EA EA RF RF	\$1,300,000 \$240 \$260	\$900,000 \$2,600,000 \$2,600,000 \$0 \$1,633,446 \$0	15% 15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$1,878,463 \$0 \$1,733,966
50.04	Traction power distribution Single Track Double Track	substations Traction Power, Substation Element Total on: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	6 2 2 2 0 6,282 6,282 6,282	EA EA RF RF RF	\$1,300,000 \$240 \$260	\$900,000 \$2,600,000 \$2,600,000 \$0 \$1,633,446 \$0	15% 15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$1,878,463 \$0 \$1,733,966 \$575,000
50.04 50.05	Traction power distribution Single Track Double Track	substations Traction Power, Substation Element Total OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	6 2 2 0 6,282 6,282 6,282	EA EA RF RF EA	\$1,300,000 \$240 \$260	\$900,000 \$2,600,000 \$2,600,000 \$1,633,446 \$0 \$1,507,797 \$500,000	15% 15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$1,878,463 \$0 \$1,733,966 \$575,000
50.04 50.05	Traction power distribution Single Track Double Track Communications	substations Traction Power, Substation Element Total OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	6 2 2 0 6,282 6,282 6,282	EA EA RF RF EA	\$1,300,000 \$240 \$260	\$900,000 \$2,600,000 \$2,600,000 \$1,633,446 \$0 \$1,507,797 \$500,000	15% 15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$1,878,463 \$0 \$1,733,966 \$575,000 \$2,308,966
50.04 50.05	Traction power distribution Single Track Double Track Communications	substations Traction Power, Substation Element Total OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	6 2 2 0 6,282 6,282 6,282 1	EA EA RF RF RF LS	\$1,300,000 \$240 \$260 \$240 \$500,000	\$900,000 \$2,600,000 \$2,600,000 \$1,633,446 \$0 \$1,507,797 \$500,000 \$2,007,797	15% 15% 15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$1,878,463 \$0 \$1,733,966 \$575,000 \$2,308,966
50.04 50.05	Traction power distribution Single Track Double Track Communications	substations Traction Power, Substation Element Total OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total nd equipment Fare Collection - 1 Platform	6 2 2 0 6,282 6,282 6,282 1 1	EA EA RF RF RF EA LS	\$1,300,000 \$240 \$260 \$240 \$500,000	\$900,000 \$2,600,000 \$2,600,000 \$1,633,446 \$0 \$1,507,797 \$500,000 \$2,007,797	15% 15% 15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$1,878,463 \$0 \$1,733,966 \$575,000 \$2,308,966 \$253,000 \$0
50.04 50.05 50.06	Traction power distribution Single Track Double Track Communications	substations Traction Power, Substation Element Total OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total nd equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	6 2 2 0 6,282 6,282 1 1 1	EA EA RF RF EA LS EA EA	\$1,300,000 \$240 \$260 \$240 \$500,000	\$900,000 \$2,600,000 \$2,600,000 \$1,633,446 \$0 \$1,507,797 \$500,000 \$2,007,797 \$220,000 \$0	15% 15% 15% 15%	
50.04 50.05 50.05	Traction power distribution Single Track Double Track Communications Fare collection system as	substations Traction Power, Substation Element Total OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total nd equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	6 2 2 0 6,282 6,282 1 1 1	EA EA RF RF EA LS EA EA	\$1,300,000 \$240 \$260 \$240 \$500,000	\$900,000 \$2,600,000 \$2,600,000 \$1,633,446 \$0 \$1,507,797 \$500,000 \$2,007,797 \$220,000 \$0	15% 15% 15% 15%	\$1,035,000 \$2,990,000 \$2,990,000 \$1,878,463 \$0 \$1,733,966 \$575,000 \$2,308,966 \$253,000 \$0

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMPR	OVEMENTS						
60.01	Purchase or lease	e of real estat	e						
			Right of Way Allowance - At Grade	6,282	RF	\$400	\$2,512,995	50%	\$3,769,492
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	6,282	RF		\$2,512,995		\$3,769,492

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK ELE	MENTS						
0.01	Guideway: At-grade exclusive	e right-of-way						
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	
	Double Track	At Grade - Ballasted, Open	0	RF	\$450	\$0	25%	
		Element Total	0	RF		\$0		
0.02	Guideway: At-grade semi-ex	clusive (allows cross-traffic)						
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
			·			ų.		
0.03	Guideway: At-grade in mixed							
	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
υ.04	Guideway: Aerial structure	Dridge Dellocted		DE	#0.00 ¢		2024	
	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	2,900	RF	\$5,500	\$15,950,000	30%	\$20,735,0
	Double Track	Aerial - Direct Fixation Over Water Element Total	2,900	RF RF	\$6,000	\$0 \$15,950,000	30%	\$20,735,0
0.05	Guideway: Built-up fill	A C			* 400	4.0	0.504	
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$600	\$0 \$0	25%	
		_						
10.06	Guideway: Underground cut			DE	0.40.000	Φ0	0.50/	
	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	#4.000.0
	Double Track	Subway - Direct Fixation Element Total	62 62	RF RF	\$15,500	\$957,675 \$957,675	35%	\$1,292,8 \$1,292,8
	. O. ida	1						
0.07	Guideway: Underground tunn		0	DE	#40.000	# 0	0.50/	
	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
	Double Track	Subway - Direct Fixation Element Total	0	RF RF	\$20,000	\$0 \$0	35%	
0.00	Cuidoway Batainad out or fil	1						
บ.บช	Guideway: Retained cut or fil	D 4 1 10 4 D1 4 D1 4	0	RF	\$6.800	\$0	30%	
	Single Track Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted	0	RF RF	\$6,800 \$2,800	\$0 \$0	30% 30%	
	Double Track	Retained Cut - Direct Fixation	400	RF	\$8,000	\$3,200,000	30%	\$4,160,0
	Double Track	Retained Gut - Bilect Fixation	700	RF	\$3,200	\$2,240,000	30%	\$2,912,0
	Double Hack	Element Total	1,100	RF	φ3,200	\$5,440,000	30%	\$7,072,0
U UO	Track: Direct fivation						450/	
0.09	Track: Direct fixation	Direct Fixation Track	0	RF	\$40E	0.2		
0.09	Single Track	Direct Fixation Track	3 362		\$405 \$810	\$0 \$2,723,046	15% 15%	
0.09		Direct Fixation Track Direct Fixation Track Element Total	3,362 3,362	RF RF RF	\$405 \$810	\$0 \$2,723,046 \$2,723,046	15%	\$3,131,5
	Single Track Double Track	Direct Fixation Track	3,362	RF		\$2,723,046		\$3,131,5
	Single Track Double Track Track: Embedded	Direct Fixation Track Element Total	3,362 3,362	RF RF	\$810	\$2,723,046 \$2,723,046	15%	\$3,131,5 \$3,131,5
	Single Track Double Track Track: Embedded Single Track	Direct Fixation Track Element Total Embedded Track	3,362 3,362	RF RF	\$810 \$490	\$2,723,046 \$2,723,046 \$0	15% 15%	
	Single Track Double Track Track: Embedded	Direct Fixation Track Element Total	3,362 3,362	RF RF	\$810	\$2,723,046 \$2,723,046	15%	
0.10	Single Track Double Track Track: Embedded Single Track Double Track	Direct Fixation Track Element Total Embedded Track Embedded Track	3,362 3,362 0 0	RF RF RF RF	\$810 \$490	\$2,723,046 \$2,723,046 \$0 \$0	15% 15%	\$3,131,5 \$3,131,5
0.10	Single Track Double Track Track: Embedded Single Track Double Track Track: Ballasted	Embedded Track Element Total Embedded Track Embedded Track Embedded Track Element Total	3,362 3,362 0 0	RF RF RF RF RF	\$810 \$490 \$980	\$2,723,046 \$2,723,046 \$0 \$0 \$0	15% 15% 15%	\$3,131,5 \$3,131,5
0.10	Single Track Double Track Track: Embedded Single Track Double Track	Direct Fixation Track Element Total Embedded Track Embedded Track	3,362 3,362 0 0	RF RF RF RF RF	\$810 \$490	\$2,723,046 \$2,723,046 \$0 \$0	15% 15%	\$3,131,5 \$3,131,5

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12 Trad	ck: Special (switches, tur	nouts)						
10.12 114	on. Opoolar (ownoneo, tan	Special Trackwork (15% of Track Cost)	15%			\$458,857	15%	\$527,68
		Element Total	1370	LS		\$458,857	1370	\$527,68
		Liement Total		LO		ψ430,037		Ψ321,00
10.13 Tra	ck: Vibration and noise da	. •						
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$20,160	15%	\$23,18
		Element Total	1	LS		\$20,160		\$23,18
20 STA	ATIONS, STOPS, TERMII	NALS, INTERMODAL						
20.01 At-g	grade station, stop, shelter	r, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	
		Center Platform Station	1	EA	\$3,000,000	\$3,000,000	20%	\$3,600,0
		Element Total	1	EA		\$3,000,000		\$3,600,0
20.02 Aeri	ial station, stop, shelter, m	nall, terminal, platform						
	,,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA	+ · · · · · · · · · · · · · · · · · · ·	\$0		
20 03 Hpc	doraround station stop sh	nelter, mall, terminal, platform						
20.03 0110	derground station, stop, si	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms						
		Center Platform Station	0	EA EA	\$52,000,000 \$45,000,000	\$0 \$0	30% 30%	
		Element Total	0	EA	\$45,000,000	\$0 \$0	30%	
		Element rotal	Ü			ΨΟ		
20.04 Oth	er stations, landings, term	ninals: Intermodal, ferry, trolley, etc.						
		N/A Element Total	1	LS		\$0		
00.05 1-:-								
20.05 Joir	nt development	N/A						
		Element Total	1	LS		\$0		
20.06 Auto	omobile parking multi-stor	cy structure						
		Parking Garage	0	STL	\$12,000	\$0	20%	
		Element Total	1	LS		\$0		
00 07 Elov	votore occalatore							
20.07 Elev	vators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	
					1	1		
		Element Total	0 1	LS	\$450,000	\$0 \$0	20%	
	EWORK & SPECIAL CO							
+0.01 Del	nondon, Oleanny, Landiwe	Demolition Allowance - Low	0	RF	\$30	\$0	30%	
		Demolition Allowance - Median	4,000	RF	\$50 \$50	\$200,000	30%	\$260,0
		Demolition Allowance - High	4,000	RF				\$200,0 \$7,2
		Element Total	4,062	RF	\$90	\$5,561 \$205,561	30%	\$267,2
			•			•		,
40.02 Site	Utilities, Utility Relocation	n Utility Relocation Allowance - Low	0	RF	\$140	¢ ດ	30%	
		•				\$0 \$1,360,000		¢1 760 0
		Utility Relocation Allowance - Median	4,000	RF	\$340 \$570	\$1,360,000	30%	\$1,768,0
		Utility Relocation Allowance - High Element Total	4,062	RF RF	\$570	\$35,218 \$1,395,218	30%	\$45,7 \$1,813,7
		Lichight Total	4,002	IM		ψ1,000,210		ψ1,013,1
40.00 11	z. mat'l, contam'd soil reme	oval/mitigation, ground water treatments						
40.03 Haz		11 1 14 1 1 15 1 14 11	4 000		ተ ር	PO4 DOC	0.00/	\$105,6
40.03 Haz		Hazardous Material Removal Allowance Element Total	4,062	RF LS	\$20	\$81,236 \$81,236	30%	\$105,6

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.04	Environmental mitigation, e	e.g. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	4,062	RF	\$50	\$203,089	30%	\$264,016
		Element Total	1	LS		\$203,089		\$264,016
10.05	Site structures including re	taining walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	70	RF	\$80	\$5,600	30%	\$7,280
		Element Total	1	LS		\$5,600		\$7,280
40.06	Pedestrian / bike access a	nd accommodation, landscaping						
		Landscaping Allowance - Low	0	RF	\$15	\$0	30%	\$0
		Landscaping Allowance - Median	4,000	RF	\$25	\$100,000	30%	\$130,000
		Landscaping Allowance - High	62	RF	\$40	\$2,471	30%	\$3,213
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$253,477	30%	\$329,520
		Element Total	1	LS		\$355,948		\$462,733
40.07	Automobile, bus, van acce	ssways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	100	STL	\$4,000	\$400,000	30%	\$520,000
		Element Total	1	LS		\$400,000		\$520,000
40.08	Temporary Facilities and o	ther indirect costs during construction						
	• •	Temporary Facilities (5% of Category 40)	5.0%			\$132,333	25%	\$165,416
		Element Total	1	LS		\$132,333		\$165,416
50 50.01	SYSTEMS Train control and signals							
	Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System Element Total	4,062 4,062	RF RF	\$260	\$1,056,064 \$1,056,064	15%	\$1,214,474 \$1,214,474
			,					
								. , ,
50.02	Traffic signals and crossing		0	Ε.Δ	¢450,000	¢0	450/	
50.02	Traffic signals and crossing	Traffic Signal	0	EA	\$150,000 \$350,000	\$0 \$0	15%	\$0
50.02	Traffic signals and crossin		0 0	EA EA	\$150,000 \$250,000	\$0 \$0 \$0	15% 15%	
	-	Traffic Signal Crossing Protection Element Total	0	EA		\$0		\$0 \$0
	Traffic signals and crossing	Traffic Signal Crossing Protection Element Total	0	EA		\$0		\$0 \$0 \$0
	-	Traffic Signal Crossing Protection Element Total	0	EA EA	\$250,000	\$0 \$0	15%	\$0 \$0
50.03	Traction power supply: sul	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total	0 0	EA EA	\$250,000	\$0 \$0 \$1,300,000	15%	\$0 \$0 \$0 \$1,495,000
50.03	-	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total	0 0	EA EA	\$250,000	\$0 \$0 \$1,300,000	15%	\$0 \$0 \$0 \$1,495,000 \$1,495,000
50.03	Traction power supply: sul	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total : catenary and third rail	0 0 1	EA EA EA	\$250,000 \$1,300,000	\$0 \$0 \$1,300,000 \$1,300,000	15%	\$0 \$0 \$0 \$1,495,000 \$1,495,000
50.03	Traction power supply: sul Traction power distribution: Single Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total catenary and third rail OCS System - Standard	0 0 1 1	EA EA EA EA	\$250,000 \$1,300,000 \$240	\$0 \$0 \$1,300,000 \$1,300,000	15% 15%	\$0 \$0 \$0 \$1,495,000
50.03 50.04	Traction power supply: sul Traction power distribution: Single Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard	0 0 1 1 0 4,062	EA EA EA RF	\$250,000 \$1,300,000 \$240	\$0 \$0 \$1,300,000 \$1,300,000 \$0 \$1,056,064	15% 15%	\$0 \$0 \$0 \$1,495,000 \$1,495,000
50.03 50.04	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard	0 0 1 1 0 4,062	EA EA EA RF	\$250,000 \$1,300,000 \$240	\$0 \$0 \$1,300,000 \$1,300,000 \$0 \$1,056,064	15% 15%	\$0 \$0 \$0 \$1,495,000 \$1,495,000
50.03 50.04	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total : catenary and third rail OCS System - Standard OCS System - Standard Element Total	0 0 1 1 0 4,062 4,062	EA EA EA RF RF RF	\$250,000 \$1,300,000 \$240 \$260	\$0 \$0 \$1,300,000 \$1,300,000 \$1,000,000 \$0 \$1,056,064	15% 15% 15% 15%	\$0 \$0 \$0 \$1,495,000 \$1,495,000 \$1,214,474 \$0
50.03 50.04	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total : catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	0 0 1 1 1 0 4,062 4,062	EA EA EA RF RF RF	\$250,000 \$1,300,000 \$240 \$260	\$0 \$0 \$1,300,000 \$1,300,000 \$0 \$1,056,064 \$0	15% 15% 15% 15%	\$0 \$0 \$1,495,000 \$1,495,000 \$1,214,474 \$0 \$1,121,053 \$575,000
50.03 50.04 50.05	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	0 0 1 1 1 0 4,062 4,062 4,062	EA EA EA RF RF RF EA	\$250,000 \$1,300,000 \$240 \$260	\$0 \$0 \$1,300,000 \$1,300,000 \$1,056,064 \$0 \$974,829 \$500,000	15% 15% 15% 15%	\$0 \$0 \$1,495,000 \$1,495,000 \$1,214,474 \$0 \$1,121,053 \$575,000
50.03 50.04 50.05	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	0 0 1 1 1 4,062 4,062 4,062	EA EA EA EA RF RF EA LS	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$0 \$1,300,000 \$1,300,000 \$1,056,064 \$0 \$974,829 \$500,000 \$1,474,829	15% 15% 15% 15% 15% 15%	\$0 \$0 \$1,495,000 \$1,495,000 \$1,214,474 \$0 \$1,121,053 \$575,000 \$1,696,053
50.03 50.04 50.05	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	0 0 1 1 1 0 4,062 4,062 4,062	EA EA EA RF RF RF EA	\$250,000 \$1,300,000 \$240 \$260	\$0 \$0 \$1,300,000 \$1,300,000 \$1,056,064 \$0 \$974,829 \$500,000	15% 15% 15% 15%	\$0 \$0 \$1,495,000 \$1,495,000 \$1,214,474 \$0 \$1,121,053 \$575,000
50.03 50.04 50.05	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total : catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total I equipment Fare Collection - 1 Platform	0 0 1 1 1 4,062 4,062 4,062 1 1	EA EA EA EA RF RF RF LS EA	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$0 \$1,300,000 \$1,300,000 \$1,056,064 \$0 \$974,829 \$500,000 \$1,474,829	15% 15% 15% 15% 15% 15%	\$0 \$0 \$1,495,000 \$1,495,000 \$1,214,474 \$0 \$1,121,053 \$575,000 \$1,696,053
50.03 50.04 50.05	Traction power supply: sulfaction power distribution: Single Track Double Track Communications Fare collection system and	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total : catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total I equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	0 0 1 1 1 0 4,062 4,062 4,062 1 1	EA EA EA RF RF EA LS EA EA	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$0 \$1,300,000 \$1,300,000 \$1,300,000 \$1,056,064 \$0 \$974,829 \$500,000 \$1,474,829	15% 15% 15% 15% 15% 15%	\$0 \$0 \$1,495,000 \$1,495,000 \$1,495,000 \$1,214,474 \$0 \$1,121,053 \$575,000 \$1,696,053
50.03 50.04 50.05 50.06	Traction power supply: sul Traction power distribution: Single Track Double Track	Traffic Signal Crossing Protection Element Total bstations Traction Power, Substation Element Total : catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total I equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	0 0 1 1 1 0 4,062 4,062 4,062 1 1	EA EA EA RF RF EA LS EA EA	\$250,000 \$1,300,000 \$240 \$260 \$240 \$500,000	\$0 \$1,300,000 \$1,300,000 \$1,300,000 \$1,056,064 \$0 \$974,829 \$500,000 \$1,474,829	15% 15% 15% 15% 15% 15%	\$0 \$0 \$1,495,000 \$1,495,000 \$1,495,000 \$1,214,474 \$0 \$1,121,053 \$575,000 \$1,696,053

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMP	PROVEMENTS						
60.01	Purchase or lease	e of real esta	ate						
			Right of Way Allowance - At Grade	1,100	RF	\$400	\$440,000	50%	\$660,000
			Right of Way Allowance - Aerial	2,900	RF	\$300	\$870,000	50%	\$1,305,000
			Right of Way Allowance - Underground	62	RF	\$250	\$15,446	50%	\$23,170
			Element Total	4,062	RF		\$1,325,446		\$1,988,170

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK ELE							
0.01	Guideway: At-grade exclusiv		•	DE	#050	00	050/	
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	
	Double Track	At Grade - Ballasted, Open Element Total	0	RF RF	\$450	\$0 \$0	25%	
						**		
0.02	Guideway: At-grade semi-ex Single Track	cclusive (allows cross-traffic) At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
	Single Track Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0 \$0	25%	
	Double Track	At Grade - Embedded, in-Street At Grade - Ballasted, In-Street	0	RF		\$0		
	Double Track	At Grade - Ballasted, In-Street At Grade - Embedded, In-Street	0	RF	\$530 \$700	\$0 \$0	25% 25%	
	Double Hack	Element Total	0	RF	\$700	\$0	23 /0	
n na	Cuidoway At grada in miya	d traffia						
0.03	Guideway: At-grade in mixe		0	DE	ΦECO	Φ0	050/	
	Single Track Double Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0 \$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$680	\$0 \$0	25%	
0.04	Guideway: Aerial structure Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0 \$0	30%	
	Single Track	Aerial - Direct Fixation Aerial - Direct Fixation Over Water	0	RF RF	\$4,600	\$0 \$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0 \$0	30%	
	Double Track Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0 \$0	30%	
	Double Track	Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0 \$0	30%	
	Double Hack	Element Total	0	RF	\$6,000	\$0 \$0	30%	
0.05	Guideway: Built-up fill	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Single Track Double Track	At Grade - Ballasted, Built-up At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
	Double Hack	Element Total	0	RF	φουσ	\$0	23 /0	
10.06	Guideway: Underground cut Single Track	: & cover Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation	5,326	RF	\$15,500	\$82,557,986	35%	\$111,453,2
	Double Hack	Element Total	5,326	RF	Ψ10,000	\$82,557,986	3370	\$111,453,2
	. O. ida	mal.						
0.07	Guideway: Underground tun	Subway - Direct Fixation	0	DE	¢42.000	# 0	35%	
	- C		0	RF	\$12,000	\$0 \$0		
	Double Track	Subway - Direct Fixation		RF	\$20,000	\$0	35%	
		Element Total	0	RF	+ ==,===	\$0		
				RF		\$0		
0.08	Guideway: Retained cut or f	ill	0				30%	
0.08	Single Track	ill Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30% 30%	
0.08	Single Track Single Track	ill Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0	RF RF	\$6,800 \$2,800	\$0 \$0	30%	
0.08	Single Track Single Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation	0 0 0	RF RF RF	\$6,800 \$2,800 \$8,000	\$0 \$0 \$0	30% 30%	
0.08	Single Track Single Track	ill Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0	RF RF	\$6,800 \$2,800	\$0 \$0	30%	
	Single Track Single Track Double Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted	0 0 0 0	RF RF RF RF	\$6,800 \$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track Track: Direct fixation	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0 0 0	RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0	30% 30% 30%	
	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track	0 0 0 0 0	RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0	30% 30% 30% 15%	
	Single Track Single Track Double Track Double Track Track: Direct fixation	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total	0 0 0 0 0	RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0	30% 30% 30%	\$4,961,4
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track	0 0 0 0 0 0	RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30% 15%	\$4,961,4
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Gut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 5,326	RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$4,314,321 \$4,314,321	30% 30% 30% 30% 15%	\$4,961,4 \$4,961,4
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Gut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track	0 0 0 0 0 0 0 5,326 5,326	RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$4,314,321 \$4,314,321	30% 30% 30% 30% 15%	\$4,961,4 \$4,961,4
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Gut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total	0 0 0 0 0 0 0 5,326	RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$4,314,321 \$4,314,321	30% 30% 30% 30% 15%	
0.09 0.10	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 5,326 5,326	RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$4,314,321 \$4,314,321 \$4,314,321	30% 30% 30% 30% 15%	\$4,961,4 \$4,961,4
0.09 0.10	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track Track: Ballasted	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Gut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track Element Total	0 0 0 0 0 0 5,326 5,326	RF RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810 \$490 \$980	\$0 \$0 \$0 \$0 \$0 \$0 \$4,314,321 \$4,314,321 \$0 \$0 \$0	30% 30% 30% 15% 15%	\$4,961,4 \$4,961,4
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Single Track Double Track Track: Embedded Single Track Double Track	Retained Cut - Direct Fixation Retained Fill - Ballasted Retained Cut - Direct Fixation Retained Fill - Ballasted Element Total Direct Fixation Track Direct Fixation Track Element Total Embedded Track Embedded Track Embedded Track	0 0 0 0 0 0 5,326 5,326	RF RF RF RF RF RF	\$6,800 \$2,800 \$8,000 \$3,200 \$405 \$810	\$0 \$0 \$0 \$0 \$0 \$0 \$4,314,321 \$4,314,321 \$4,314,321	30% 30% 30% 30% 15%	\$4,961,4

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
NO.	BEGIN END	DESCRIPTION	QII	UNIT	CO31		CONTO	
10.12	Track: Special (switches, t	urnouts)						
		Special Trackwork (15% of Track Cost)	15%			\$647,148	15%	\$744,22
		Element Total	1	LS		\$647,148		\$744,22
በ 13	Track: Vibration and noise	dampening						
0.10	Track. Vibration and noise	Vibration Allowance (6% of Ballasted Track	6%			\$0	15%	
		Cost)						
		Element Total	1	LS		\$0		9
20	STATIONS, STOPS, TER	MINALS, INTERMODAL						
0.01	At-grade station, stop, shell	ter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	:
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	:
		Center Platform Station	0	EA	\$3,000,000	\$0	20%	
		Element Total	0	EA		\$0		
0.02	Aerial station, stop, shelter	, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA		\$0		
0.03	Underground station, stop,	shelter, mall, terminal, platform						
		Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA	\$52,000,000	\$0	30%	
		Center Platform Station	1	EA	\$45,000,000	\$45,000,000	30%	\$58,500,0
		Element Total	1	EA		\$45,000,000		\$58,500,0
0.04	Other stations, landings, te	rminals: Intermodal, ferry, trolley, etc. N/A Element Total	1	LS		\$0		
0.05	Joint development							
		N/A	4	1.0				
		Element Total	1	LS		\$0		
0.06	Automobile parking multi-s	•		a		•	000/	
		Parking Garage Element Total	0 1	STL LS	\$12,000	\$0 \$0	20%	
0.07	Elevators, escalators	Floruster	0	_^	# 000 000	# 400,000	000/	£400.0
		Eleavator Escalator	2	EΑ	\$200,000	\$400,000	20%	\$480,0
		Element Total		EA LS	\$450,000	\$900,000 \$1,300,000	20%	\$1,080,0 \$1,560,0
		Liomont Fotal				ψ1,000,000		Ψ1,000,0
	SITEWORK & SPECIAL C Demolition, Clearing, Earth							
0.01	Demonitori, Cleaning, Lanti	Demolition Allowance - Low	0	RF	\$30	\$0	30%	
			0				30%	
		Demolition Allowance - Median Demolition Allowance - High		RF	\$50 \$00	\$0 \$470.360		ድርጋጋ 4
		Element Total	5,326 5,326	RF RF	\$90	\$479,369 \$479,369	30%	\$623,1 \$623,1
			5,520			+ 0,000		¥023,1
0.02	Site Utilities, Utility Relocat					•	000/	
		Utility Relocation Allowance - Low	0	RF	\$140	\$0	30%	
		Utility Relocation Allowance - Median	0	RF	\$340	\$0	30%	
		Utility Relocation Allowance - High	5,326	RF	\$570	\$3,036,003	30%	\$3,946,8
		Element Total	5,326	RF		\$3,036,003		\$3,946,8
0.03	Haz. mat'l, contam'd soil re	moval/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	5,326	RF	\$20	\$106,526	30%	\$138,4
		Element Total	1	LS		\$106,526		\$138,4

NO.	STATIONING BEGIN END	D DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		e.g. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	5,326	RF	\$50	\$266,316	30%	\$346,211
		Element Total	1	LS		\$266,316		\$346,211
10.05	Site structures including r	etaining walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	0	RF	\$80	\$0	30%	\$0
		Element Total	1	LS		\$0		\$0
40.06	Pedestrian / bike access a	and accommodation, landscaping						
		Landscaping Allowance - Low	0	RF	\$15	\$0	30%	\$0
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	\$0
		Landscaping Allowance - High	5,326	RF	\$40	\$213,053	30%	\$276,969
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$1,275,580	30%	\$1,658,254
		Element Total	1	LS		\$1,488,633		\$1,935,223
40.07	Automobile, bus, van acco	essways including roads, parking lots						
		Roadway Modifications Allow Full Intersection	0		#F0.000		200/	C O
		Roadway Modifications Allow AC Paving	0	EA	\$50,000	\$0	30%	\$0
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	100	STL	\$4,000	\$400,000	30%	\$520,000
		Element Total	100	LS	Ψ4,000	\$400,000	30 /0	\$520,000
		Element Total		LO		ψ+00,000		Ψ020,000
40.08	Temporary Facilities and	other indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$288,842	25%	\$361,053
		Element Total	1	LS		\$288,842		\$361,053
50	SYSTEMS							
50.01	Train control and signals Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	5,326	RF	\$260	\$1,384,844	15%	\$1,592,570
		Element Total	5,326	RF	·	\$1,384,844		\$1,592,570
50.02	Traffic signals and crossir	ng protection						
	· ·	Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	0	EA	\$250,000	\$0	15%	\$0
		Element Total						
		Element Total	0	EA		\$0		\$0
50.03	Traction power supply: si		0	EA		\$0		\$0
50.03	Traction power supply: se		2	EA EA	\$1,300,000	\$0 \$2,600,000	15%	\$0 \$2,990,000
50.03	Traction power supply: so	ubstations			\$1,300,000			\$2,990,000
	Traction power supply: su	ubstations Traction Power, Substation Element Total	2	EA	\$1,300,000	\$2,600,000		
		ubstations Traction Power, Substation Element Total	2	EA	\$1,300,000 \$240	\$2,600,000		\$2,990,000
	Traction power distribution	ubstations Traction Power, Substation Element Total catenary and third rail	2 2	EA EA		\$2,600,000 \$2,600,000	15%	\$2,990,000 \$2,990,000
	Traction power distribution Single Track	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard	2 2	EA EA	\$240	\$2,600,000 \$2,600,000	15% 15%	\$2,990,000 \$2,990,000 \$0
50.04	Traction power distribution Single Track	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard	2 2 0 5,326	EA EA RF RF	\$240	\$2,600,000 \$2,600,000 \$0 \$1,384,844	15% 15%	\$2,990,000 \$2,990,000 \$0 \$1,592,570
50.04	Traction power distribution Single Track Double Track	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard	2 2 0 5,326	EA EA RF RF	\$240	\$2,600,000 \$2,600,000 \$0 \$1,384,844	15% 15%	\$2,990,000 \$2,990,000 \$0 \$1,592,570
50.04	Traction power distribution Single Track Double Track	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total	2 2 0 5,326 5,326	EA EA RF RF	\$240 \$260	\$2,600,000 \$2,600,000 \$0 \$1,384,844 \$0	15% 15% 15%	\$2,990,000 \$2,990,000 \$0 \$1,592,570 \$0 \$1,470,065
50.04	Traction power distribution Single Track Double Track	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	2 2 0 5,326 5,326 5,326	EA EA RF RF RF	\$240 \$260 \$240	\$2,600,000 \$2,600,000 \$1,384,844 \$0 \$1,278,317	15% 15% 15%	\$2,990,000 \$2,990,000 \$0 \$1,592,570 \$0
50.04 50.05	Traction power distribution Single Track Double Track Communications	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	2 2 0 5,326 5,326 5,326	EA EA RF RF EA	\$240 \$260 \$240	\$2,600,000 \$2,600,000 \$1,384,844 \$0 \$1,278,317 \$500,000	15% 15% 15%	\$2,990,000 \$2,990,000 \$1,592,570 \$0 \$1,470,065 \$575,000
50.04 50.05	Traction power distribution Single Track Double Track	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	2 2 0 5,326 5,326 5,326	EA EA RF RF RF LS	\$240 \$260 \$240 \$500,000	\$2,600,000 \$2,600,000 \$0 \$1,384,844 \$0 \$1,278,317 \$500,000 \$1,778,317	15% 15% 15% 15%	\$2,990,000 \$2,990,000 \$1,592,570 \$0 \$1,470,065 \$575,000 \$2,045,065
50.04 50.05	Traction power distribution Single Track Double Track Communications	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total	2 2 0 5,326 5,326 5,326 1	EA EA RF RF EA	\$240 \$260 \$240	\$2,600,000 \$2,600,000 \$1,384,844 \$0 \$1,278,317 \$500,000	15% 15% 15%	\$2,990,000 \$2,990,000 \$1,592,570 \$0 \$1,470,065 \$575,000
50.04 50.05	Traction power distribution Single Track Double Track Communications	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total d equipment Fare Collection - 1 Platform	2 2 0 5,326 5,326 5,326 1 1	EA EA RF RF EA LS	\$240 \$260 \$240 \$500,000 \$220,000	\$2,600,000 \$2,600,000 \$0 \$1,384,844 \$0 \$1,278,317 \$500,000 \$1,778,317	15% 15% 15% 15%	\$2,990,000 \$2,990,000 \$1,592,570 \$0 \$1,470,065 \$575,000 \$2,045,065
50.04 50.05 50.06	Traction power distribution Single Track Double Track Communications Fare collection system an	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total d equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 2 0 5,326 5,326 1 1 1	EA EA RF RF EA LS	\$240 \$260 \$240 \$500,000 \$220,000	\$2,600,000 \$2,600,000 \$0 \$1,384,844 \$0 \$1,278,317 \$500,000 \$1,778,317 \$220,000 \$0	15% 15% 15% 15%	\$2,990,000 \$2,990,000 \$1,592,570 \$0 \$1,470,065 \$575,000 \$2,045,065
50.04 50.05 50.06	Traction power distribution Single Track Double Track Communications	ubstations Traction Power, Substation Element Total n: catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total d equipment Fare Collection - 1 Platform Fare Collection - 2 Platform	2 2 0 5,326 5,326 1 1 1	EA EA RF RF EA LS	\$240 \$260 \$240 \$500,000 \$220,000	\$2,600,000 \$2,600,000 \$0 \$1,384,844 \$0 \$1,278,317 \$500,000 \$1,778,317 \$220,000 \$0	15% 15% 15% 15%	\$2,990,000 \$2,990,000 \$1,592,570 \$0 \$1,470,065 \$575,000 \$2,045,065

CAT	STATIO	ONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMP	ROVEMENTS						
60.01	Purchase or lease	e of real esta	ate						
			Right of Way Allowance - At Grade	0	RF	\$400	\$0	50%	\$0
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	5,326	RF	\$250	\$1,331,580	50%	\$1,997,371
			Element Total	5,326	RF		\$1,331,580		\$1,997,371

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	ALLCTD CONTGY	COST
10 0	GUIDEWAY & TRACK ELEM	MENTS						
0.01	Guideway: At-grade exclusive	e right-of-way						
S	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	
	Double Track	At Grade - Ballasted, Open	13,137	RF	\$450	\$5,911,439	25%	\$7,389,2
		Element Total	13,137	RF		\$5,911,439		\$7,389,2
0.02	Guideway: At-grade semi-exc	,						
S	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
S	Single Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	
	Double Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	2,800	RF	\$700	\$1,960,000	25%	\$2,450,0
		Element Total	2,800	RF		\$1,960,000		\$2,450,0
0.03	Guideway: At-grade in mixed	traffic						
S	Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	
		Element Total	0	RF		\$0		
0.04	Guideway: Aerial structure							
S	Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
S	Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
S	Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	
	Double Track	Aerial - Direct Fixation Over Water	100	RF	\$6,000	\$600,000	30%	\$780,0
		Element Total	100	RF	, ,,,,,,,	\$600,000		\$780,
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
		Element Total	0	RF		\$0		
0.06	Guideway: Underground cut	& cover						
S	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$15,500	\$0	35%	
		Element Total	0	RF		\$0		
0.07	Guideway: Underground tunr							
S	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
		Element Total	0	RF		\$0		
0.08	Guideway: Retained cut or fil	I						
S	Single Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
S	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
С	Double Track	Retained Cut - Direct Fixation	500	RF	\$8,000	\$4,000,000	30%	\$5,200,0
	Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	
		Element Total	500	RF	· ,	\$4,000,000		\$5,200,
).09 T	Frack: Direct fixation							
S	Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
	Double Track	Direct Fixation Track	600	RF	\$810	\$486,000	15%	\$558,9
		Element Total	600	RF		\$486,000		\$558,
).10 T	Frack: Embedded							
S	Single Track	Embedded Track	0	RF	\$490	\$0	15%	
C	Double Track	Embedded Track Element Total	2,800 2,800	RF RF	\$980	\$2,744,000 \$2,744,000	15%	\$3,155,0 \$3,155,0
		Lientent Total	2,000	LVI_		φ ∠ , <i>ι</i> 44,000		φο, 105,
	Frack: Ballasted Single Track	Ballasted Track		RF	\$240	¢0	159/	
	•		12 127			\$0 \$6.305.535	15% 15%	¢7.054.6
L	Double Track	Ballasted Track	13,137	RF	\$480	\$6,305,535	15%	\$7,251,3
		Element Total	13,137	RF		\$6,305,535		\$7,251,3

	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 12 Trac	ck: Special (switches, tur	nouts)						
10.12 1100	in. Opediai (ownorios, turi	Special Trackwork (15% of Track Cost)	15%			\$1,430,330	15%	\$1,644,88
		Element Total	1	LS		\$1,430,330	1070	\$1,644,88
						* .,		¥ .,,
10.13 Trac	ck: Vibration and noise da							
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$378,332	15%	\$435,08
		Element Total	1	LS		\$378,332		\$435,08
20 STA	TIONS, STOPS, TERMI	NALS. INTERMODAL						
	rade station, stop, shelter	·						
•		Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	:
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0	20%	
		Center Platform Station	2	EA	\$3,000,000	\$6,000,000	20%	\$7,200,0
		Element Total	2	EA		\$6,000,000		\$7,200,0
20 02 Aeri:	al station, stop, shelter, m	nall terminal platform						
/		Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$18,000,000	\$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA	***************************************	\$0		
20 03 Llnd	orground station stop sk	nelter, mall, terminal, platform						
20.03 Onu	erground station, stop, si	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0	EA		\$0 \$0	30%	
		Center Platform Station	0	EA	\$52,000,000 \$45,000,000	\$0 \$0	30%	
		Element Total	0	EA	\$45,000,000	\$0	30%	
		Liement Total	U	LA		φυ		
20.04 Othe	er stations, landings, term	ninals: Intermodal, ferry, trolley, etc.						
		N/A Element Total	1	LS		\$0		
20.05 Joint	t development	N/A						
		Element Total	1	LS		\$0		
OO OE Auto	mahila narkina multi atar	a cotructure						
20.06 Auto	omobile parking multi-stor	Parking Garage	0	STL	\$12,000	\$0	20%	
		Element Total	1	LS	Ψ12,000	\$0	2070	
20.07 Elev	ators, escalators	Elementes			# 000 000	40	000/	
		Eleavator	0	EA	\$200,000	\$0	20%	
		Element Total	0 1	EA LS	\$450,000	\$0 \$0	20%	
		2.56 1.514.	·			ΨΨ		
	EWORK & SPECIAL CO							
ıu.u1 Dem	nolition, Clearing, Earthwo		40.40=	-	***	0001.000	000/	AF 10 -
		Demolition Allowance - Low	13,137	RF	\$30	\$394,096	30%	\$512,3
		Demolition Allowance - Median	3,400	RF	\$50	\$170,000	30%	\$221,0
		Demolition Allowance - High	16.537	RF RF	\$90	\$0	30%	\$733,3
		Element Total	16,537	ΚF		\$564,096		\$/33,3
		n						
40.02 Site	Utilities, Utility Relocation	••		RF	\$140	\$1,839,114	30%	\$2,390,8
40.02 Site	Utilities, Utility Relocation	Utility Relocation Allowance - Low	13,137	1 (1	Ψ140	ψ.,σσσ,	/-	
40.02 Site	Utilities, Utility Relocation		13,137 3,400	RF	\$340	\$1,156,000	30%	
10.02 Site	Utilities, Utility Relocation	Utility Relocation Allowance - Low						
40.02 Site	Utilities, Utility Relocation	Utility Relocation Allowance - Low Utility Relocation Allowance - Median	3,400	RF	\$340	\$1,156,000	30%	\$1,502,8
	,	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	3,400 0	RF RF	\$340	\$1,156,000 \$0	30%	\$1,502,8
	,	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	3,400 0	RF RF	\$340	\$1,156,000 \$0	30%	\$1,502,8 \$3,893,6 \$429,9

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
		. wetlands, historic/archeologic, parks	· · · · · · · · · · · · · · · · · · ·					
		Enviromental Mitigation Allowance	16,537	RF	\$50	\$826,827	30%	\$1,074,87
		Element Total	1	LS		\$826,827		\$1,074,875
0.05	Site structures including retai	ning walls, sound walls						
	g	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	1,314	RF	\$80	\$105,092	30%	\$136,62
		Element Total	1	LS	·	\$105,092		\$136,62
10 06	Pedestrian / hike access and	accommodation, landscaping						
+0.00	r edestrial / bike access and	Landscaping Allowance - Low	13,137	RF	\$15	\$197,048	30%	\$256,16
		Landscaping Allowance - Median	3,400	RF	\$25	\$85,000	30%	\$110,50
		Landscaping Allowance - High	0,	RF	\$40	\$0	30%	\$
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$
		Artwork (1% of Guideway & Stations)	1%	_, .	4000,000	\$184,714	30%	\$240,12
		Element Total	1	LS		\$466,762	0070	\$606,79
0.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full			450.000	4.5 0.000	000/	0.10 = 00
		Intersection	3	EA	\$50,000	\$150,000	30%	\$195,00
		Roadway Modifications Allow AC Paving	07.000	0.5	400	#0.040.000	000/	# 0.000.00
		(incl. Curb & Sidewalk)	67,200	SF	\$30	\$2,016,000	30%	\$2,620,80
		Parking Lots Element Total	400	STL	\$4,000	\$1,600,000	30%	\$2,080,00
		Element Total	1	LS		\$3,766,000		\$4,895,80
10.08	Temporary Facilities and other	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$452,731	25%	\$565,91
		Element Total	1	LS		\$452,731		\$565,91
50 50.01	SYSTEMS Train control and signals Single Track	Signal System	0	RF	\$240	\$0	15%	\$(
	Double Track	Signal System	16,537	RF	\$260	\$4,299,498	15%	\$4,944,423
		Element Total	16,537	RF		\$4,299,498		\$4,944,42
50.02	Traffic signals and crossing p	protection						
30.02	Traine signals and crossing p	Traffic Signal	3	EA	\$150,000	\$450,000	15%	\$517,50
		Crossing Protection	7	EA	\$250,000	\$1,750,000	15%	\$2,012,50
		Element Total	10	EA	+	\$2,200,000	,	\$2,530,000
50 O2	Traction power supply: subs	tations						
50.03	Traction power supply. Subs	Traction Power, Substation	4	EA	\$1,300,000	\$5,200,000	15%	\$5,980,00
		Element Total	4	EA	ψ1,000,000	\$5,200,000	.070	\$5,980,000
50 04	Traction power distribution:	catenary and third rail						
JU.U4	Single Track	OCS System - Standard	0	RF	\$240	\$0	15%	\$(
	Double Track	OCS System - Standard	16,537	RF	\$260	\$4,299,498	15%	\$4,944,423
		Element Total	16,537	RF		\$0		\$(
50.05	Communications							
- 0.00		Communication, Line	16,537	RF	\$240	\$3,968,768	15%	\$4,564,083
		Communication, Station	2	EA	\$500,000	\$1,000,000	15%	\$1,150,000
		Element Total	1	LS		\$4,968,768		\$5,714,083
50.06	Fare collection system and e	quipment						
	. a. o conconon system and e	Fare Collection - 1 Platform	2	EA	\$220,000	\$440,000	15%	\$506,000
		Fare Collection - 2 Platform	0	EA	\$400,000	\$0	15%	\$300,000
		Element Total	1	LS	ψ.50,000	\$440,000	.070	\$506,000
F0 0F	0 1 10 1 1							
50.07	Central Control	N/A						
		Element Total	1	LS		\$0		\$(

CAT	STATIC	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EXI	ISTING IMPDO	OVEMENTS						
60.01	Purchase or lease								
		F	Right of Way Allowance - At Grade	16,437	RF	\$400	\$6,574,613	50%	\$9,861,919
		F	Right of Way Allowance - Aerial	100	RF	\$300	\$30,000	50%	\$45,000
		F	Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
		_	Element Total	16,537	RF		\$6,604,613		\$9,906,919

Hillsborough County MPO Transit Study System Planning LR-Westchase On CSX to west of Sheldon

CAT NO.	STATIONING BEGIN EN		QTY	UNIT	UNIT	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK							
0.01	Guideway: At-grade exc							
	Single Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	Double Track	At Grade - Ballasted, Open Element Total	23,167 23,167	RF RF	\$450	\$10,425,311 \$10,425,311	25%	\$13,031,63 \$13,031,63
		Liement Total	23,107	IXI		φ10,425,511		φ13,031,03
0.02		ni-exclusive (allows cross-traffic)	0	DE	6440	Ф О	050/	d
	Single Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	
	Single Track	At Grade - Embedded, In-Street At Grade - Ballasted, In-Street	0	RF	\$580	\$0	25%	9
	Double Track		0	RF	\$530 \$700	\$0	25%	
	Double Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	;
0.00	Cuidouseus At areado in a	wived traffic						
0.03	Guideway: At-grade in n Single Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	Double Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	
	Double Hack	Element Total	0	RF	φοσο	\$0	23 /0	
0.04	Cuidoway, Aprial atrust	170						
0.04	Guideway: Aerial structu Single Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
	Single Track Single Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0 \$0	30%	
	Single Track Single Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0 \$0	30%	
	Double Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
	Double Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	
	Double Track	Aerial - Direct Fixation Over Water	50	RF	\$6,000	\$300,000	30%	\$390,0
	Double Truck	Element Total	50	RF	ΨΟ,ΟΟΟ	\$300,000	0070	\$390,0
0 05	Guideway: Built-up fill							
0.00	Single Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$600	\$0	25%	
	Double Hash	Element Total	0	RF	Ψ000	\$0	20,0	
10 06	Guideway: Underground	1 cut & cover						
0.00	Single Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$15,500	\$0	35%	
		Element Total	0	RF	,	\$0		
0.07	Guideway: Underground	i tunnel						
	Single Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
	Double Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
		Element Total	0	RF		\$0		
0.08	Guideway: Retained cut							
	Single Track			RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Double Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
	Double Track	Retained Fill - Ballasted Element Total	0	RF RF	\$3,200	\$0 \$0	30%	
		Element Total	U	KF		Φ0		
0.09	Track: Direct fixation							
	Single Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
	Double Track	Direct Fixation Track Element Total	50 50	RF RF	\$810	\$40,500 \$40,500	15%	\$46,5
		Element Total	50	KF		\$40,500		\$46,5
0.10	Track: Embedded							
	Single Track	Embedded Track	0		\$490	\$0	15%	
	Double Track	Embedded Track	0	RF RF	\$980	\$0 \$0	15%	
		Element Total	0	KF		\$0		
0.11	Track: Ballasted							
	Single Track	Ballasted Track	0	RF	\$240	\$0	15%	
	Double Track	Ballasted Track	23,167	RF	\$480	\$11,120,332	15%	\$12,788,3
		Element Total	23,167	RF		\$11,120,332		\$12,788,3

Hillsborough County MPO Transit Study System Planning LR-Westchase On CSX to west of Sheldon

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
0.12	Track: Special (switches, to	urnouts) Special Trackwork (15% of Track Cost)	15%			\$1,674,125	15%	\$1,925,24
		Element Total	1370	LS		\$1,674,125	1370	\$1,925,24
		Element Total	•			ψ1,074,120		Ψ1,320,2
0.13	Track: Vibration and noise	. •					. = 4.	
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$667,220	15%	\$767,3
		Element Total	1	LS		\$667,220		\$767,3
	STATIONS, STOPS, TERN At-grade station, stop, shelf							
0.01	7 ti grade station, stop, shen	Side Platform Station - 1 Platform	0	EA	\$2,000,000	\$0	20%	
		Side Platform Station - 2 Platforms	0	EA	\$3,500,000	\$0 \$0	20%	
		Center Platform Station	4	EA	\$3,000,000	\$12,000,000	20%	\$14,400,0
		Element Total	4	EA	ψ3,000,000	\$12,000,000	2070	\$14,400,0
n n2	Aerial station, stop, shelter,	mall terminal platform						
J.J2	otation, stop, snotter,	Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$12,000,000	\$0 \$0	25%	
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	
		Element Total	0	EA	Ψ10,000,000	\$0	2070	
0.00	Underground station step	shelter, mall, terminal, platform						
0.03	Onderground station, stop,	Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 1 Platforms	0					
			0	EΑ	\$52,000,000	\$0 \$0	30%	
		Center Platform Station Element Total	0	EA EA	\$45,000,000	\$0 \$0	30%	
0.04	Other stations, landings, ter	rminals: Intermodal, ferry, trolley, etc.						
	3.,	N/A				•		
		Element Total	1	LS		\$0		
0.05	Joint development							
		N/A Element Total	1	LS		\$0		
0.00	Automobile medice multipe							
0.06	Automobile parking multi-st	Parking Garage	0	STL	\$12,000	\$0	20%	
		Element Total	1	LS	, ,,,,,,	\$0		
0.07	Elevators, escalators							
	•	Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator	0	EA	\$450,000	\$0	20%	
		Element Total	1	LS		\$0		
40	SITEWORK & SPECIAL C	ONDITIONS						
0.01	Demolition, Clearing, Earth	work						
		Demolition Allowance - Low	23,167	RF	\$30	\$695,021	30%	\$903,5
		Demolition Allowance - Median	50	RF	\$50	\$2,500	30%	\$3,2
		Demolition Allowance - High	0	RF	\$90	\$0	30%	
		Element Total	23,217	RF		\$697,521		\$906,7
0.02	Site Utilities, Utility Relocati	on						
		Utility Relocation Allowance - Low	23,167	RF	\$140	\$3,243,430	30%	\$4,216,4
		Utility Relocation Allowance - Median	50	RF	\$340	\$17,000	30%	\$22,1
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	
		Element Total	23,217	RF		\$3,260,430		\$4,238,5
เก กร	Haz. mat'l, contam'd soil re	moval/mitigation, ground water treatments						
10.00			22 247	RF	ድጋር	¢464 247	30%	\$603,6
10.00		Hazardous Material Removal Allowance	23,217	ΓC	\$20	\$464,347	30 /0	φ003.C

Hillsborough County MPO Transit Study System Planning LR-Westchase On CSX to west of Sheldon

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	23,217	RF	\$50	\$1,160,868	30%	\$1,509,128
		Element Total	1	LS		\$1,160,868		\$1,509,128
40.05	Site structures including retai	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	2,317	RF	\$80	\$185,339	30%	\$240,941
		Element Total	1	LS		\$185,339		\$240,941
40.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	23,167	RF	\$15	\$347,510	30%	\$451,763
		Landscaping Allowance - Median	50	RF	\$25	\$1,250	30%	\$1,625
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$227,253	30%	\$295,429
		Element Total	1	LS		\$576,013		\$748,818
40.07	Automobile, bus, van access	ways including roads, parking lots						
	, ,	Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	1,400	STL	\$4,000	\$5,600,000	30%	\$7,280,000
		Element Total	1	LS		\$5,600,000		\$7,280,000
40.08	Temporary Facilities and other	er indirect costs during construction						
	, , , , , , , , , , , , , , , , , , , ,	Temporary Facilities (5% of Category 40)	5.0%			\$597.226	25%	\$746,532
		Element Total	1	LS		\$597,226		\$746,532
50	SYSTEMS							
50.01	Train control and signals	Circular Countries	0	DE	0040	# 0	450/	0.0
	Single Track Double Track	Signal System Signal System	0 23,217	RF RF	\$240 \$260	\$0 \$6,036,513	15% 15%	\$0 \$6,941,990
	Double Hack	Element Total	23,217	RF	\$200	\$6,036,513	15%	\$6,941,990
F0 00	- "							
50.02	Traffic signals and crossing p		0	Ε.Δ	¢450,000	¢o.	450/	C O
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection Element Total	12 12	EA EA	\$250,000	\$3,000,000	15%	\$3,450,000 \$3,450,000
						, , ,		. , ,
50.03	Traction power supply: subs	tations Traction Power, Substation	5	EA	\$1,300,000	\$6,500,000	15%	\$7,475,000
		Element Total	5	EA	ψ1,000,000	\$6,500,000	1070	\$7,475,000
50.04	-							
50.04	Traction power distribution: c Single Track	Catenary and third rail OCS System - Standard	0	RF	\$240	\$0	15%	\$0
	Double Track	OCS System - Standard OCS System - Standard	23,217	RF	\$240 \$260	\$6,036,513	15%	\$6,941,990
	Double Huok	Element Total	23,217	RF	φ∠υυ	\$0,030,313	10 /0	\$0,941,990
E0 05	Communications							
50.05	Communications	Communication, Line	23,217	RF	\$240	\$5,572,166	15%	\$6,407,991
		Communication, Station	23,217	EA	\$500,000	\$2,000,000	15%	\$2,300,000
		Element Total	1	LS	φοσο,σσσ	\$7,572,166	1070	\$8,707,991
50 OG	Earn collection austom and a	quipment						
JU.U0	Fare collection system and e	quipmenτ Fare Collection - 1 Platform	4	EA	\$220,000	\$880,000	15%	\$1,012,000
		Fare Collection - 1 Platform	0	EA	\$400,000	\$000,000	15%	\$1,012,000
		Element Total	1	LS	φ400,000	\$880,000	1070	\$1,012,000
		Liement Total	'	LO		φυσυ,υυυ		ψ1,012,000
50.07	Central Control							
		N/A Element Total	1	LS		\$0		\$0
		LIGHTETIL TOLAL	1	LO		φυ		φU

Hillsborough County MPO Transit Study System Planning LR-Westchase

On CSX to west of Sheldon

CAT	STATIC	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EX	ISTING IMPR	ROVEMENTS						
	Purchase or lease								
			Right of Way Allowance - At Grade	23,167	RF	\$400	\$9,266,943	50%	\$13,900,415
			Right of Way Allowance - Aerial	50	RF	\$300	\$15,000	50%	\$22,500
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
			Element Total	23,217	RF		\$9,281,943		\$13,922,915
ĺ									
1									

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
	UIDEWAY & TRACK ELEN							
	ngle Track	At Grade - Ballasted, Open	0	RF	\$350	\$0	25%	\$
	ouble Track	At Grade - Ballasted, Open	8,919	RF	\$450	\$4,013,641	25%	\$5,017,05
20	Jane Track	Element Total	8,919	RF	ψ.00	\$4,013,641	2070	\$5,017,05
		clusive (allows cross-traffic)						
	ngle Track	At Grade - Ballasted, In-Street	0	RF	\$440	\$0	25%	\$
	ngle Track	At Grade - Embedded, In-Street	0	RF	\$580	\$0	25%	5
	ouble Track	At Grade - Ballasted, In-Street	0	RF	\$530	\$0	25%	;
Do	ouble Track	At Grade - Embedded, In-Street Element Total	0	RF RF	\$700	\$0 \$0	25%	
0 03 Gu	uideway: At-grade in mixed	traffic						
	ngle Track	At Grade - Embedded, In-Street	0	RF	\$560	\$0	25%	
	ouble Track	At Grade - Embedded, In-Street	0	RF	\$680	\$0	25%	
20	Judio Truok	Element Total	0	RF	Ψοσο	\$0	2070	
0.04 <u>G</u> u	uideway: Aerial structure							
Sin	ngle Track	Bridge - Ballasted	0	RF	\$8,200	\$0	30%	
Sir	ngle Track	Aerial - Direct Fixation	0	RF	\$4,600	\$0	30%	
	ngle Track	Aerial - Direct Fixation Over Water	0	RF	\$5,000	\$0	30%	
Do	ouble Track	Bridge - Ballasted	0	RF	\$12,200	\$0	30%	
Do	ouble Track	Aerial - Direct Fixation	0	RF	\$5,500	\$0	30%	
Do	ouble Track	Aerial - Direct Fixation Over Water	0	RF	\$6,000	\$0	30%	
		Element Total	0	RF		\$0		
	uideway: Built-up fill							
	ngle Track	At Grade - Ballasted, Built-up	0	RF	\$480	\$0	25%	
Do	ouble Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$600	\$0 \$0	25%	
			Ü	131		ΨΟ		
	uideway: Underground cut &				* • • • • • • • • • • • • • • • • • • •		0.50/	
	ngle Track	Subway - Direct Fixation	0	RF	\$10,000	\$0	35%	
Do	ouble Track	Subway - Direct Fixation Element Total	0	RF RF	\$15,500	\$0 \$0	35%	
0.07 Gu	uideway: Underground tunn	nel						
	ngle Track	Subway - Direct Fixation	0	RF	\$12,000	\$0	35%	
	ouble Track	Subway - Direct Fixation	0	RF	\$20,000	\$0	35%	
		Element Total	0	RF		\$0		
	uideway: Retained cut or fill							
	ngle Track	Retained Cut - Direct Fixation	0	RF	\$6,800	\$0	30%	
	ngle Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	ouble Track	Retained Cut - Direct Fixation	0	RF	\$8,000	\$0	30%	
Do	ouble Track	Retained Fill - Ballasted Element Total	0	RF RF	\$3,200	\$0 \$0	30%	
		Ziollioni Fotal	· ·			Ψ		
	ack: Direct fixation	Direct Fination Track					4501	
	ngle Track	Direct Fixation Track	0	RF	\$405	\$0	15%	
Do	ouble Track	Direct Fixation Track Element Total	0	RF RF	\$810	\$0 \$0	15%	
).10 Tra	ack: Embedded							
	ngle Track	Embedded Track	0	RF	\$490	\$0	15%	
	ouble Track	Embedded Track	0	RF	\$980	\$0	15%	
_ •		Element Total	0	RF		\$0		
).11 Tra	ack: Ballasted							
Sir	ngle Track	Ballasted Track	0	RF	\$240	\$0	15%	
Do	ouble Track	Ballasted Track	8,919	RF	\$480	\$4,281,217	15%	\$4,923,4
		Element Total	8,919	RF		\$4,281,217		\$4,923,4

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
0.12	Track: Special (switches, to		150/			¢642 402	150/	\$720 E
		Special Trackwork (15% of Track Cost)	15% 1	LS		\$642,183 \$642,183	15%	\$738,5
		Element Total	1	LS		\$042,103		\$738,5
0.13	Track: Vibration and noise	. •						
		Vibration Allowance (6% of Ballasted Track Cost)	6%			\$256,873	15%	\$295,4
		Element Total	1	LS		\$256,873		\$295,4
	STATIONS, STOPS, TERM							
J.U I	At-grade station, stop, shelt	Side Platform Station - 1 Platform	0	Ε.	¢2 000 000	¢ο	200/	
		Side Platform Station - 2 Platforms	0	EΑ	\$2,000,000	\$0 \$0	20%	
		Center Platform Station	0	EΑ	\$3,500,000	\$0	20%	67 000 0
		Element Total	2	EA EA	\$3,000,000	\$6,000,000 \$6,000,000	20%	\$7,200,0 \$7,200,0
						, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		. , ,
0.02	Aerial station, stop, shelter,	mall, terminal, platform Side Platform Station - 1 Platform	0	EA	\$12,000,000	\$0	25%	
		Side Platform Station - 2 Platforms	0	EA	\$12,000,000	\$0 \$0	25% 25%	
		Center Platform Station	0	EA	\$15,000,000	\$0 \$0	25%	
		Element Total	0	EA	\$15,000,000	\$0	25%	
0.03	Underground station, stop,	shelter, mall, terminal, platform Side Platform Station - 1 Platform	0	EA	\$28,000,000	\$0	30%	
		Side Platform Station - 2 Platforms	0					
			0	EΑ	\$52,000,000	\$0 \$0	30%	
		Center Platform Station Element Total	0	EA EA	\$45,000,000	\$0 \$0	30%	
.04	Other stations, landings, ter	minals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		
0.05	Joint development							
		N/A Element Total	1	LS		\$0		
		Lienent Total	'	LO		φυ		
0.06	Automobile parking multi-ste	ory structure Parking Garage	0	СТІ	\$12.000	0.2	20%	
		Element Total	1	STL LS	\$12,000	\$0 \$0	2076	
. 07	Clavatara assolutora							
0.07	Elevators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	
		Escalator	0	EA	\$450,000	\$0	20%	
		Element Total	1	LS	+ .30,000	\$0	== /0	
10	SITEWORK & SPECIAL CO	ONDITIONS						
	Demolition, Clearing, Earth							
	, 5,	Demolition Allowance - Low	8,919	RF	\$30	\$267,576	30%	\$347,
		Demolition Allowance - Median	0	RF	\$50	\$0	30%	
		Demolition Allowance - High	0	RF	\$90	\$0	30%	
		Element Total	8,919	RF	,	\$267,576		\$347,
		on						
02	Site Utilities Utility Relocation	viii	8,919	RF	\$140	\$1,248,688	30%	\$1,623
0.02	Site Utilities, Utility Relocation	Utility Relocation Allowance - Low	0,515					. ,
).02	Site Utilities, Utility Relocati		0,919	RF	\$340	\$0	30%	
).02	Site Utilities, Utility Relocati	Utility Relocation Allowance - Median		RF RF	\$340 \$570	\$0 \$0	30% 30%	
).02	Site Utilities, Utility Relocati		0	RF RF	\$340 \$570	\$0 \$0 \$1,248,688	30% 30%	\$1,623
		Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	0	RF		\$0		\$1,623
		Utility Relocation Allowance - Median Utility Relocation Allowance - High	0	RF		\$0		\$1,623, \$231,

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	8,919	RF	\$50	\$445,960	30%	\$579,748
		Element Total	1	LS		\$445,960		\$579,748
0.05	Site structures including reta	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	892	RF	\$80	\$71,354	30%	\$92,760
		Element Total	1	LS		\$71,354		\$92,760
10.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	8,919	RF	\$15	\$133,788	30%	\$173,924
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	\$(
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$(
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$100,136	30%	\$130,177
		Element Total	1	LS		\$233,924		\$304,102
10.07	Automobile, bus, van access	ways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$0
		Roadway Modifications Allow AC Paving						
		(incl. Curb & Sidewalk)	0	SF	\$30	\$0	30%	\$0
		Parking Lots	0	STL	\$4,000	\$0	30%	\$0
		Element Total	1	LS		\$0		\$0
0.08	Temporary Facilities and oth	er indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$122,294	25%	\$152,868
		Element Total	1	LS		\$122,294		\$152,868
50	SYSTEMS							
0.01	Train control and signals Single Track	Signal System	0	RF	\$240	\$0	15%	\$0
	Double Track	Signal System	8,919	RF	\$260	\$2,318,993	15%	\$2,666,842
		Element Total	8,919	RF		\$2,318,993		\$2,666,842
50.02	Traffic signals and crossing p	protection						
		Traffic Signal	0	EA	\$150,000	\$0	15%	\$0
		Crossing Protection	4	EA	\$250,000	\$1,000,000	15%	\$1,150,000
		Element Total	4	EA		\$1,000,000		\$1,150,000
50.03	Traction power supply: subs	tations						
		Traction Power, Substation	2	EA	\$1,300,000	\$2,600,000	15%	\$2,990,000
				_ ^		\$2,600,000		\$2,990,000
		Element Total	2	EA		\$2,000,000		
50.04	Traction power distribution:	catenary and third rail	2			\$2,000,000		
50.04	Traction power distribution: Single Track	catenary and third rail OCS System - Standard	0	RF	\$240	\$0	15%	
50.04		catenary and third rail	0 8,919	RF RF	\$240 \$260		15% 15%	
50.04	Single Track	catenary and third rail OCS System - Standard	0	RF		\$0		\$0 \$2,666,842 \$0
	Single Track	catenary and third rail OCS System - Standard OCS System - Standard	0 8,919	RF RF		\$0 \$2,318,993		\$2,666,842
	Single Track Double Track	catenary and third rail OCS System - Standard OCS System - Standard	0 8,919	RF RF		\$0 \$2,318,993		\$2,666,842 \$0
	Single Track Double Track	catenary and third rail OCS System - Standard OCS System - Standard Element Total	8,919 8,919	RF RF RF	\$260	\$0 \$2,318,993 \$0	15%	\$2,666,842 \$0 \$2,461,700
	Single Track Double Track	catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line	0 8,919 8,919	RF RF RF	\$260 \$240	\$0 \$2,318,993 \$0 \$2,140,609	15% 15%	\$2,666,842 \$0 \$2,461,700 \$1,150,000
50.05	Single Track Double Track	Communication, Line Communication, Station Element Total	0 8,919 8,919 8,919 2	RF RF RF RF	\$260 \$240	\$0 \$2,318,993 \$0 \$2,140,609 \$1,000,000	15% 15%	\$2,666,842 \$0 \$2,461,700 \$1,150,000
50.05	Single Track Double Track Communications	Communication, Line Communication, Station Element Total	0 8,919 8,919 8,919 2	RF RF RF RF	\$260 \$240	\$0 \$2,318,993 \$0 \$2,140,609 \$1,000,000	15% 15%	\$2,666,842 \$0 \$2,461,700 \$1,150,000 \$3,611,700
50.05	Single Track Double Track Communications	Communication, Line Communication, Station Element Total Communication Station Element Total	8,919 8,919 8,919 2 1	RF RF RF RF LS	\$260 \$240 \$500,000	\$0 \$2,318,993 \$0 \$2,140,609 \$1,000,000 \$3,140,609	15% 15% 15%	\$2,666,842 \$0 \$2,461,700 \$1,150,000 \$3,611,700
50.05	Single Track Double Track Communications	Catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform	8,919 8,919 8,919 2 1	RF RF RF RF LS	\$260 \$240 \$500,000 \$220,000	\$0 \$2,318,993 \$0 \$2,140,609 \$1,000,000 \$3,140,609	15% 15% 15%	\$2,666,842 \$0 \$2,461,700 \$1,150,000 \$3,611,700 \$506,000
50.05 50.06	Single Track Double Track Communications Fare collection system and e	Catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	8,919 8,919 8,919 2 1	RF RF RF RF LS	\$260 \$240 \$500,000 \$220,000	\$0 \$2,318,993 \$0 \$2,140,609 \$1,000,000 \$3,140,609 \$440,000 \$0	15% 15% 15%	\$2,666,842
50.05 50.06	Single Track Double Track Communications	Catenary and third rail OCS System - Standard OCS System - Standard Element Total Communication, Line Communication, Station Element Total quipment Fare Collection - 1 Platform Fare Collection - 2 Platform	8,919 8,919 8,919 2 1	RF RF RF RF LS	\$260 \$240 \$500,000 \$220,000	\$0 \$2,318,993 \$0 \$2,140,609 \$1,000,000 \$3,140,609 \$440,000 \$0	15% 15% 15%	\$2,666,842 \$0 \$2,461,700 \$1,150,000 \$3,611,700 \$506,000

CAT	STATIO	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
60	ROW, LAND, EXI	STING IMPR	OVEMENTS						
60.01	Purchase or lease	of real estate	9						
			Right of Way Allowance - At Grade	8,919	RF	\$400	\$3,567,681	50%	\$5,351,522
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$0
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
		•	Element Total	8,919	RF		\$3,567,681		\$5,351,522

Hillsborough County MPO Transit Study System Planning SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS

SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS NIA			COST			UNIT	BASE	ALLCTD	TOTAL	
Administration Building: Office, sales, storage, revenue counting NIA Element Total 1		BEGIN END	DESCRIPTION		QTY	UNIT				
Administration Building: Office, sales, storage, revenue counting NIA Element Total 1	20	SUDDODT EACH ITIES: VAD	DDS SHODS ADMINI BLDGS							
Minimal Mini										
No.	30.01	Administration building. Offic	N/A							
N/A Element Total 1			Element Total		1	LS		\$0		\$0
Element Total 1 LS	30.02	Light Maintenance Facility								
Maintenance Facility (per vehicle) 147 EA \$1,500,000 \$220,500,000 25% \$275,625,00										
Maintenance Facility (per vehicle)			Element Total		1	LS		\$0		\$0
Element Total	30.03	Heavy Maintenance Facility								
30.04 Storage or Maintenance of Way Building N/A Element Total					147		\$1,500,000		25%	\$275,625,000
NI/A Element Total 1 LS \$0			Element Total		1	LS		\$220,500,000		\$275,625,000
Sample Figure F	30.04	Storage or Maintenance of Wa	ay Building							
30.05 Yard and Yard Track										
Yard Yard Track 1,000 RF \$240 \$240,000 15% \$276,00 Yard Signal System, Single Track 1,000 RF \$240 \$240,000 15% \$276,00 Yard OCS System Standard, Single Track 1,000 RF \$240 \$240,000 15% \$276,00 Yard Traction Power, Substation 1 EA \$1,300,000 \$1,300,000 15% \$1,495,00 Element Total 1 LS \$2,020,000 \$2,323,00 80.01 Purchase or lease of real estate Right of Way Allowance 80.02 AC \$500,000 \$10,000,000 50% \$15,000,00			Element Total		1	LS		\$0		\$0
Yard Signal System, Single Track 1,000 RF \$240 \$240,000 15% \$276,00 Yard OCS System Standard, Single Track 1,000 RF \$240 \$240,000 15% \$276,00 Yard Traction Power, Substation 1 EA \$1,300,000 \$1,300,000 15% \$1,495,00 Element Total 1 LS \$2,020,000 \$2,323,00 60 ROW, LAND, EXISTING IMPROVEMENTS 80.01 \$1,000,000 \$10,000,000 50% \$15,000,00 60.01 Purchase or lease of real estate Right of Way Allowance 20 AC \$500,000 \$10,000,000 50% \$15,000,00	30.05	Yard and Yard Track								
Yard OCS System Standard, Single Track 1,000 RF \$240 \$240,000 15% \$276,00 Yard Traction Power, Substation Element Total 1 EA \$1,300,000 \$1,300,000 15% \$1,495,00 60 ROW, LAND, EXISTING IMPROVEMENTS 60.01 Purchase or lease of real estate Right of Way Allowance 20 AC \$500,000 \$10,000,000 50% \$15,000,00		Yard	Yard Track		1,000	RF	\$240	\$240,000	15%	\$276,000
Yard Traction Power, Substation 1 EA \$1,300,000 \$1,300,000 \$15% \$1,495,00 60 ROW, LAND, EXISTING IMPROVEMENTS 60.01 Purchase or lease of real estate Right of Way Allowance 20 AC \$500,000 \$10,000,000 50% \$15,000,00		Yard	Signal System, Single Track		1,000	RF	\$240	\$240,000	15%	\$276,000
Element Total 1 LS \$2,020,000 \$2,323,00					1,000					\$276,000
60 ROW, LAND, EXISTING IMPROVEMENTS 60.01 Purchase or lease of real estate Right of Way Allowance 20 AC \$500,000 \$10,000,000 50% \$15,000,000		Yard			•		\$1,300,000		15%	\$1,495,000
60.01 Purchase or lease of real estate Right of Way Allowance 20 AC \$500,000 \$10,000,000 50% \$15,000,000			Element Total		1	LS		\$2,020,000		\$2,323,000
Right of Way Allowance 20 AC \$500,000 \$10,000,000 50% \$15,000,00	60	ROW, LAND, EXISTING IMP	ROVEMENTS							
	30.01	Purchase or lease of real esta								
Element Total 1 LS \$10,000,000 \$15,000,00			,				\$500,000		50%	\$15,000,000
			Element Total		1	LS		\$10,000,000		\$15,000,000

	Hillsborough County MPO Transit Study System Planning VEHICLES												
TRAN	NSIT MODE: LRT STATIO BEGIN	ONING END	DESCRIPTION	COST	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST			
70 70.01	VEHICLES I Light Rail		Light Rail Vehicle		147	EA	\$3,600,000	\$529,200,000	10%	\$582,120,000			

Hillsborough County MPO Transit Study

System Planning

Commuter Rail Transit

Capital Cost Estimate

(2007 Dollars in Millions)

		Commuter Rail	Regional Commuter Rail	Commuter Rail
	Description	Subtotal	Subtotal	Total
	Length (Mile):	67.8	23.9	91.6
	Number of Stations:	12	4	16
	Number of Revenue Vehicles:	82	30	112
10	GUIDEWAY & TRACK ELEMENTS	\$350.63	\$305.26	\$655.89
20	STATIONS, STOPS, TERMINALS, INTERMODAL	\$21.60	\$11.28	\$32.88
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	\$140.55	\$0.00	\$140.55
40	SITEWORK & SPECIAL CONDITIONS	\$150.92	\$58.48	\$209.40
50	SYSTEMS	\$99.57	\$24.20	\$123.77
	Construction Subtotal (Sum Categories 10 - 50)	\$763.28	\$399.22	\$1,162.49
60	ROW, LAND, EXISTING IMPROVEMENTS	\$229.15	\$74.89	\$304.03
70	VEHICLES	\$205.21	\$75.08	\$280.28
80	PROFESSIONAL SERVICES	\$244.25	\$127.75	\$372.00
90	UNALLOCATED CONTINGENCY	\$144.19	\$67.69	\$211.88
	Total Project Cost	\$1,586.07	\$744.62	\$2,330.68

Preferred CR Hillsborough County MPO Transit Study

System Planning

Commuter Rail Transit

Capital Cost Estimate

(2007 Dollars in Millions) CR-Dwtn North CR-Dwtn West Segment

		0	CD D	wtn North		(2007 Dollars in Mi	vtn West		CR-East		CD C	arasota			
		Segment CR-01	CR-02	CR-03	CR-04	CR-05	CR-06	CR-07	CR-East	CR-09	CR-11	CR-12			
CAT No.	Description	County line/ Hwy 54 to Hwy275	Hwy275 to Hwy580/ CL Railroad	Between CR-East/ CR-Dwtn West and CR-I4 East		f West of	Downtown to west of Channelside Dr	Downtown to CL	CL Rail (east of	I75/ LRT Sta to US98 at CL		Big Bend/ LRT Sta to Sarasota/ Countyline	Maintenance Facility	Vehicles	Alternative Total
Length (Mi	le):	5.9	4.6	0.3	4.8	0.6	1.3	1.9	4.5	18.1	11.6	14.1			67.8
Number of	Stations:	2	1	0	0	1	0	0	0	2	4	2			12
Number of	Revenue Vehicles:													82	82
10 GUIDEWA	Y & TRACK ELEMENTS														
10.01 G	uideway: At-grade exclusive right-of-way	\$9.73	\$7.61	\$0.55	\$7.97	\$0.98	\$2.14	\$3.09	\$7.15	\$29.90	\$18.48	\$23.12			\$110.7
10.02 G	uideway: At-grade semi-exclusive (allows cross-traffic)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.03 G	uideway: At-grade in mixed traffic	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.04 G	uideway: Aerial structure	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12.38	\$0.00	\$30.94	\$10.83			\$54.1
10.05 G	uideway: Built-up fill	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.06 G	uideway: Underground cut & cover	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.07 G	uideway: Underground tunnel	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.08 G	uideway: Retained cut or fill	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.09 Tı	rack: Direct fixation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.10 Ti	rack: Embedded	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
10.11 Tı	rack: Ballasted	\$15.39	\$12.04	\$0.86	\$12.60	\$1.56	\$3.39	\$4.90	\$11.70	\$47.31	\$30.24	\$36.93			\$176.9
10.12 Tı	rack: Special (switches, turnouts)	\$0.77	\$0.60	\$0.04	\$0.63	\$0.08	\$0.17	\$0.24	\$0.59	\$2.37	\$1.51	\$1.85			\$8.8
10.13 Tı	rack: Vibration and noise dampening	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
_	Subtotal Category 10	\$25.89	\$20.25	5 \$1.45	\$21.20	\$2.62	\$5.70	\$8.23	\$31.81	\$79.58	\$81.17	\$72.73			\$350.6
20 STATIONS	S, STOPS, TERMINALS, INTERMODAL														
20.01 A	t-grade station, stop, shelter, mall, terminal, platform	\$3.60	\$1.80	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$0.00	\$3.60	\$7.20	\$3.60			\$21.6
20.02 A	erial station, stop, shelter, mall, terminal, platform	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
20.03 U	nderground station, stop, shelter, mall, terminal, platform	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
20.04 O	ther stations, landings, terminals: Intermodal, ferry, trolley, e	etc. \$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
20.05 Jo	pint development	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
20.06 A	utomobile parking multi-story structure	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
20.07 E	levators, escalators	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.0
	Subtotal Category 20	\$3.60	\$1.80	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$0.00	\$3.60	\$7.20	\$3.60			\$21.6
30 SUPPORT	FACILITIES: YARDS, SHOPS, ADMIN. BLDGS														
30.01 A	dministration Building: Office, sales, storage, revenue count	ing											\$0.00		\$0.0
30.02 Li	ght Maintenance Facility												\$0.00		\$0.0
30.03 H	eavy Maintenance Facility												\$140.00		\$140.0
30.04 S	torage or Maintenance of Way Building												\$0.00		\$0.0
30.05 Y	ard and Yard Track												\$0.55		\$0.5
_	Subtotal Category 30												\$140.55		\$140.5

240

Hillsborough County MPO Transit Study

Preferred CR

System Planning

Commuter Rail Transit

Capital Cost Estimate

(2007 Dollars in Millions)

						(2007 Dollars in N									
	Segment		CR-D\	wtn North		CR-D	vtn West		CR-East		CR-Sa	arasota			
	Section	CR-01	CR-02	CR-03	CR-04	CR-05	CR-06	CR-07	CR-08	CR-09	CR-11	CR-12			
CAT Description		County line/ Hwy 54 to Hwy275	Hwy275 to Hwy580/ CL Railroad	Between CR-East/ CR-Dwtn West and CR-I4 East	CR-I4 East to S o Busch Blvd		of Channelside Dr	Downtown to CL Rail (east of Acline St)	CL Rail (east of Acline St) to I75/ LRT Sta	I75/ LRT Sta to US98 at CL	CL Rail (east of Acline St) to Big Bend/ LRT Sta	Big Bend/ LRT Sta to Sarasota/ Countyline	Maintenance Facility	Vehicles	Alternativ Total
40 SITEWORK & SPECIAL CONDITIONS															
40.01 Demolition, Clearing, Earthwork		\$1.21	\$0.95	\$0.07	\$0.99	\$0.12	\$0.27	\$0.39	\$0.94	\$3.73	\$2.44	\$2.93			\$14.
40.02 Site Utilities, Utility Relocation		\$5.67	\$4.43	\$0.32	\$4.64	\$0.57	\$1.25	\$1.80	\$4.51	\$17.41	\$11.65	\$13.77			\$66.
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground	d water treatments	\$0.81	\$0.63	\$0.05	\$0.66	\$0.08	\$0.18	\$0.26	\$0.62	\$2.49	\$1.59	\$1.94			\$9.
40.04 Environmental mitigation, e.g. wetlands, historic/are	cheologic, parks	\$0.61	\$0.47	\$0.03	\$0.50	\$0.06	\$0.13	\$0.19	\$0.46	\$1.87	\$1.19	\$1.46			\$6.
40.05 Site structures including retaining walls, sound wall	ls	\$0.32	\$0.25	\$0.02	\$0.27	\$0.03	\$0.07	\$0.10	\$0.25	\$1.00	\$0.64	\$0.78			\$3.
40.06 Pedestrian / bike access and accommodation, land	Iscaping	\$0.75	\$0.57	\$0.04	\$0.58	\$0.09	\$0.16	\$0.23	\$0.67	\$2.22	\$1.80	\$1.85			\$8.
40.07 Automobile, bus, van accessways including roads,	parking lots	\$6.24	\$3.38	\$0.07	\$0.85	\$0.13	\$0.20	\$0.33	\$0.72	\$8.32	\$7.15	\$7.61			\$34.
40.08 Temporary Facilities and other indirect costs during	g construction	\$0.75	\$0.51	\$0.03	\$0.41	\$0.05	\$0.11	\$0.16	\$0.39	\$1.78	\$1.27	\$1.46			\$6.
Subtotal Category 40		\$16.36	\$11.21	\$0.62	\$8.89	\$1.15	\$2.36	\$3.45	\$8.56	\$38.81	\$27.72	\$31.80			\$150.
50 SYSTEMS															
50.01 Train control and signals		\$5.01	\$3.92	\$0.28	\$4.10	\$0.51	\$1.10	\$1.59	\$3.81	\$15.40	\$9.84	\$12.02			\$57.
50.02 Traffic signals and crossing protection		\$2.76	\$2.07	\$0.17	\$2.24	\$0.35	\$0.52	\$0.86	\$1.90	\$8.28	\$5.18	\$6.38			\$30.
50.03 Traction power supply: substations		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.
50.04 Traction power distribution: catenary and third rail		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.
50.05 Communications		\$0.88	\$0.64	\$0.04	\$0.59	\$0.15	\$0.16	\$0.23	\$0.54	\$2.36	\$1.73	\$1.88			\$9.
50.06 Fare collection system and equipment		\$0.35	\$0.17	\$0.00	\$0.00	\$0.17	\$0.00	\$0.00	\$0.00	\$0.35	\$0.69	\$0.35			\$2.
50.07 Central Control		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.
Subtotal Category 50		\$8.99	\$6.80	\$0.49	\$6.93	\$1.18	\$1.78	\$2.68	\$6.25	\$26.39	\$17.44	\$20.63			\$99.
Subtotal Construction Costs		\$54.85	\$40.07	\$2.56	\$37.02	\$6.74	\$9.83	\$14.37	\$46.62	\$148.38	\$133.54	\$128.75	\$140.55		\$763.2
60 ROW, LAND, EXISTING IMPROVEMENTS															
60.01 Purchase or lease of real estate		\$18.68	\$14.61	\$1.05	\$15.29	\$1.89	\$4.11	\$5.94	\$14.08	\$57.41	\$36.39	\$44.71	\$15.00		\$229.
Subtotal Right-of-Way		\$18.68	\$14.61	\$1.05	\$15.29	\$1.89	\$4.11	\$5.94	\$14.08	\$57.41	\$36.39	\$44.71	\$15.00		\$229.

Hillsborough County MPO Transit Study

System Planning

Commuter Rail Transit

Capital Cost Estimate

(2007 Dollars in Millions)

						(2007 Dollars III II	•								
	Segment			vtn North			wtn West		CR-East			arasota			
	Section	CR-01	CR-02	CR-03	CR-04	CR-05	CR-06	CR-07	CR-08	CR-09	CR-11	CR-12			
		County line/ Hwy	Hwy275 to	Between CR-East/				Downtown to CL	CL Rail (east of	I75/ LRT Sta to		Big Bend/ LRT Sta			
CAT Description		54 to Hwy275	Hwy580/ CL	CR-Dwtn West	Busch Blvd			Rail (east of Acline		US98 at CL	Acline St) to Big	to Sarasota/	Maintenance	Vehicles	Alternative
No.			Railroad	and CR-I4 East		NJefferson/ E Poll St	<u> </u>	St)	LRT Sta		Bend/ LRT Sta	Countyline	Facility		Total
70 VEHICLES															
70.01 Commuter Rail Vehicles														\$205.21	\$205.2
Subtotal Vehicles														\$205.21	\$205.2
Subtotal Vellicles														Ψ203.21	Ψ203.2
80 PROFESSIONAL SERVICES															
80.01 Preliminary Engineering	4.0%	\$2.19	\$1.60	\$0.10	\$1.48	\$0.27	\$0.39	\$0.57	\$1.86	\$5.94	\$5.34	\$5.15	\$5.62		\$30.5
80.02 Final Design	6.0%	\$3.29	\$2.40	\$0.15	\$2.22	\$0.40	\$0.59	\$0.86	\$2.80	\$8.90	\$8.01	\$7.73	\$8.43		\$45.80
80.03 Project Management for Design and Construction	5.0%	\$2.74	\$2.00	\$0.13	\$1.85	\$0.34	\$0.49	\$0.72	\$2.33	\$7.42	\$6.68	\$6.44	\$7.03		\$38.16
80.04 Construction Administration & Management	8.0%	\$4.39	\$3.21	\$0.20	\$2.96	\$0.54	\$0.79	\$1.15	\$3.73	\$11.87	\$10.68	\$10.30	\$11.24		\$61.06
80.05 Insurance	2.0%	\$1.10	\$0.80	\$0.05	\$0.74	\$0.13	\$0.20	\$0.29	\$0.93	\$2.97	\$2.67	\$2.58	\$2.81		\$15.27
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.	3.0%	\$1.65	\$1.20	\$0.08	\$1.11	\$0.20	\$0.30	\$0.43	\$1.40	\$4.45	\$4.01	\$3.86	\$4.22		\$22.90
80.07 Surveys, Testing, Investigation, Inspection	3.0%	\$1.65	\$1.20	\$0.08	\$1.11	\$0.20	\$0.30	\$0.43	\$1.40	\$4.45	\$4.01	\$3.86	\$4.22		\$22.90
80.08 Start up	1.0%	\$0.55	\$0.40	\$0.03	\$0.37	\$0.07	\$0.10	\$0.14	\$0.47	\$1.48	\$1.34	\$1.29	\$1.41		\$7.63
Subtotal Professional Services	LS	\$17.55	\$12.82	\$0.82	\$11.85	\$2.16	\$3.15	\$4.60	\$14.92	\$47.48	\$42.73	\$41.20	\$44.98	\$0.00	\$244.2
90 UNALLOCATED CONTINGENCY	10.0%	\$9.11	\$6.75	\$0.44	\$6.42	\$1.08	\$1.71	\$2.49	\$7.56	\$25.33	\$21.27	\$21.47	\$20.05	\$20.52	\$144.1
Project Total		\$100.18	\$74.25	\$4.87	\$70.58	\$11.87	\$18.80	\$27.39	\$83.18	\$278.60	\$233.92	\$236.13	\$220.58	\$225.73	\$1,586.0

Preferred CR

Hillsborough County MPO Transit Study System Planning

Commuter Rail Transit

Capital Cost Estimate

(2007 Dollars in Millions)

		Segment	CR-I4 East		
		Section	CR-10		
CAT			CR-Dwtn toward		Alternative
No.	Description		east to N County Line Rd	Vehicles	Total
	Length (Mile):		23.9		23.9
	Number of Stations:		4		4
	Number of Revenue Vehicles:			30	30
10	GUIDEWAY & TRACK ELEMENTS				
	10.01 Guideway: At-grade exclusive right-of-way		\$136.36		\$136.3
	10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)		\$0.00		\$0.0
	10.03 Guideway: At-grade in mixed traffic		\$0.00		\$0.0
	10.04 Guideway: Aerial structure		\$95.86		\$95.8
	10.05 Guideway: Built-up fill		\$0.00		\$0.0
	10.06 Guideway: Underground cut & cover		\$0.00		\$0.0
	10.07 Guideway: Underground tunnel		\$0.00		\$0.0
	10.08 Guideway: Retained cut or fill		\$0.00		\$0.0
	10.09 Track: Direct fixation		\$0.00		\$0.0
	10.10 Track: Embedded		\$0.00		\$0.0
	10.11 Track: Ballasted		\$69.56		\$69.5
	10.12 Track: Special (switches, turnouts)		\$3.48		\$3.4
	10.13 Track: Vibration and noise dampening		\$0.00		\$0.0
	Subtotal Category 10		\$305.26		\$305.2
20	STATIONS, STOPS, TERMINALS, INTERMODAL				
	20.01 At-grade station, stop, shelter, mall, terminal, platform		\$7.20		\$7.2
	20.02 Aerial station, stop, shelter, mall, terminal, platform		\$0.00		\$0.0
	20.03 Underground station, stop, shelter, mall, terminal, platform	n	\$0.00		\$0.0
	20.04 Other stations, landings, terminals: Intermodal, ferry, troll	ey, etc.	\$0.00		\$0.0
	20.05 Joint development		\$0.00		\$0.0
	20.06 Automobile parking multi-story structure		\$0.00		\$0.0
	20.07 Elevators, escalators		\$4.08		\$4.0
	Subtotal Category 20		\$11.28		\$11.2

Hillsborough County MPO Transit Study System Planning

Commuter Rail Transit

Capital Cost Estimate
(2007 Dollars in Millions)

		Segn			
		Sec	tion CR-10 CR-Dwtn toward		
CAT No.		Description	east to N County Line Rd	Vehicles	Alternative Total
30 S	UPPO	RT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			
;	30.01	Administration Building: Office, sales, storage, revenue counting			\$0.00
;	30.02	Light Maintenance Facility			\$0.0
;	30.03	Heavy Maintenance Facility			\$0.0
;	30.04	Storage or Maintenance of Way Building			\$0.0
;	30.05	Yard and Yard Track			\$0.0
		Subtotal Category 30			\$0.0
40 SI	SITEWO	DRK & SPECIAL CONDITIONS			
4	40.01	Demolition, Clearing, Earthwork	\$5.04		\$5.0
4	40.02	Site Utilities, Utility Relocation	\$24.18		\$24.1
4	40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	\$3.28		\$3.2
4	40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	\$2.46		\$2.4
4	40.05	Site structures including retaining walls, sound walls	\$1.31		\$1.3
4	40.06	Pedestrian / bike access and accommodation, landscaping	\$9.13		\$9.1
4	40.07	Automobile, bus, van accessways including roads, parking lots	\$10.40		\$10.4
4	40.08	Temporary Facilities and other indirect costs during construction	\$2.68		\$2.6
		Subtotal Category 40	\$58.48		\$58.4
50 S	YSTEN	MS			
!	50.01	Train control and signals	\$20.29		\$20.2
!	50.02	Traffic signals and crossing protection	\$0.00		\$0.0
!	50.03	Traction power supply: substations	\$0.00		\$0.0
!	50.04	Traction power distribution: catenary and third rail	\$0.00		\$0.0
!	50.05	Communications	\$3.22		\$3.2
!	50.06	Fare collection system and equipment	\$0.69		\$0.6
!	50.07	Central Control	\$0.00		\$0.0
		Subtotal Category 50	\$24.20		\$24.2
		Subtotal Construction Costs	\$399.22		\$399.22

Hillsborough County MPO Transit Study System Planning

Commuter Rail Transit

Capital Cost Estimate

(2007 Dollars in Millions)

			Segment	CR-I4 East		
			Section	CR-10		
CAT No.		Description		CR-Dwtn toward east to N County Line Rd	Vehicles	Alternative Total
60	ROW, L	AND, EXISTING IMPROVEMENTS				
	60.01	Purchase or lease of real estate		\$74.89		\$74.89
		Subtotal Right-of-Way		\$74.89		\$74.89
70	VEHICL	ES				
	70.01	Commuter Rail Vehicles			\$75.08	\$75.08
		Subtotal Vehicles			\$75.08	\$75.08
80	PROFE	SSIONAL SERVICES				
	80.01	Preliminary Engineering	4.0%	\$15.97		\$15.97
	80.02	Final Design	6.0%	\$23.95		\$23.95
	80.03	Project Management for Design and Construction	5.0%	\$19.96		\$19.96
	80.04	Construction Administration & Management	8.0%	\$31.94		\$31.94
	80.05	Insurance	2.0%	\$7.98		\$7.98
	80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	3.0%	\$11.98		\$11.98
	80.07	Surveys, Testing, Investigation, Inspection	3.0%	\$11.98		\$11.98
	80.08	Start up	1.0%	\$3.99		\$3.99
		Subtotal Professional Services	LS	\$127.75	\$0.00	\$127.75
90	UNALL	OCATED CONTINGENCY	10.0%	\$60.19	\$7.51	\$67.69
		Project Total		\$662.04	\$82.58	\$744.62

Hillsborough County MPO Transit Study System Planning CR-Dwtn North County line/ Hwy 54 to Hwy275

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	TOTAL COST
10	GUIDEWAY & TRACK EL	EMENTS						
10.01	Guideway: At-grade exclus	sive right-of-way						
	Single Track	At Grade - Ballasted, Open	31,132	RF	\$250	\$7,783,000	25%	\$9,728,7
	Double Track	At Grade - Ballasted, Open	0	RF	\$420	\$0	25%	:
		Element Total	31,132	RF		\$7,783,000		\$9,728,7
10 02	Guideway: At-grade semi-e	exclusive (allows cross-traffic)						
		N/A						
		Element Total	0	RF		\$0		:
10.03	Guideway: At-grade in mixe							
		N/A Element Total	0	RF		\$0		
10.04	Guideway: Aerial structure							
10.04	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	
	Single Track	Aerial - Ballasted Over Water	0	RF	\$11,900	\$0	30%	
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	
	Double Track	Aerial - Ballasted Over Water	0	RF	\$15,200	\$0 \$0	30%	
	DOUDIG HACK	Element Total	0	RF	φ10,300	\$0	JU /0	
10.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	
		Element Total	0	RF		\$0		
0.06	Guideway: Underground cu	ut & cover						
		N/A						
		Element Total	0	RF		\$0		;
10.07	Guideway: Underground tu	innel						
		N/A Element Total	0	RF		\$0		
			Ü			Ψ		
10.08	Guideway: Retained cut or Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Double Track	Retained Cut - Ballasted		RF				
		Retained Cut - Ballasted Retained Fill - Ballasted	0		\$8,000	\$0	30%	
	Double Track	Element Total	0	RF RF	\$3,200	\$0 \$0	30%	
0.00	Totale Disset fination							
0.09	Track: Direct fixation	N/A						
		Element Total	0	RF		\$0		
0.10	Track: Embedded							
		N/A						
		Element Total	0	RF		\$0		
0.11	Track: Ballasted							
	Single Track	Ballasted Track	31,132	RF	\$240	\$7,471,680	15%	\$8,592,4
		Ballasted Track - Refurbish Existing	31,132	RF	\$190	\$5,915,080	15%	\$6,802,3
	Double Track	Ballasted Track Element Total	31,132	RF RF	\$480	\$0 \$13,386,760	15%	\$15,394,7
		Elonon Total	01,102	1.01		ψ10,000,100		ψ10,004,7
10.12	Track: Special (switches, t		E01			#000 000	450/	A-700 -
		Special Trackwork (5% of Track Cost) Element Total	5%	LS		\$669,338 \$669,338	15%	\$769,7 \$769,7
			1	20		ψυυσ,υυσ		Ψ105,1
10.13	Track: Vibration and noise	. •						
		Element Total	1	LS		\$0		
10.13	Track: Vibration and noise	N/A	1	LS			\$0	\$0

Hillsborough County MPO Transit Study System Planning CR-Dwtn North County line/ Hwy 54 to Hwy275

	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20	STATIONS, STOPS, TERMI	NALS, INTERMODAL						
20.01	At-grade station, stop, shelte	r, mall, terminal, platform						
		Center Platform Station	2	EA	\$1,500,000	\$3,000,000	20%	\$3,600,00
		Element Total	2	EA		\$3,000,000		\$3,600,00
20 02	Aerial station, stop, shelter, n	nall terminal platform						
-0.02	rional diagon, diop, director, in	Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$0		\$
on na	Underground station, stop, st	helter mall terminal platform						
.0.00	onderground station, stop, si	N/A						
		Element Total	0	EA		\$0		5
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc.						
		N/A						
		Element Total	1	LS		\$0		\$
20.05	Joint development							
		N/A				<u> </u>		
		Element Total	1	LS		\$0		\$
20.06	Automobile parking multi-stor							
		Parking Garage	0	STL	\$12,000	\$0	20%	9
		Element Total	1	LS		\$0		\$
20.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	9
		Escalator	0	EA	\$450,000	\$0	20%	
		Element Total	1	LS		\$0		\$
40	SITEWORK & SPECIAL CO							
40.01	Demolition, Clearing, Earthwe	ork Demolition Allowance - Low	31,132	RF	\$30	\$933,960	30%	\$1,214,14
		Demolition Allowance - Median	01,102	RF	\$50	\$0	30%	\$1,211,11
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$
			U					4
		Element Total	31,132	RF		\$933,960		
10 02	Site Utilities Utility Palocation	Element Total		RF				
10.02	Site Utilities, Utility Relocation	Element Total	31,132		\$140	\$933,960	30%	\$1,214,14
40.02	Site Utilities, Utility Relocation	Element Total n Utility Relocation Allowance - Low	31,132 31,132	RF	\$140 \$340	\$933,960 \$4,358,480	30% 30%	\$1,214,14 \$5,666,02
10.02	Site Utilities, Utility Relocation	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median	31,132 31,132 0	RF RF	\$340	\$933,960 \$4,358,480 \$0	30%	\$1,214,14 \$5,666,02
10.02	Site Utilities, Utility Relocation	Element Total n Utility Relocation Allowance - Low	31,132 31,132	RF		\$933,960 \$4,358,480		\$1,214,14 \$5,666,02
		Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	31,132 31,132 0 0	RF RF RF	\$340	\$933,960 \$4,358,480 \$0 \$0	30%	\$1,214,14 \$5,666,02
		Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	31,132 31,132 0 0 31,132	RF RF RF	\$340 \$570	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480	30% 30%	\$1,214,14 \$5,666,02 \$ \$5,666,02
		Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	31,132 31,132 0 0	RF RF RF	\$340	\$933,960 \$4,358,480 \$0 \$0	30%	\$1,214,14 \$5,666,02 \$ \$5,666,02 \$809,43
40.03	Haz. mat'l, contam'd soil rem	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total ioval/mitigation, ground water treatments Hazardous Material Removal Allowance	31,132 31,132 0 0 31,132 31,132	RF RF RF	\$340 \$570	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640	30% 30%	\$1,214,14 \$5,666,02 \$ \$5,666,02 \$809,43 \$809,43
40.03	Haz. mat'l, contam'd soil rem	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total soval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total	31,132 31,132 0 0 31,132 31,132	RF RF RF	\$340 \$570	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640	30% 30%	\$1,214,14 \$5,666,02 \$ \$5,666,02 \$809,43
40.03	Haz. mat'l, contam'd soil rem	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total soval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks	31,132 31,132 0 0 31,132 31,132	RF RF RF	\$340 \$570 \$20	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640	30% 30% 30%	\$1,214,14 \$5,666,02 \$ \$5,666,02 \$809,43
10.03 10.04	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Element Total Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total Invoval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total Invoval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total Invoval/mitigation Allowance Element Total	31,132 31,132 0 0 31,132 31,132	RF RF RF RF	\$340 \$570 \$20	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980	30% 30% 30%	\$1,214,14 \$5,666,02 \$ \$5,666,02 \$809,43 \$809,43
10.03 10.04	Haz. mat'l, contam'd soil rem	Element Total In Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total In Itility Relocation Allowance - High Element Total	31,132 31,132 0 0 31,132 31,132	RF RF RF RF	\$340 \$570 \$20	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980	30% 30% 30%	\$1,214,14 \$5,666,02 \$ \$5,666,02 \$809,43 \$809,43
10.03 10.04	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Element Total In Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total In Itility Relocation Allowance - High Element Total Itility Relocation Allowance - High Element Total Itility Relocation Allowance - Low Utility Relocation Allowance - High Element Total Itility Relocation Allowance - Low Utility Relocation Allowance - High Element Total Itility Relocation Allowance - High Element Total Itility Relocation Allowance - High Element Total Itility Relocation Allowance - High Element Total	31,132 31,132 0 0 31,132 31,132	RF RF RF LS RF	\$340 \$570 \$20	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980	30% 30% 30%	\$1,214,14 \$5,666,02 \$ \$5,666,02 \$809,43 \$809,43 \$607,07 \$607,07
10.03 10.04	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Element Total Tutility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total Toval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total June wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total June Wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total June Wetlands, sound Walls Retaining & Sound Wall Allowance (10% of	31,132 0 0 31,132 31,132 1 31,132	RF RF RF LS	\$340 \$570 \$20 \$15	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980 \$466,980	30% 30% 30% 30%	\$1,214,14 \$5,666,02 \$5,666,02 \$5,666,02 \$809,43 \$607,07
0.03 0.04 0.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total	31,132 0 0 31,132 31,132 1 31,132 1 31,132	RF RF RF LS RF	\$340 \$570 \$20 \$15	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980 \$466,980	30% 30% 30% 30%	\$1,214,14 \$5,666,02 \$5,666,02 \$5,666,02 \$809,43 \$809,43 \$607,07 \$607,07
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g.	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total	31,132 0 0 31,132 31,132 1 31,132 1 31,132	RF RF RF LS RF	\$340 \$570 \$20 \$15	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980 \$466,980	30% 30% 30% 30%	\$1,214,14 \$5,666,02 \$5,666,02 \$809,43 \$809,43 \$607,07 \$607,07 \$323,77
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g.	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total	31,132 0 0 31,132 31,132 1 31,132 1 31,132	RF RF LS RF LS	\$340 \$570 \$20 \$15	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980 \$466,980 \$249,056 \$249,056	30% 30% 30% 30%	\$1,214,14 \$5,666,02 \$5,666,02 \$5,666,02 \$809,43 \$607,07 \$607,07 \$323,77 \$323,77
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g.	Element Total n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low	31,132 0 0 31,132 31,132 1 31,132 1 31,132	RF RF RF LS RF LS RF	\$340 \$570 \$20 \$15	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980 \$466,980 \$249,056 \$249,056	30% 30% 30% 30%	\$1,214,14 \$5,666,02 \$5,666,02 \$5,666,02 \$809,43 \$809,43 \$607,07 \$607,07
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g.	Element Total Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median	31,132 31,132 0 0 31,132 1 31,132 1 3,113 1 31,132 0	RF RF LS RF LS RF RF	\$340 \$570 \$20 \$15 \$80 \$15 \$25	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980 \$466,980 \$249,056 \$249,056 \$249,056	30% 30% 30% 30% 30%	\$1,214,14 \$5,666,02 \$5,666,02 \$809,43 \$809,43 \$607,07 \$607,07
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g.	Element Total Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median Landscaping Allowance - High	31,132 31,132 0 0 31,132 31,132 1 31,132 1 31,132 0 0	RF RF LS RF RF RF RF RF	\$340 \$570 \$20 \$15 \$80 \$15 \$25 \$40	\$933,960 \$4,358,480 \$0 \$0 \$4,358,480 \$622,640 \$622,640 \$466,980 \$466,980 \$249,056 \$249,056 \$466,980 \$0 \$0	30% 30% 30% 30% 30% 30% 30% 30%	\$1,214,1. \$5,666,0. \$5,666,0. \$809,4 \$809,4 \$607,0 \$323,7 \$323,7

Hillsborough County MPO Transit Study System Planning CR-Dwtn North County line/ Hwy 54 to Hwy275

NO	STATIONING		OTV	LINUT	UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN EN	ND DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
0.07	Automobile, bus, van ac	ccessways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	16	EA	\$50,000	\$800,000	30%	\$1,040,0
		Parking Lots	1,000	STL	\$4,000	\$4,000,000	30%	\$5,200,0
		Element Total	1	LS		\$4,800,000		\$6,240,0
80.04	Temporary Facilities and	d other indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$600,296	25%	\$750,3
		Element Total	1	LS		\$600,296		\$750,3
50	SYSTEMS							
50.01	Train control and signals	s						
		Signal System	31,132	RF	\$140	\$4,358,480	15%	\$5,012,2
		Element Total	31,132	RF		\$4,358,480		\$5,012,2
50.02	Traffic signals and cross	• •						
		Crossing Protection	16	EA	\$150,000	\$2,400,000	15%	\$2,760,0
		Element Total	16	EA		\$2,400,000		\$2,760,0
50.03	Traction power supply:							
		N/A Element Total	0	EA		\$0		
		Lienent Total	U	LA		ΨΟ		
50.04	Traction power distribution	ion: catenary and third rail N/A						
		Element Total	0	RF		\$0		
50.05	Communications							
		Passenger Information System, Fiber Optic	31,132	RF	\$20	\$622,640	15%	\$716,0
		Passenger Information System, Station	2	EA	\$70,000	\$140,000	15%	\$161,0
		Element Total	1	LS		\$762,640		\$877,0
50.06	Fare collection system a	and equipment						
		Fare Collection	2	EA	\$150,000	\$300,000	15%	\$345,0
		Element Total	1	LS		\$300,000		\$345,00
50.07	Central Control	NA						
		N/A Element Total	1	LS		\$0		
			·	20		Ψū		
60	ROW, LAND, EXISTING Purchase or lease of rea							
2.0.0		Right of Way Allowance - At Grade	31,132	RF	\$400	\$12,452,800	50%	\$18,679,2
		Right of Way Allowance - Aerial	0 1, 102	RF	\$300	\$0	50%	Ψ10,010,2
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	
		Element Total	31,132	RF	• • •	\$12,452,800		\$18,679,20

Hillsborough County MPO Transit Study System Planning CR-Dwtn North Hwy275 to Hwy580/ CL Railroad

	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	BASE COST	CONTGY	COST
10	GUIDEWAY & TRACK ELE	MENTS						
0.01	Guideway: At-grade exclusive							
	Single Track	At Grade - Ballasted, Open	24,351	RF	\$250	\$6,087,750	25%	\$7,609,6
	Double Track	At Grade - Ballasted, Open	0	RF	\$420	\$0	25%	
		Element Total	24,351	RF		\$6,087,750		\$7,609,6
0.02	? Guideway: At-grade semi-ex							
		N/A Element Total	0	RF		\$0		
0.00	A Contidence on A4 money de tire metion							
0.03	Guideway: At-grade in mixe	n/A						
		Element Total	0	RF		\$0		
0.04	Guideway: Aerial structure							
	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	
	Single Track	Aerial - Ballasted Over Water	0	RF	\$11,900	\$0	30%	
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	
	Double Track	Aerial - Ballasted Over Water	0	RF	\$16,500	\$0	30%	
		Element Total	0	RF		\$0		
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	
		Element Total	0	RF		\$0		
0.06	Guideway: Underground cut							
		N/A Element Total	0	RF		\$0		
0.07	′ Guideway: Underground tun	nol						
0.07	Guideway. Onderground turi	N/A						
		Element Total	0	RF		\$0		
0.08	Guideway: Retained cut or f						222/	
	O: . T .		_					
	Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	•	Retained Fill - Ballasted Retained Cut - Ballasted						
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	
	Single Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted	0	RF RF	\$2,800 \$8,000	\$0 \$0	30% 30%	
0.09	Single Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30% 30%	
0.09	Single Track Double Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Double Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30% 30%	
	Single Track Double Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Double Track Double Track Track: Direct fixation	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
0.10	Single Track Double Track Double Track Track: Direct fixation	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.10	Single Track Double Track Double Track Track: Direct fixation Track: Embedded	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.10	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0	30% 30% 30%	\$6,720,8
0.10	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$5,844,240 \$4,626,690	30% 30% 30% 30%	
0.10	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30% 30%	\$6,720,6 \$5,320,6
0.10 0.11	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total	0 0 0 0 0 0 0 24,351 24,351	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,626,690 \$0	30% 30% 30% 30%	\$6,720,6 \$5,320,6
0.10 0.11	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total	0 0 0 0 0 0 0 24,351 24,351	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,626,690 \$0	30% 30% 30% 30%	\$6,720,8 \$5,320,6 \$12,041,5
0.10 0.11	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total Element Total	0 0 0 0 0 0 24,351 24,351 0 24,351	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$10,470,930	30% 30% 30% 30%	
0.10 0.11 0.12	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total rnouts) Special Trackwork (5% of Track Cost) Element Total	0 0 0 0 0 0 0 24,351 24,351 24,351	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$10,470,930 \$523,547	30% 30% 30% 30%	\$6,720,8 \$5,320,6 \$12,041,5
0.10 0.11 0.12	Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track Track: Special (switches, tu	Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total Figure 1	0 0 0 0 0 0 0 24,351 24,351 24,351	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$10,470,930 \$523,547	30% 30% 30% 30%	\$6,720,8 \$5,320,6 \$12,041,5

Hillsborough County MPO Transit Study System Planning CR-Dwtn North Hwy275 to Hwy580/ CL Railroad

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20 5	STATIONS, STOPS, TERMIN	IALS. INTERMODAL						
20.01 A	At-grade station, stop, shelter	, mall, terminal, platform						
		Center Platform Station	1	EA	\$1,500,000	\$1,500,000	20%	\$1,800,00
		Element Total	1	EA		\$1,500,000		\$1,800,00
20.02 A	Aerial station, stop, shelter, m	all, terminal, platform						
		Center Platform Station		EA	\$15,000,000	\$0	25%	5
		Element Total	0	EA		\$0		5
20.03 L	Jnderground station, stop, sh	elter, mall, terminal, platform						
		N/A						
		Element Total	0	EA		\$0		;
20.04 C	Other stations, landings, term	inals: Intermodal, ferry, trolley, etc.						
		N/A Element Total	1	LS		\$0		
		Liement Total	'	LO		ΨΟ		,
:0.05 J	oint development	N/A						
		Element Total	1	LS		\$0		9
20 0E 4	Automobile parking multi-story	/ structure						
.0.00 F	atomobile parking multi-story	Parking Garage	0	STL	\$12,000	\$0	20%	9
		Element Total	1	LS	· ,	\$0		9
20.07 E	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	;
		Escalator	0	EA	\$450,000	\$0	20%	
40 S	SITEWORK & SPECIAL CON	Element Total	1	LS		\$0		\$
	Demolition, Clearing, Earthwo							
		Demolition Allowance - Low	24,351	RF	\$30	\$730,530	30%	\$949,68
		Demolition Allowance - Median	0	RF	\$50	\$0	30%	(
		Demolition Allowance - High	0	RF	\$90	\$0	30%	00400
		Element Total	24,351	RF		\$730,530		\$949,68
0.02 S	Site Utilities, Utility Relocation							
		Utility Relocation Allowance - Low	24,351	RF	\$140	\$3,409,140	30%	\$4,431,88
		Utility Relocation Allowance - Median	0	RF	\$340	\$0	30%	;
		Utility Relocation Allowance - High	0 04 054	RF	\$570	\$0	30%	£4.404.04
		Element Total	24,351	RF		\$3,409,140		\$4,431,88
0.03 H	laz. mat'l, contam'd soil remo	oval/mitigation, ground water treatments	0.4.05.4		400	4.07.000	000/	4000 4
		Hazardous Material Removal Allowance	24,351	RF LS	\$20	\$487,020	30%	\$633,12 \$633,12
		Element Total	1	LS		\$487,020		\$633,17
0.04 E	Environmental mitigation, e.g.	wetlands, historic/archeologic, parks	04.054	DF	Φ4 <i>E</i>	¢205 005	20%	¢474.0
		Enviromental Mitigation Allowance Element Total	24,351 1	RF LS	\$15	\$365,265 \$365,265	30%	\$474,84 \$474,84
.0.05.5	Site structures including retair	ning walls, sound walls						
. J. J. C	Suddiand moldang retail	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	2,435	RF	\$80	\$194,808	30%	\$253,25
		Element Total	1	LS		\$194,808		\$253,25
0.06 F	Pedestrian / bike access and	accommodation, landscaping						
0.06 F	Pedestrian / bike access and	accommodation, landscaping Landscaping Allowance - Low	24,351	RF	\$15	\$365,265	30%	\$474,8
0.06 F	Pedestrian / bike access and		24,351 0	RF RF	\$15 \$25	\$365,265 \$0	30% 30%	
10.06 F	Pedestrian / bike access and	Landscaping Allowance - Low						:
10.06 F	Pedestrian / bike access and	Landscaping Allowance - Low Landscaping Allowance - Median Landscaping Allowance - High Pedestrain Overpasses	0 0 0	RF	\$25	\$0 \$0 \$0	30% 30% 30%	\$474,8
10.06 F	Pedestrian / bike access and	Landscaping Allowance - Low Landscaping Allowance - Median Landscaping Allowance - High	0	RF RF	\$25 \$40	\$0 \$0	30% 30%	

Hillsborough County MPO Transit Study System Planning CR-Dwtn North Hwy275 to Hwy580/ CL Railroad

CAT	STATIONIN		OTV	LINUT	UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN E	END DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
n n 7	Automobile bus van	accessways including roads, parking lots						
0.07	Automobile, bus, vair	Roadway Modifications Allow Full						
		Intersection	12	EA	\$50,000	\$600,000	30%	\$780,0
		Parking Lots	500	STL	\$4,000	\$2,000,000	30%	\$2,600,0
		Element Total	1	LS	Ψ1,000	\$2,600,000	0070	\$3,380,0
n ng	Tomporary Excilities a	and other indirect costs during construction						
.0.00	remporary r acinues a	Temporary Facilities (5% of Category 40)	5.0%			\$411,395	25%	\$514,2
		Element Total	1	LS		\$411,395	2370	\$514,24
50	SYSTEMS							
0.01	Train control and sign							
		Signal System	24,351	RF	\$140	\$3,409,140	15%	\$3,920,5
		Element Total	24,351	RF		\$3,409,140		\$3,920,5
50.02	Traffic signals and cro	• .						
		Crossing Protection	12	EA	\$150,000	\$1,800,000	15%	\$2,070,00
		Element Total	12	EA		\$1,800,000		\$2,070,00
0.03	Traction power supply							
		N/A	0	EA		\$0		
		Element Total	0	EA		\$0		9
50.04	Traction power distribution	ution: catenary and third rail						
		N/A Element Total	0	RF		\$0		\$
50 OE	Communications							
50.05	Communications	Passenger Information System, Fiber Optic	24,351	RF	\$20	\$487,020	15%	\$560,07
		Passenger Information System, Fiber Option	, 24,331 1	EA	\$70,000	\$70,000	15%	\$80,50
		Element Total	1	LS	Ψ7 0,000	\$557,020	1070	\$640,57
50 06	Fare collection system	and equipment						
10.00	i are conection system	Fare Collection	1	EA	\$150,000	\$150,000	15%	\$172,50
		Element Total	1	LS		\$150,000		\$172,50
50.07	Central Control							
		N/A						
		Element Total	1	LS		\$0		\$
60	ROW, LAND, EXISTII	NG IMPROVEMENTS						
80.01	Purchase or lease of r							
		Right of Way Allowance - At Grade	24,351	RF	\$400	\$9,740,400	50%	\$14,610,60
		Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	011010
		Element Total	24,351	RF		\$9,740,400		\$14,610,60

Hillsborough County MPO Transit Study System Planning CR-Dwtn North

Between CR-East/ CR-Dwtn West and CR-I4 East

CAT STATIONING NO. BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10 GUIDEWAY & TRACK ELE 10.01 Guideway: At-grade exclusiv							
Single Track	At Grade - Ballasted, Open	1,744	RF	\$250	\$436.000	25%	\$545,00
Double Track	At Grade - Ballasted, Open At Grade - Ballasted, Open	1,744	RF	\$420	\$430,000	25%	
Double Hack	Element Total	1,744	RF	Φ42 0	\$436,000	2376	\$ \$545,00
10.02 Guideway: At-grade semi-ex	cclusive (allows cross-traffic)						
, ,	N/A Element Total	0	RF		\$0		\$
10.02 Cuidouanu At arada in missa		·			Ψ.		Ť
10.03 Guideway: At-grade in mixed	N/A						
	Element Total	0	RF		\$0		\$
10.04 Guideway: Aerial structure				0.1.000	40	222/	
Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	
Single Track	Aerial - Ballasted Over Water	0	RF	\$11,900	\$0	30%	Ç
Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	\$
Double Track	Aerial - Ballasted Over Water Element Total	0	RF RF	\$16,500	\$0 \$0	30%	9
	Element Total	Ü	IXI		ΨΟ		Ψ
10.05 Guideway: Built-up fill Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	9
Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	9
Double Huck	Element Total	0	RF	Ψ	\$0	2070	
0.06 Guideway: Underground cut	& cover						
, , , , , , , , , , , , , , , , , , , ,	N/A						
	Element Total	0	RF		\$0		\$
10.07 Guideway: Underground tun	nel N/A						
	Element Total	0	RF		\$0		\$
0.08 Guideway: Retained cut or fi	III						
Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	Ç
Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	9
Double Track	Retained Cut - Ballasted	0	RF	\$8,000	\$0	30%	Ş
Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	;
	Element Total	0	RF		\$0		;
0.09 Track: Direct fixation							
	N/A Element Total	0	RF		\$0		:
0.40 T. I. F. I. II. I							
0.10 Track: Embedded	N/A						
	Element Total	0	RF		\$0		(
0.11 Track: Ballasted							
Single Track	Ballasted Track	1,744	RF	\$240	\$418,560	15%	\$481,34
	Ballasted Track - Refurbish Existing	1,744	RF	\$190	\$331,360	15%	\$381,06
Double Track	Ballasted Track	0	RF	\$480	\$0	15%	(
	Element Total	1,744	RF		\$749,920		\$862,40
0.12 Track: Special (switches, tu	· ·	F0/			¢07.400	450/	640.4 0
	Special Trackwork (5% of Track Cost)	5%	1.0		\$37,496	15%	\$43,12
	Element Total	1	LS		\$37,496		\$43,12
10.13 Track: Vibration and noise of	dampening N/A						
	Element Total	1	LS		\$0		9
	Element Total	1	LS		\$0		

Hillsborough County MPO Transit Study System Planning CR-Dwtn North Between CR-East/ CR-Dwtn West and CR-I4 East

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20	STATIONS, STOPS, TERMI	NALS, INTERMODAL						
	At-grade station, stop, shelte	·						
	3 , ,	Center Platform Station	0	EA	\$1,500,000	\$0	20%	\$(
		Element Total	0	EA		\$0		\$(
20 N2	Aerial station, stop, shelter, n	gall terminal platform						
20.02	Acriai station, stop, shelter, in	Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$(
		Element Total	0	EA		\$0		\$0
00.00								
20.03	Underground station, stop, sł	neiter, maii, terminai, piattorm N/A						
		Element Total	0	EA		\$0		\$(
20 04	Other stations landings term	ninals: Intermodal, ferry, trolley, etc.						
20.04	Other stations, landings, term	N/A						
		Element Total	1	LS		\$0		\$0
20.05	Joint development							
	ount do totopinon	N/A						
		Element Total	1	LS		\$0		\$0
20.06	Automobile parking multi-stor	ov structure						
20.00	Automobile parking main stor	Parking Garage	0	STL	\$12,000	\$0	20%	\$0
		Element Total	1	LS	· · · · · · ·	\$0		\$0
20.07	Elevators, escalators							
20.07	Elevators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	\$0
		Escalator	0	EA	\$450,000	\$0	20%	\$0
		Element Total	1	LS		\$0		\$0
40	SITEWORK & SPECIAL CO	NDITIONS						
	Demolition, Clearing, Earthwe							
		Demolition Allowance - Low	1,744	RF	\$30	\$52,320	30%	\$68,016
		Demolition Allowance - Median	0	RF	\$50	\$0	30%	\$0
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$0
		Element Total	1,744	RF		\$52,320		\$68,016
40.02	Site Utilities, Utility Relocation	n						
	•	Utility Relocation Allowance - Low	1,744	RF	\$140	\$244,160	30%	\$317,408
		Utility Relocation Allowance - Median	0	RF	\$340	\$0	30%	\$0
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$0
		Element Total	1,744	RF		\$244,160		\$317,408
40.03	Haz. mat'l, contam'd soil rem	oval/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	1,744	RF	\$20	\$34,880	30%	\$45,344
		Element Total	1	LS		\$34,880		\$45,344
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
	5 7 5	Enviromental Mitigation Allowance	1,744	RF	\$15	\$26,160	30%	\$34,008
		Element Total	1	LS		\$26,160		\$34,008
40.05	Site structures including retai	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	174	RF	\$80	\$13,952	30%	\$18,138
		Element Total	1	LS		\$13,952		\$18,138
40.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	1,744	RF	\$15	\$26,160	30%	\$34,008
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	\$(
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$(
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$4,360	30%	\$5,668
		Element Total	1	LS		\$30,520		\$39,67

Hillsborough County MPO Transit Study System Planning CR-Dwtn North Between CR-East/ CR-Dwtn West and CR-I4 East

CAT	STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
40.07	Automobile, bus, van acces	sways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	1	EA	\$50,000	\$50,000	30%	\$65,00
		Parking Lots	0	STL	\$4,000	\$0	30%	\$
		Element Total	1	LS		\$50,000		\$65,00
40.08	Temporary Facilities and oth	ner indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$22,600	25%	\$28,25
		Element Total	1	LS		\$22,600		\$28,25
50	SYSTEMS							
	Train control and signals							
		Signal System	1,744	RF	\$140	\$244,160	15%	\$280,78
		Element Total	1,744	RF	·	\$244,160		\$280,78
50.02	Traffic signals and crossing	protection						
		Crossing Protection	1	EA	\$150,000	\$150,000	15%	\$172,50
		Element Total	1	EA		\$150,000		\$172,50
50.03	Traction power supply: sub	stations						
		N/A						
		Element Total	0	EA		\$0		\$
50.04	Traction power distribution:	catenary and third rail						
		N/A						
		Element Total	0	RF		\$0		\$
50.05	Communications							
		Passenger Information System, Fiber Optic	1,744	RF	\$20	\$34,880	15%	\$40,11
		Passenger Information System, Station	0	EA	\$70,000	\$0	15%	\$
		Element Total	1	LS		\$34,880		\$40,11
50.06	Fare collection system and							
		Fare Collection	0	EA	\$150,000	\$0	15%	\$1
		Element Total	1	LS		\$0		\$0
50.07	Central Control							
		N/A Element Total	1	LS		\$0		\$(
	DOW LAND EVICTOR							
60 60.01	ROW, LAND, EXISTING IM Purchase or lease of real es							
		Right of Way Allowance - At Grade	1,744	RF	\$400	\$697,600	50%	\$1,046,40
		Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$(
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
		Element Total	1,744	RF		\$697,600		\$1,046,400

Hillsborough County MPO Transit Study System Planning CR-Dwtn North CR-14 East to S of Busch Blvd

CAT NO.	STATIONING BEGIN ENI)	DESCRIPTION	QTY	UNIT	COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK E	LEMENTS							
10.01	Guideway: At-grade exclu	usive right-of-way							
	Single Track	At Grade -	Ballasted, Open	25,488	RF	\$250	\$6,372,000	25%	\$7,965,0
	Double Track	At Grade -	Ballasted, Open	0	RF	\$420	\$0	25%	
			Element Total	25,488	RF		\$6,372,000		\$7,965,0
10.02	Guideway: At-grade semi	-exclusive (allow	s cross-traffic)						
	, , ,	N/A	,						
			Element Total	0	RF		\$0		
10.03	Guideway: At-grade in mi								
		N/A	Element Total	0	RF		\$0		
10 04	Guideway: Aerial structur	0							
10.04	Single Track	e Aerial - Ba	illasted	0	RF	\$11,000	\$0	30%	
	Single Track		Illasted Over Water	0	RF	\$11,900	\$0	30%	
	Double Track	Aerial - Ba		0	RF	\$15,200	\$0	30%	:
	Double Track		illasted Over Water	0	RF	\$16,500	\$0 \$0	30%	
	Double Hack	Adriai - Da	Element Total	0	RF	ψ10,000	\$0	JU /0	
10.05	Guideway: Built-up fill								
	Single Track		Ballasted, Built-up	0	RF	\$440	\$0	25%	
	Double Track	At Grade -	Ballasted, Built-up	0	RF	\$740	\$0	25%	
			Element Total	0	RF		\$0		
0.06	Guideway: Underground	cut & cover							
		N/A							
			Element Total	0	RF		\$0		:
10.07	Guideway: Underground	tunnel							
		N/A	Element Total	0	RF		\$0		;
			Element Total	Ü	141		ΨΟ		
10.08	Guideway: Retained cut of Single Track		Cut - Ballasted	0	RF	\$6,800	\$0	30%	
	•		ill - Ballasted						
	Single Track			0	RF	\$2,800	\$0	30%	
	Double Track		cut - Ballasted	0	RF	\$8,000	\$0	30%	:
	Double Track	Retained F	ill - Ballasted Element Total	0	RF RF	\$3,200	\$0 \$0	30%	
			Liement Total	O	IXI		ΨΟ		
10.09	Track: Direct fixation	N/A							
		IN/A	Element Total	0	RF		\$0		;
10 10	Track: Embedded								
10.10	Track. Embedded	N/A							
			Element Total	0	RF		\$0		;
10.11	Track: Ballasted								
	Single Track	Ballasted 1		25,488	RF	\$240	\$6,117,120	15%	\$7,034,6
			rack - Refurbish Existing	25,488	RF	\$190	\$4,842,720	15%	\$5,569,12
	Double Track	Ballasted 1		0	RF	\$480	\$0	15%	A40.000.0
			Element Total	25,488	RF		\$10,959,840		\$12,603,8
0.12	Track: Special (switches							. =	
		Special Tra	ackwork (5% of Track Cost) Element Total	5% 1	16		\$547,992 \$547,002	15%	\$630,1
			Element Total	1	LS		\$547,992		\$630,1
	Track: Vibration and nois	se damnening							
10.13	Track. Vibration and not								
10.13	Track. Vibration and floid	N/A	Element Total	1	LS		\$0		

Hillsborough County MPO Transit Study System Planning CR-Dwtn North CR-14 East to S of Busch Blvd

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20	STATIONS, STOPS, TERMII	NALS, INTERMODAL						
	At-grade station, stop, shelter	•						
		Center Platform Station	0	EA	\$1,500,000	\$0	20%	9
		Element Total	0	EA		\$0		\$
0.02	Aerial station, stop, shelter, m	nall. terminal. platform						
	, , , , , , , , , , , , , , , , , , , ,	Center Platform Station	0	EA	\$15,000,000	\$0	25%	5
		Element Total	0	EA		\$0		Ç
20.03	Underground station, stop, sh	nelter, mall, terminal, platform						
	3 ,, ,, ,	N/A						
		Element Total	0	EA		\$0		Ç
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc.						
		N/A Element Total	1	LS		\$0		
						*-		
0.05	Joint development	N/A						
		Element Total	1	LS		\$0		
90 0e	Automobile parking multi-stor	v structure						
.0.00	Automobile parking muid-Stor	Parking Garage	0	STL	\$12,000	\$0	20%	\$
		Element Total	1	LS	. ,	\$0		3
n n7	Elevators, escalators							
.0.01	Lievators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	9
		Escalator	0	EA	\$450,000	\$0	20%	9
		Element Total	1	LS		\$0		Ş
40	SITEWORK & SPECIAL CO							
10.01	Demolition, Clearing, Earthwo	Demolition Allowance - Low	25,488	RF	\$30	\$764,640	30%	\$994,03
		Demolition Allowance - Median	20,400	RF	\$50	\$0	30%	ψ554,00
		Demolition Allowance - High	0	RF	\$90	\$0	30%	
		Element Total	25,488	RF	• • • •	\$764,640		\$994,03
n n2	Site Utilities, Utility Relocation	2						
0.02	one offinites, offinity relocation	Utility Relocation Allowance - Low	25,488	RF	\$140	\$3,568,320	30%	\$4,638,8
		Utility Relocation Allowance - Median	0	RF	\$340	\$0	30%	ψ.,σσσ,σ
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	
		Element Total	25,488	RF	****	\$3,568,320		\$4,638,8
0 03	Haz mat'l contam'd soil remo	oval/mitigation, ground water treatments						
0.00	riaz. mati, contama con rom	Hazardous Material Removal Allowance	25,488	RF	\$20	\$509,760	30%	\$662,68
		Element Total	1	LS		\$509,760		\$662,68
10.04	Environmental mitigation. e.g	. wetlands, historic/archeologic, parks						
	3	Enviromental Mitigation Allowance	25,488	RF	\$15	\$382,320	30%	\$497,01
		Element Total	1	LS		\$382,320		\$497,01
0.05	Site structures including retai	ning walls, sound walls						
	•	Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	2,549	RF	\$80	\$203,904	30%	\$265,07
		Element Total	1	LS		\$203,904		\$265,07
0.06	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	25,488	RF	\$15	\$382,320	30%	\$497,0
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	:
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	;
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	
		Artwork (1% of Guideway & Stations)	1%			\$63,720	30%	\$82,8
		Element Total	1	LS		\$446,040		\$579,8

Hillsborough County MPO Transit Study System Planning CR-Dwtn North CR-I4 East to S of Busch Blvd

CAT	SIT MODE: Commuter F STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN EN		QTY	UNIT	COST	COST	CONTGY	COST
NO.	BEGIN EN	DESCRIPTION	QII	UNII	CO31	CO31	CONTGT	
40.07	Automobile, bus, van ac	ccessways including roads, parking lots						
		Roadway Modifications Allow Full Intersection	40		# F0.000	# 050 000	200/	CO45 00
		Parking Lots	13 0	EA STL	\$50,000	\$650,000	30%	\$845,00 \$
		Element Total	1	LS	\$4,000	\$0 \$650,000	30%	\$845,00
		Liement rotal		LO		ψ000,000		ψ0+0,00
40.08	Temporary Facilities and	d other indirect costs during construction	F 00/			#000 040	050/	£407.04
		Temporary Facilities (5% of Category 40) Element Total	5.0%	LS		\$326,249 \$326,249	25%	\$407,81
		Element Total	ı	LS		\$320,249		\$407,81
50	SYSTEMS							
50.01	Train control and signals	s						
		Signal System	25,488	RF	\$140	\$3,568,320	15%	\$4,103,56
		Element Total	25,488	RF		\$3,568,320		\$4,103,568
50.02	Traffic signals and cross	sing protection						
		Crossing Protection	13	EA	\$150,000	\$1,950,000	15%	\$2,242,50
		Element Total	13	EA		\$1,950,000		\$2,242,500
50.03	Traction power supply:	substations						
		N/A						
		Element Total	0	EA		\$0		\$
50.04	Traction power distributi	ion: catenary and third rail						
		N/A						
		Element Total	0	RF		\$0		\$
50.05	Communications							
		Passenger Information System, Fiber Optic	25,488	RF	\$20	\$509,760	15%	\$586,22
		Passenger Information System, Station	0	EA	\$70,000	\$0	15%	\$
		Element Total	1	LS		\$509,760		\$586,22
50.06	Fare collection system a	and equipment						
		Fare Collection	0	EA	\$150,000	\$0	15%	\$
		Element Total	1	LS		\$0		\$(
50.07	Central Control							
		N/A Element Total	1	LS		\$0		\$
			•			Ψ**		Ψ.
60	ROW, LAND, EXISTING Purchase or lease of rea							
50.01	i uroriase or rease or rec	Right of Way Allowance - At Grade	25.488	RF	\$400	\$10,195,200	50%	\$15,292,80
		Right of Way Allowance - Aerial	23,400	RF	\$300	\$10,193,200	50%	\$13,232,000
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$(
		Element Total	25,488	RF	4200	\$10,195,200	/-	\$15,292,800

Hillsborough County MPO Transit Study System Planning CR-Dwtn West

West of Channelside Dr to NJefferson/ E Polk St

TRANSIT	MODE:	Commuter Rail	

CAT NO.	STATIONING BEGIN END	D DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
10	GUIDEWAY & TRACK E	LEMENTS						
0.01	Guideway: At-grade exclu							
	Single Track	At Grade - Ballasted, Open	3,148	RF	\$250	\$787,000	25%	\$983,75
	Double Track	At Grade - Ballasted, Open	0	RF	\$420	\$0	25%	\$
		Element Total	3,148	RF		\$787,000		\$983,75
0.02	Guideway: At-grade semi	-exclusive (allows cross-traffic)						
		N/A Element Total	0	RF		\$0		\$
0.00	0.1		·			Ψ.		Ť
0.03	Guideway: At-grade in mi	N/A						
		Element Total	0	RF		\$0		\$
10.04	Guideway: Aerial structur	е						
	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	\$
	Single Track	Aerial - Ballasted Over Water	0	RF	\$11,900	\$0	30%	9
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	\$
	Double Track	Aerial - Ballasted Over Water	0	RF	\$16,500	\$0	30%	\$
		Element Total	0	RF	, ,	\$0		9
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	\$
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	\$
		Element Total	0	RF		\$0		9
0.06	Guideway: Underground	cut & cover						
		N/A						
		Element Total	0	RF		\$0		Ş
0.07	Guideway: Underground	tunnel						
	,g	N/A						
		Element Total	0	RF		\$0		\$
0.08	Guideway: Retained cut of		_					_
	Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	\$
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	\$
	Double Track	Retained Cut - Ballasted	0	RF	\$8,000	\$0	30%	\$
	Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	5
		Element Total	0	RF		\$0		Ç
0.09	Track: Direct fixation							
		N/A						
		Element Total	0	RF		\$0		\$
0.10	Track: Embedded							
		N/A Element Total	0	RF		\$0		\$
			_			**		•
0.11	Track: Ballasted							
	Single Track	Ballasted Track	3,148	RF	\$240	\$755,520	15%	\$868,84
		Ballasted Track - Refurbish Existing	3,148	RF	\$190	\$598,120	15%	\$687,83
	Double Track	Ballasted Track Element Total	0 3,148	RF RF	\$480	\$0 \$1,353,640	15%	\$1,556,68
		Element Total	0,140	131		ψ1,000,040		ψ1,000,00
0.12	Track: Special (switches,	turnouts) Special Trackwork (5% of Track Cost)	5%			\$67,682	15%	¢77.00
		. , , , , , , , , , , , , , , , , , , ,		1.0			1070	\$77,83
		Element Total	1	LS		\$67,682		\$77,83
0.13	Track: Vibration and nois	se dampening N/A						
		Element Total	1	LS		\$0		\$
				-		+ *		,

Hillsborough County MPO Transit Study System Planning CR-Dwtn West

West of Channelside Dr to NJefferson/ E Polk St

ITRANSIT	MODE:	Commuter	Rail

20.01 A 20.02 A 20.03 U 20.04 O 20.05 J 20.06 A		, mall, terminal, platform Center Platform Station Element Total	1 1 0 0	EA EA EA	\$1,500,000 \$15,000,000	\$1,500,000 \$1,500,000 \$0 \$0 \$0	25%	\$1,800,000 \$1,800,000 \$0 \$0
20.01 A 20.02 A 20.03 U 20.04 O 20.05 J 20.06 A	at-grade station, stop, shelter station, stop, shelter, multiple station, stop, shelter, multiple station, stop, shelter, multiple stations, stop, shelter, multiple stations, landings, term to stations, landings, term stations, landings, term stations oint development	, mall, terminal, platform Center Platform Station Element Total all, terminal, platform Center Platform Station Element Total elter, mall, terminal, platform N/A Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total	0 0	EA EA EA		\$1,500,000 \$0 \$0		\$1,800,000 \$0 \$0
20.03 U 20.04 O 20.05 Jo 20.06 A	Underground station, stop, shother stations, landings, termoint development	Element Total all, terminal, platform Center Platform Station Element Total elter, mall, terminal, platform N/A Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total	0 0	EA EA EA		\$1,500,000 \$0 \$0		\$1,800,000 \$0 \$0
20.03 U 20.04 O 20.05 Jo 20.06 A	Underground station, stop, shother stations, landings, termoint development	all, terminal, platform Center Platform Station Element Total elter, mall, terminal, platform N/A Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total	0 0	EA EA	\$15,000,000	\$0 \$0	25%	\$0 \$0
20.03 U 20.04 O 20.05 Jo 20.06 A	Underground station, stop, shother stations, landings, termoint development	Center Platform Station Element Total elter, mall, terminal, platform N/A Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total	0	EA	\$15,000,000	\$0 \$0	25%	\$0 \$0
20.04 O 20.05 Ja 20.06 A	Other stations, landings, term	Element Total elter, mall, terminal, platform N/A Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total N/A	0	EA	\$15,000,000	\$0 \$0	25%	\$0 \$0
20.04 O 20.05 Jo 20.06 A	Other stations, landings, term	elter, mall, terminal, platform N/A Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total N/A	0	EA		\$0		\$0
20.04 O 20.05 Jo 20.06 A	Other stations, landings, term	N/A Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total N/A				·		·
20.05 Jo 20.06 A	oint development	Element Total inals: Intermodal, ferry, trolley, etc. N/A Element Total N/A				·		·
20.05 Jo 20.06 A	oint development	N/A Element Total N/A	1	LS		\$0		\$0
20.06 A	·	Element Total N/A	1	LS		\$0		\$0
20.06 A	·							
20.06 A	·							
	sutomobile parking multi-story							
	automobile parking multi-stor		1	LS		\$0		\$0
	atomobile parking muiti-story	, otructure						
20.07 E		Parking Garage	0	STL	\$12,000	\$0	20%	\$0
20.07 E		Element Total	1	LS		\$0		\$0
20.07	Elevators, escalators							
	novatoro, obbailatoro	Eleavator	0	EA	\$200,000	\$0	20%	\$0
		Escalator	0	EA	\$450,000	\$0	20%	\$0
		Element Total	1	LS		\$0		\$0
40 S	SITEWORK & SPECIAL COM	NDITIONS						
40.01 D	emolition, Clearing, Earthwo		0.440	DE	000	004440	000/	0400 770
		Demolition Allowance - Low Demolition Allowance - Median	3,148	RF	\$30 \$50	\$94,440	30%	\$122,772
		Demolition Allowance - Niedlan	0	RF RF	\$50 \$90	\$0 \$0	30% 30%	\$0 \$0
		Element Total	3,148	RF	Ψ30	\$94,440	3070	\$122,772
40.00.0	er-There There- D-I							
40.02 S	ite Utilities, Utility Relocation	Utility Relocation Allowance - Low	3,148	RF	\$140	\$440,720	30%	\$572,936
		Utility Relocation Allowance - Median	0,140	RF	\$340	\$0	30%	\$0
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$0
		Element Total	3,148	RF	·	\$440,720		\$572,936
40.03 H	laz. mat'l, contam'd soil remo	oval/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	3,148	RF	\$20	\$62,960	30%	\$81,848
		Element Total	1	LS		\$62,960		\$81,848
40.04 E	invironmental mitigation, e.g.	wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	3,148	RF	\$15	\$47,220	30%	\$61,386
		Element Total	1	LS		\$47,220		\$61,386
40.05 S	ite structures including retair	ning walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	315	RF	\$80	\$25,184	30%	\$32,739
		Element Total	1	LS		\$25,184		\$32,739
40.06 P	Pedestrian / bike access and	accommodation, landscaping						
		Landscaping Allowance - Low	3,148	RF	\$15	\$47,220	30%	\$61,386
		Landscaping Allowance - Median	0	RF	\$25	\$0 \$0	30%	\$0
		Landscaping Allowance - High	0	RF	\$40	\$0 \$0	30%	\$0 \$0
		Pedestrain Overpasses Artwork (1% of Guideway & Stations)	0 1%	EA	\$800,000	\$0 \$22,870	30% 30%	\$0 \$29,731
		Element Total	1 70	LS		\$70,090	JU /0	\$29,731

Hillsborough County MPO Transit Study System Planning CR-Dwtn West

West of Channelside Dr to NJefferson/ E Polk St

CAT	STATIO	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
0.07	Automobile bus y	an accessi	ways including roads, parking lots						
0.07	Automobile, bus, v	an access	Roadway Modifications Allow Full						
			Intersection	2	EA	\$50,000	\$100,000	30%	\$130,0
			Parking Lots	0	STL	\$4,000	\$0	30%	ψ100,0
			Element Total	1	LS	ψ4,000	\$100,000	30 /0	\$130,0
n no	Tomporory Eggiliti	oo and atha	er indirect costs during construction						
0.00	remporary Faciliu	es and othe		F 00/			¢40.004	0.50/	ሰ ር ጋ
			Temporary Facilities (5% of Category 40)	5.0%			\$42,031	25%	\$52,5
			Element Total	1	LS		\$42,031		\$52,5
50	SYSTEMS								
	Train control and	signals							
		-	Signal System	3,148	RF	\$140	\$440,720	15%	\$506,8
			Element Total	3,148	RF		\$440,720		\$506,8
50.02	Traffic signals and	crossing p	protection Crossing Protection	2	EA	\$150,000	\$300,000	15%	\$345,0
			Element Total	2	EA	φ130,000	\$300,000	13 /6	\$345,0
				_			,		*****
50.03	Traction power su	pply: subst							
			N/A						
			Element Total	0	EA		\$0		
50.04	Traction power dis	tribution: c	catenary and third rail						
			N/A						
			Element Total	0	RF		\$0		
50.05	Communications								
0.03	Communications		Passenger Information System, Fiber Optic	3,148	RF	\$20	\$62,960	15%	\$72,4
			Passenger Information System, Station	1	EA	\$70,000	\$70,000	15%	\$80,5
			Element Total	1	LS	ψ, σ,σσσ	\$132,960	1070	\$152,9
0.06	Fare collection sys	stem and e		4	Ε.Δ	¢150,000	¢150,000	15%	¢470.
			Fare Collection Element Total	1 1	EA LS	\$150,000	\$150,000 \$150,000	15%	\$172,5 \$172,5
	0 1 10 1 1						*****		*, .
0.07	Central Control		N/A						
			Element Total	1	LS		\$0		
60	DOW LAND EV	CTING ISS	DDOVEMENTS						
	ROW, LAND, EXI Purchase or lease								
JJ.U I	i diviluse di lease	o. rour cou	Right of Way Allowance - At Grade	3,148	RF	\$400	\$1,259,200	50%	\$1,888,8
			Right of Way Allowance - Aerial	0,140	RF	\$300	\$0	50%	ψ1,000,0
			Right of Way Allowance - Underground	0	RF	\$250	\$0 \$0	50 % 50%	
			Element Total	3,148	RF	ΨΖΟΟ	\$1,259,200	JU /0	\$1,888,8

Hillsborough County MPO Transit Study System Planning CR-Dwtn West Downtown to west of Channelside Dr

CAT NO.	STATIONING				UNIT	BASE	ALLCTD	TOTAL
	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
10	GUIDEWAY & TRACK ELE							
0.01	Guideway: At-grade exclusiv	· ,						
	Single Track	At Grade - Ballasted, Open	6,852	RF	\$250	\$1,713,000	25%	\$2,141,2
	Double Track	At Grade - Ballasted, Open	0	RF	\$420	\$0	25%	;
		Element Total	6,852	RF		\$1,713,000		\$2,141,2
0.03	2 Guideway: At-grade semi-ex	valueiva (allows cross traffic)						
0.02	Colideway. At-grade serili-ex	N/A						
		Element Total	0	RF		\$0		
n na	3 Guideway: At-grade in mixed	d traffia						
0.00	Odideway. Al-grade in mixe	N/A						
		Element Total	0	RF		\$0		
n n/	1 Guideway: Aerial structure							
0.04	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	
	Single Track Single Track	Aerial - Ballasted Over Water	0	RF	\$11,900	\$0 \$0	30%	
	Double Track	Aerial - Ballasted Over Water	0	RF	\$15,200	\$0	30%	
	Double Track	Aerial - Ballasted Over Water	0	RF	\$15,200 \$16,500	\$0 \$0	30%	
	Double Hack	Element Total	0	RF	φ10,300	\$0 \$0	30 %	
		Element Total	· ·	131		ΨΟ		
0.05	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	
		Element Total	0	RF		\$0		
0 06	6 Guideway: Underground cut	& cover						
0.00	o Guideway. Officerground cut	N/A						
		Element Total	0	RF		\$0		
0.07	7 Guideway: Underground tun	nel						
		N/A						
		Element Total	0	RF		\$0		
			ŭ			**		
0.08	3 Guideway: Retained cut or f	III	· ·			**		
0.08	3 Guideway: Retained cut or fi			RF	\$6 800		30%	
0.08	Single Track	Retained Cut - Ballasted	0	RF RF	\$6,800 \$2,800	\$0	30% 30%	
0.08	Single Track Single Track	Retained Cut - Ballasted Retained Fill - Ballasted	0	RF	\$2,800	\$0 \$0	30%	
0.08	Single Track Single Track Double Track	Retained Cut - Ballasted	0 0	RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30% 30%	
0.08	Single Track Single Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted	0	RF	\$2,800	\$0 \$0	30%	
	Single Track Single Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted	0 0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.09 0.10	Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Track: Embedded	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	
0.09	Single Track Single Track Double Track Double Track Double Track Track: Direct fixation Track: Embedded	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	\$1,891,1
0.09 0.10	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30% 30%	
0.09 0.10	Single Track Single Track Double Track Double Track O Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing	0 0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	\$1,891,1 \$1,497,1
0.09 0.10 0.11	Single Track Single Track Double Track Double Track O Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track Element Total	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	30% 30% 30% 30%	\$1,891,1 \$1,497,1
0.09 0.10 0.11	Single Track Single Track Double Track Double Track O Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track Element Total Element Total Ballasted Track Element Total Element Total	0 0 0 0 0 0 0 0 6,852 6,852 0 6,852	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,644,480 \$1,301,880 \$0 \$2,946,360	30% 30% 30% 30%	\$1,891,1 \$1,497,1 \$3,388,3
0.09 0.10 0.11	Single Track Single Track Double Track Double Track O Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total rnouts) Special Trackwork (5% of Track Cost)	0 0 0 0 0 0 0 0 6,852 6,852 0 6,852	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,644,480 \$1,301,880 \$0 \$2,946,360	30% 30% 30% 30%	\$1,891,1 \$1,497,1 \$3,388,3 \$169,4
0.09 0.10 0.11	Single Track Single Track Double Track Double Track O Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track Element Total Element Total Ballasted Track Element Total Element Total	0 0 0 0 0 0 0 0 6,852 6,852 0 6,852	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,644,480 \$1,301,880 \$0 \$2,946,360	30% 30% 30% 30%	\$1,891,1 \$1,497,1 \$3,388,3 \$169,4
0.09 0.10 0.11	Single Track Single Track Double Track Double Track O Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track Track: Special (switches, tu	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Element Total Element Total Retained Fill - Ballasted Element Total	0 0 0 0 0 0 0 0 6,852 6,852 0 6,852	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,644,480 \$1,301,880 \$0 \$2,946,360	30% 30% 30% 30%	\$1,891,1 \$1,497,1 \$3,388,3
0.09 0.10 0.11	Single Track Single Track Double Track Double Track O Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Element Total Element Total Retained Fill - Ballasted Element Total	0 0 0 0 0 0 0 0 6,852 6,852 0 6,852	RF RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,644,480 \$1,301,880 \$0 \$2,946,360	30% 30% 30% 30%	\$1,891,1 \$1,497,1 \$3,388,3 \$169,4

Hillsborough County MPO Transit Study System Planning CR-Dwtn West Downtown to west of Channelside Dr

	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20	STATIONS, STOPS, TERMII	NALS, INTERMODAL						
20.01	At-grade station, stop, shelter	r, mall, terminal, platform						
		Center Platform Station	0	EA	\$1,500,000	\$0	20%	\$(
		Element Total	0	EA		\$0		\$(
20.02	Aerial station, stop, shelter, m	nall, terminal, platform						
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		\$
20.03	Underground station, stop, sh	nelter, mall, terminal, platform N/A						
		Element Total	0	EA		\$0		\$
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc.						
		Element Total	1	LS		\$0		\$(
20.05	Joint development							
		N/A Element Total	1	LS		\$0		\$(
		Element Total	'	LS		φυ		Φ
20.06	Automobile parking multi-stor	ry structure Parking Garage	0	STL	\$12,000	\$0	20%	\$0
		Element Total	1	LS	\$12,000	\$0 \$0	20%	\$0
00.07								
20.07	Elevators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	\$0
		Escalator	0	EA	\$450,000	\$0	20%	\$(
		Element Total	1	LS	. ,	\$0		\$0
40	SITEWORK & SPECIAL CO							
40.01	Demolition, Clearing, Earthwo	ork Demolition Allowance - Low	6,852	RF	\$30	\$205,560	30%	\$267,228
		Demolition Allowance - Median	0,032	RF	\$50 \$50	\$203,300	30%	\$207,220
		Demolition Allowance - High	0	RF	\$90	\$0 \$0	30%	\$(
		Element Total	6,852	RF	ΨΟΟ	\$205,560	0070	\$267,228
40 O2	Site Utilities, Utility Relocation	n						
10.02	One Chinico, Chiny Holocation			D.E.		40=0.000		
			6 852	RF.	\$140	\$959 280	30%	\$1 247 064
		Utility Relocation Allowance - Low	6,852 0	RF RF	\$140 \$340	\$959,280 \$0	30% 30%	
			6,852 0 0	RF	\$140 \$340 \$570	\$959,280 \$0 \$0	30% 30% 30%	\$(
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median	0		\$340	\$0	30%	\$(\$(
40.03	Haz. mat'l, contam'd soil rem	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	0	RF RF	\$340	\$0 \$0	30%	\$(\$(
40.03	Haz. mat'l, contam'd soil rem	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	0	RF RF	\$340	\$0 \$0	30%	\$(\$(\$1,247,064
40.03	Haz. mat'l, contam'd soil reme	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments	0 0 6,852	RF RF	\$340 \$570	\$0 \$0 \$959,280	30% 30%	\$1,247,064 \$0 \$1,247,064 \$178,152 \$178,152
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance	0 0 6,852 6,852	RF RF RF	\$340 \$570	\$0 \$0 \$959,280 \$137,040	30% 30%	\$1,247,064 \$1,78,152
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total u. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance	6,852 6,852	RF RF RF LS	\$340 \$570	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780	30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total p. wetlands, historic/archeologic, parks	6,852 6,852	RF RF RF LS	\$340 \$570 \$20	\$0 \$0 \$959,280 \$137,040 \$137,040	30% 30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152
40.04		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total	6,852 6,852	RF RF RF LS	\$340 \$570 \$20	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780	30% 30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152 \$133,614
40.04	Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of	6,852 6,852 1 6,852	RF RF RF LS	\$340 \$570 \$20 \$15	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780 \$102,780	30% 30% 30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152 \$133,614
40.04	Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total	6,852 6,852	RF RF RF LS	\$340 \$570 \$20	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780	30% 30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152 \$133,614 \$133,614
40.04 40.05	Environmental mitigation, e.g Site structures including retai	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total s. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total	6,852 6,852 1 6,852 1	RF RF RF LS	\$340 \$570 \$20 \$15	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780 \$102,780	30% 30% 30% 30%	\$ \$1,247,06 \$178,15 \$178,15 \$133,61 \$133,61 \$71,26
40.04 40.05	Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total s. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping	6,852 6,852 1 6,852 1	RF RF RF LS	\$340 \$570 \$20 \$15	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780 \$102,780 \$54,816 \$54,816	30% 30% 30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152 \$133,614 \$71,26
40.04 40.05	Environmental mitigation, e.g Site structures including retai	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low	6,852 6,852 1 6,852 1 685	RF RF RF LS RF LS	\$340 \$570 \$20 \$15	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780 \$102,780 \$54,816 \$54,816	30% 30% 30% 30%	\$1,247,066 \$1,247,066 \$178,156 \$178,156 \$133,616 \$71,26 \$71,26
40.04 40.05	Environmental mitigation, e.g Site structures including retai	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total s. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median	6,852 6,852 1 6,852 1 6,852 1	RF RF RF LS RF LS	\$340 \$570 \$20 \$15 \$80 \$15 \$25	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780 \$102,780 \$54,816 \$54,816 \$102,780 \$0	30% 30% 30% 30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152 \$133,614 \$71,262 \$133,614 \$133,614 \$133,614
40.04 40.05	Environmental mitigation, e.g Site structures including retai	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - High	6,852 6,852 1 6,852 1 6,852 0 0	RF RF LS RF LS	\$340 \$570 \$20 \$15 \$80 \$15 \$25 \$40	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780 \$102,780 \$54,816 \$54,816 \$102,780 \$0 \$0	30% 30% 30% 30% 30% 30% 30% 30%	\$1,247,064 \$1,247,064 \$178,152 \$178,152 \$133,614 \$71,267 \$71,267 \$133,614
40.04 40.05	Environmental mitigation, e.g Site structures including retai	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median	6,852 6,852 1 6,852 1 6,852 1	RF RF RF LS RF LS	\$340 \$570 \$20 \$15 \$80 \$15 \$25	\$0 \$0 \$959,280 \$137,040 \$137,040 \$102,780 \$102,780 \$54,816 \$54,816 \$102,780 \$0	30% 30% 30% 30% 30%	\$ \$1,247,06 \$178,15 \$178,15 \$133,61 \$133,61 \$71,26 \$133,61 \$133,61

Hillsborough County MPO Transit Study System Planning CR-Dwtn West Downtown to west of Channelside Dr

	STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN EN	D DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
0.07	Automobile, bus, van acc	cessways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	3	EA	\$50,000	\$150,000	30%	\$195,00
		Parking Lots	0	STL	\$4,000	\$0	30%	\$
		Element Total	1	LS		\$150,000		\$195,00
80.0	Temporary Facilities and	other indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$86,469	25%	\$108,0
		Element Total	1	LS		\$86,469		\$108,08
50	SYSTEMS							
0.01	Train control and signals							
	-	Signal System	6,852	RF	\$140	\$959,280	15%	\$1,103,1
		Element Total	6,852	RF		\$959,280		\$1,103,17
0.02	Traffic signals and crossi	ing protection						
		Crossing Protection	3	EA	\$150,000	\$450,000	15%	\$517,5
		Element Total	3	EA		\$450,000		\$517,5
0.03	Traction power supply: s	substations						
		N/A						
		Element Total	0	EA		\$0		:
0.04	Traction power distribution	on: catenary and third rail						
		N/A						
		Element Total	0	RF		\$0		
0.05	Communications							
		Passenger Information System, Fiber Optic	6,852	RF	\$20	\$137,040	15%	\$157,5
		Passenger Information System, Station	0	EA	\$70,000	\$0	15%	
		Element Total	1	LS		\$137,040		\$157,5
0.06	Fare collection system a	• •						
		Fare Collection Element Total	0	EA LS	\$150,000	\$0 \$0	15%	
		Element Total	1	LS		\$0		
0.07	Central Control	N/A						
		Element Total	1	LS		\$0		
60	ROW, LAND, EXISTING	IMPROVEMENTS						
	Purchase or lease of rea							
		Right of Way Allowance - At Grade	6,852	RF	\$400	\$2,740,800	50%	\$4,111,2
		Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	+ ., ,=
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	
		Element Total	6,852	RF		\$2,740,800		\$4,111,2

Hillsborough County MPO Transit Study System Planning CR-East

CAT	STATIONING	3			UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN E	ND DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
	GUIDEWAY & TRACK							
	Guideway: At-grade ex	• •						
	Single Track	At Grade - Ballasted, Open	9,899	RF	\$250	\$2,474,750	25%	\$3,093,43
	Double Track	At Grade - Ballasted, Open Element Total	9,899	RF RF	\$420	\$0 \$2,474,750	25%	\$3,093,43
			-,	• ••				ΨΨ,,
1.02	Guideway: At-grade se	mi-exclusive (allows cross-traffic) N/A						
		Element Total	0	RF		\$0		\$
).03	Guideway: At-grade in							
		N/A Element Total	0	RF		\$0		\$
. 04	Oridanian Aprial struct							
	Guideway: Aerial struct Single Track	ure Aerial - Ballasted	0	RF	\$11,000	\$0	30%	9
	Single Track Single Track	Aerial - Ballasted Over Water	0	RF	\$11,000	\$0 \$0	30%	9
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	
	Double Track	Aerial - Ballasted Over Water	0	RF	\$16,500	\$0	30%	
		Element Total	0	RF		\$0		\$
	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	9
	Double Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$740	\$0 \$0	25%	9
						**		
0.06	Guideway: Undergroun	d cut & cover N/A						
		Element Total	0	RF		\$0		\$
0.07	Guideway: Undergroun							
		N/A Element Total	0	RF		\$0		\$
			v			ΨŪ		Ψ
	Guideway: Retained cu							
	Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	9
	Single Track Double Track	Retained Fill - Ballasted Retained Cut - Ballasted	0	RF RF	\$2,800	\$0 \$0	30% 30%	9
	Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted	0	RF	\$8,000 \$3,200	\$0 \$0	30%	9
		Element Total	0	RF	ψ0,200	\$0	0070	9
0.09	Track: Direct fixation							
		N/A						
		Element Total	0	RF		\$0		\$
0.10	Track: Embedded							
		N/A		DE		# 2		4
		Element Total	0	RF		\$0		\$
	Track: Ballasted	Delle shed Treedy	2.22		***	***	4501	00.700
	Single Track	Ballasted Track Reflected Track Refurbish Existing	9,899	RF	\$240 \$100	\$2,375,760	15%	\$2,732,12
	Double Track	Ballasted Track - Refurbish Existing Ballasted Track	9,899 0	RF RF	\$190 \$480	\$1,880,810 \$0	15% 15%	\$2,162,93 \$
		Element Total	9,899	RF	+ .00	\$4,256,570		\$4,895,05
0.12	Track: Special (switche	es, turnouts)						
-		Special Trackwork (5% of Track Cost)	5%			\$212,829	15%	\$244,75
		Element Total	1	LS		\$212,829		\$244,75
0.13	Track: Vibration and no	oise dampening						
		N/A		1.0		* -		
		Element Total	1	LS		\$0		\$

Hillsborough County MPO Transit Study System Planning CR-East Downtown to CL Rail (east of Acline St)

Demolition Allowance - Median 0 RF \$50 \$0 30%	ALLCTD TOTAL CONTGY COST		BASE COST	UNIT COST	UNIT	QTY	STATIONING Begin end description
Additional content Additio							TATIONS, STOPS, TERMINALS, INTERMODAL
Center Platform Station Quarter Platform Station Quarter Platform Station Quarter Platform Station Quarter Quarter Platform Station Quarter Qu							
20.02 Aerial station, stop, shelter, mall, terminal, platform	0 20%	0	\$0	\$1,500,000	EA	0	
Center Platform Station December Platform Station December Platform December	0	0	\$0		EA	0	Element Total
Center Platform Station Defend Station Defend Station Defend Station Defend							erial station, stop, shelter, mall, terminal, platform
20.03 Underground station, stop, shelter, mail, terminal, platform N/A	0 25%	O	\$0	\$15,000,000	EA	0	Center Platform Station
NA	0	0	\$0		EA	0	Element Total
Element Total							nderground station, stop, shelter, mall, terminal, platform
							N/A
N/A Element Total 1	D)	\$0		EA	0	Element Total
Element Total 1 LS							
NA	0	0	\$0		LS	1	
NA Element Total 1							sint development
20.06 Automobile parking multi-story structure Parking Garage D STL \$12,000 \$0 20%							·
Parking Garage	0	0	\$0		LS	1	Element Total
Element Total 1							utomobile parking multi-story structure
Eleavator Secalator Eleavator Secalator Seca				\$12,000		0	
Eleavator 0	0	J	\$0		LS	1	Element Total
Escalator							evators, escalators
Element Total							
40.01 Demolition, Clearing, Earthwork 40.01 Demolition, Clearing, Earthwork Demolition Allowance - Nedian Demolition Allowance - Hedian Demolition Allowance - Hedian Demolition Allowance - High Demolition Allowance - High Demolition Allowance - High Relement Total Relement T				\$450,000			
Demolition, Clearing, Earthwork Demolition Allowance - Low Demolition Allowance - Median Demolition Allowance - Median Demolition Allowance - High Demolition Allowance - Median Demolition Allowance - High Demolition Allowance Demoliti	J	,	φυ				Elononi Total
Demolition Allowance - Low 9,899 RF \$30 \$296,970 30% 200,000							
Demolition Allowance - Median Demolition Allowance - High Demolition Allowance	0 30% \$386,0	n	\$296 970	\$30	RF	9 899	
Demolition Allowance - High Demolition Allowance - Low Superior	· ·						
Element Total 9,899 RF \$296,970							
Utility Relocation Allowance - Low				,			
Utility Relocation Allowance - Low 9,899 RF \$140 \$1,385,860 30% \$1							ite Utilities Utility Relocation
Utility Relocation Allowance - Median 0 RF \$340 \$0 30%	0 30% \$1,801,6	0	\$1.385.860	\$140	RF	9.899	
Utility Relocation Allowance - High							•
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	0 30%	0	\$0		RF	0	· · · · · · · · · · · · · · · · · · ·
Hazardous Material Removal Allowance 9,899 RF \$20 \$197,980 30%	0 \$1,801,6)	\$1,385,860		RF	9,899	Element Total
Hazardous Material Removal Allowance 9,899 RF \$20 \$197,980 30%							az. mat'l, contam'd soil removal/mitigation, ground water treatments
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks Environmental Mitigation Allowance 9,899 RF \$15 \$148,485 30% Element Total 1 LS \$148,485 30% 40.05 Site structures including retaining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) 990 RF \$80 \$79,192 30% Element Total 1 LS \$79,192 40.06 Pedestrian / bike access and accommodation, landscaping Landscaping Allowance - Low 9,899 RF \$15 \$148,485 30% Landscaping Allowance - Median 0 RF \$25 \$0 30% Landscaping Allowance - High 0 RF \$40 \$0 30% Pedestrain Overpasses 0 EA \$800,000 \$0 30%	0 30% \$257,3	0	\$197,980	\$20	RF	9,899	
Environmental Mitigation Allowance 9,899 RF \$15 \$148,485 30%	0 \$257,3)	\$197,980		LS	1	Element Total
Element Total 1 LS \$148,485							nvironmental mitigation, e.g. wetlands, historic/archeologic, parks
40.05 Site structures including retaining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total 40.06 Pedestrian / bike access and accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median Landscaping Allowance - Median Landscaping Allowance - High Pedestrian Overpasses 0 EA \$800,000 \$0 30%				\$15		9,899	Enviromental Mitigation Allowance
Retaining & Sound Wall Allowance (10% of Ballasted Track Length) 990 RF \$80 \$79,192 30%	5 \$193,0	5	\$148,485		LS	1	Element Total
Ballasted Track Length 990 RF							
Element Total 1 LS \$79,192		_					· · · · · · · · · · · · · · · · · · ·
40.06 Pedestrian / bike access and accommodation, landscaping Landscaping Allowance - Low 9,899 RF \$15 \$148,485 30% Landscaping Allowance - Median 0 RF \$25 \$0 30% Landscaping Allowance - High 0 RF \$40 \$0 30% Pedestrain Overpasses 0 EA \$800,000 \$0 30%				\$80			
Landscaping Allowance - Low 9,899 RF \$15 \$148,485 30% Landscaping Allowance - Median 0 RF \$25 \$0 30% Landscaping Allowance - High 0 RF \$40 \$0 30% Pedestrain Overpasses 0 EA \$800,000 \$0 30%	_ φ102,3	-	Ψ10,102				LIGHTON TOWN
Landscaping Allowance - Median 0 RF \$25 \$0 30% Landscaping Allowance - High 0 RF \$40 \$0 30% Pedestrain Overpasses 0 EA \$800,000 \$0 30%							· · · · · · · · · · · · · · · · · · ·
Landscaping Allowance - High 0 RF \$40 \$0 30% Pedestrain Overpasses 0 EA \$800,000 \$0 30%							· · · · · · · · · · · · · · · · · · ·
Pedestrain Overpasses 0 EA \$800,000 \$0 30%							· -
· ·							, ,
Artwork (1% of Guideway & Stations) 1% \$24,748 30%				\$800,000	EA		·
Element Total 1 LS \$173,233					10		

Hillsborough County MPO Transit Study System Planning CR-East Downtown to CL Rail (east of Acline St)

CAT	STATIO	NING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
0.07	Automobile, bus, v	an access	ways including roads, parking lots						
			Roadway Modifications Allow Full						
			Intersection	5	EA	\$50,000	\$250,000	30%	\$325,0
			Parking Lots	0	STL	\$4,000	\$0	30%	, , .
			Element Total	1	LS	¥ 1,122	\$250,000		\$325,0
0.08	Temporary Facilitie	es and othe	er indirect costs during construction						
	, ,		Temporary Facilities (5% of Category 40)	5.0%			\$126,586	25%	\$158,2
			Element Total	1	LS		\$126,586		\$158,2
50	SYSTEMS								
0.01	Train control and s	sianals							
		U 1 1	Signal System	9,899	RF	\$140	\$1,385,860	15%	\$1,593,7
			Element Total	9,899	RF	Ψ	\$1,385,860	,,,	\$1,593,7
50.02	Traffic signals and	crossing p	rotection						
		31	Crossing Protection	5	EA	\$150,000	\$750,000	15%	\$862,5
			Element Total	5	EA	ψ100,000	\$750,000	,	\$862,5
0.03	Traction power su	pply: subst	tations						
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	N/A						
			Element Total	0	EA		\$0		
50.04	Traction power dis	stribution: c	catenary and third rail						
	·		N/A						
			Element Total	0	RF		\$0		
50.05	Communications								
			Passenger Information System, Fiber Optic	9,899	RF	\$20	\$197,980	15%	\$227,6
			Passenger Information System, Station	0	EA	\$70,000	\$0	15%	
			Element Total	1	LS		\$197,980		\$227,6
0.06	Fare collection sys	stem and e	quipment						
			Fare Collection	0	EA	\$150,000	\$0	15%	
			Element Total	1	LS		\$0		
50.07	Central Control								
			N/A Element Total	1	LS		\$0		
				·			Ψ.		
60	ROW, LAND, EXIS Purchase or lease								
			Right of Way Allowance - At Grade	9.899	RF	\$400	\$3,959,600	50%	\$5,939,4
			Right of Way Allowance - Aerial	0,000	RF	\$300	\$0	50%	
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	
			Element Total	9,899	RF	ΨΣΟΟ	\$3,959,600	2070	\$5,939,4

Hillsborough County MPO Transit Study System Planning CR-East

CL Rail (east of Acline St) to I75/ LRT Sta

TRANSIT MODE: Commuter F	≺aıı
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10 10.01	GUIDEWAY & TRACK ELEM Guideway: At-grade exclusive	WENTS						
10.01		a right of way						
	Single Track	At Grade - Ballasted, Open	22,864	RF	\$250	\$5,716,000	25%	\$7,145,00
	Double Track	At Grade - Ballasted, Open	0	RF	\$420	\$0	25%	\$1,140,000
	Double Track	Element Total	22,864	RF	Ψ+20	\$5,716,000	2070	\$7,145,000
10.02	Guideway: At-grade semi-exc	clusive (allows cross-traffic)						
		N/A Element Total	0	RF		\$0		\$
			U	KI		φυ		Ψ
10.03	Guideway: At-grade in mixed	l traffic N/A						
		Element Total	0	RF		\$0		\$
10.04	Guideway: Aerial structure	Assist Dellasted		DE.	#11.000	40	0.00/	•
	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	\$40,070,000
	Single Track	Aerial - Ballasted Over Water	800	RF	\$11,900	\$9,520,000	30%	\$12,376,000
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	\$
	Double Track	Aerial - Ballasted Over Water Element Total	0 800	RF RF	\$16,500	\$0 \$9,520,000	30%	\$12,376,000
		Liement Total	000	IXI		ψ9,020,000		Ψ12,070,000
10.05	Guideway: Built-up fill	At Grade - Ballasted, Built-up	0	RF	Ф440	# 0	0.50/	Φ.
	Single Track Double Track	At Grade - Ballasted, Built-up At Grade - Ballasted, Built-up	0		\$440 \$740	\$0 *0	25%	\$(\$(
	Double Hack	Element Total	0	RF RF	\$740	\$0 \$0	25%	\$(
10 06	Guideway: Underground cut	& cover						
10.00	Guideway. Officerground cut of	N/A						
		Element Total	0	RF		\$0		\$(
40.07	0.11							
10.07	Guideway: Underground tunn	nel N/A						
		Element Total	0	RF		\$0		\$0
10.08	Guideway: Retained cut or fil							
	Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	\$(
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	\$0
	Double Track	Retained Cut - Ballasted	0	RF	\$8,000	\$0	30%	\$0
	Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	\$(
		Element Total	0	RF		\$0		\$(
10.09	Track: Direct fixation	N/A						
		N/A Element Total	0	RF		\$0		\$(
						•		•
10.10	Track: Embedded	N/A						
		N/A Element Total	0	RF		\$0		\$(
						**		*
10.11	Track: Ballasted	2						
	Single Track	Ballasted Track	23,664	RF	\$240	\$5,679,360	15%	\$6,531,264
	Devisia Territ	Ballasted Track - Refurbish Existing	23,664	RF	\$190	\$4,496,160	15%	\$5,170,584
	Double Track	Ballasted Track Element Total	23,664	RF RF	\$480	\$0 \$10,175,520	15%	\$0 \$11,701,848
			-,			. , .,		. , . ,
10.12	Track: Special (switches, tur	,				AFOO == -	4501	*
		Special Trackwork (5% of Track Cost) Element Total	5% 1	LS		\$508,776 \$508,776	15%	\$585,092 \$585,092
		Element Total	1	LO		φυυσ,//6		φυ ο υ,09,
10.13	Track: Vibration and noise da	ampening N/A						

Hillsborough County MPO Transit Study System Planning CR-East CL Rail (east of Acline St) to I75/ LRT Sta

217	SIT MODE: Commuter Rail				11507	DACE	ALLOTO	TOTA:
CAT	STATIONING	DESCRIPTION	OTV	LINIT	UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
20	STATIONS, STOPS, TERMI	NAI S INTERMODAL						
	At-grade station, stop, shelte	•						
20.01	Al-grade station, stop, shelte	Center Platform Station	0	EA	\$1,500,000	\$0	20%	\$(
		Element Total	0	EA	Ψ1,000,000	\$0	2070	\$
		Elomont Total	Ü	_, ,		ΨΟ		•
20.02	Aerial station, stop, shelter, r	mall, terminal, platform						
	, , , , , , , , , , , , , , , , , ,	Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		\$
20.03	Underground station, stop, s	helter, mall, terminal, platform						
		N/A						
		Element Total	0	EA		\$0		\$
20.04	Other stations, landings, tern	ninals: Intermodal, ferry, trolley, etc.						
		N/A Element Total	1	LS		\$0		\$
		Liement Total		LO		ΨΟ		Ψ
20.05	Joint development							
_0.00	uo i olopinoit	N/A						
		Element Total	1	LS		\$0		\$
			•	-		,		·
20.06	Automobile parking multi-sto	ry structure						
		Parking Garage	0	STL	\$12,000	\$0	20%	\$
		Element Total	1	LS		\$0		\$
20.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	\$
		Escalator	0	EA	\$450,000	\$0	20%	\$
		Element Total	1	LS		\$0		\$(
40	SITEWORK & SPECIAL CO	SHOITIONS						
	Demolition, Clearing, Earthw							
10.01	Bomonaon, Glodinig, Editiv	Demolition Allowance - Low	22,864	RF	\$30	\$685,920	30%	\$891,69
		Demolition Allowance - Median	800	RF	\$50	\$40,000	30%	\$52,00
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$
		Element Total	23,664	RF		\$725,920		\$943,69
40.02	Site Utilities, Utility Relocation	n						
		Utility Relocation Allowance - Low	22,864	RF	\$140	\$3,200,960	30%	\$4,161,24
		Utility Relocation Allowance - Median	800	RF	\$340	\$272,000	30%	\$353,60
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$
		Element Total	23,664	RF		\$3,472,960		\$4,514,84
40.00								
40.03	Haz. mat'i, contam'd soil rem	noval/mitigation, ground water treatments Hazardous Material Removal Allowance	00.004	DE	# 00	£470.000	200/	# 045.00
		Element Total	23,664	RF LS	\$20	\$473,280 \$473,280	30%	\$615,26 \$615,26
		Element Total	'	LS		Φ473,200		φ013,20 ⁴
40 N4	Environmental mitigation e.c	g. wetlands, historic/archeologic, parks						
.0.04	om.om.armaganon, e.g	Enviromental Mitigation Allowance	23,664	RF	\$15	\$354,960	30%	\$461,448
		Element Total	1	LS	Ψισ	\$354,960	2270	\$461,448
						,,000		+ , , , , ,
40.05	Site structures including reta	ining walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	2,366	RF	\$80	\$189,312	30%	\$246,10
		Element Total	1	LS		\$189,312		\$246,10
40.06	Pedestrian / bike access and	accommodation, landscaping				,		
		Landscaping Allowance - Low	22,864	RF	\$15	\$342,960	30%	\$445,84
		Landscaping Allowance - Median	800	RF	\$25	\$20,000	30%	\$26,00
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$400.00
		Artwork (1% of Guideway & Stations)	1%			\$152,360	30%	\$198,068
		Element Total	1	LS		\$515,320		\$669,91

Hillsborough County MPO Transit Study System Planning CR-East

CL Rail (east of Acline St) to I75/ LRT Sta

RANSIT MODE: Commuter Rail
NAMOTI MODE. COMMITTEE NAM

CAT	STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
40.07	Automobile, bus, van access	sways including roads, parking lots						
	, ,	Roadway Modifications Allow Full						
		Intersection	11	EA	\$50,000	\$550,000	30%	\$715,00
		Parking Lots	0	STL	\$4,000	\$0	30%	\$
		Element Total	1	LS	•	\$550,000		\$715,00
40.08	Temporary Facilities and oth	ner indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$314,088	25%	\$392,61
		Element Total	1	LS		\$314,088		\$392,61
50	SYSTEMS							
	Train control and signals							
00.0.	Train control and digitals	Signal System	23,664	RF	\$140	\$3,312,960	15%	\$3,809,90
		Element Total	23,664	RF	Ψσ	\$3,312,960	1070	\$3,809,904
50.02	Traffic signals and crossing	protection						
		Crossing Protection	11	EA	\$150,000	\$1,650,000	15%	\$1,897,500
		Element Total	11	EA	· · ·	\$1,650,000		\$1,897,500
50.03	Traction power supply: subs	stations						
		N/A						
		Element Total	0	EA		\$0		\$0
50.04	Traction power distribution:	•						
		N/A						
		Element Total	0	RF		\$0		\$(
50.05	Communications							
		Passenger Information System, Fiber Optic	23,664	RF	\$20	\$473,280	15%	\$544,27
		Passenger Information System, Station	0	EA	\$70,000	\$0	15%	\$ 511.03
		Element Total	1	LS		\$473,280		\$544,27
50.06	Fare collection system and e		•		# 450.000	00	450/	•
		Fare Collection	0	EA	\$150,000	\$0	15%	\$(
		Element Total	1	LS		\$0		\$(
50.07	Central Control	N/A						
		Element Total	1	LS		\$0		\$0
60	ROW, LAND, EXISTING IM	PROVEMENTS						
	Purchase or lease of real es							
		Right of Way Allowance - At Grade	22,864	RF	\$400	\$9,145,600	50%	\$13,718,400
		Right of Way Allowance - Aerial	800	RF	\$300	\$240,000	50%	\$360,000
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$0
		Element Total	23,664	RF		\$9,385,600		\$14,078,400

Hillsborough County MPO Transit Study System Planning CR-East I75/ LRT Sta to US98 at CL

CAT NO.	STATIONING BEGIN ENI	D DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	CONTGY	TOTAL COST
10	GUIDEWAY & TRACK E	LEMENTS						
10.01	Guideway: At-grade exclu	usive right-of-way						
	Single Track	At Grade - Ballasted, Open	95,680	RF	\$250	\$23,920,000	25%	\$29,900,0
	Double Track	At Grade - Ballasted, Open	0	RF	\$420	\$0	25%	;
		Element Total	95,680	RF		\$23,920,000		\$29,900,0
10.02	Guideway: At-grade semi	-exclusive (allows cross-traffic)						
	, ,	N/A						
		Element Total	0	RF		\$0		;
10.03	Guideway: At-grade in mi							
		N/A Element Total	0	RF		\$0		
10.04	Guideway: Aerial structur							
10.04	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	
	Single Track	Aerial - Ballasted Over Water	0	RF	\$11,900	\$0	30%	
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	
	Double Track	Aerial - Ballasted Over Water	0			\$0 \$0	30%	
	Double Track	Element Total	0	RF RF	\$16,500	\$0	30%	
10 05	Guideway: Built-up fill							
10.00	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	
		Element Total	0	RF		\$0		
0.06	Guideway: Underground	cut & cover						
	,g	N/A						
		Element Total	0	RF		\$0		
10 07	Guideway: Underground	tunnel						
10.01	Caldoway. Chaolground	N/A						
		Element Total	0	RF		\$0		;
10.08	Guideway: Retained cut of	or fill						
	Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	:
	Double Track	Retained Cut - Ballasted	0	RF	\$8,000	\$0	30%	
	Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	
		Element Total	0	RF		\$0		
0.09	Track: Direct fixation							
		N/A						
		Element Total	0	RF		\$0		
10.10	Track: Embedded							
		N/A						
		Element Total	0	RF		\$0		
0.11	Track: Ballasted							
	Single Track	Ballasted Track	95,680	RF	\$240	\$22,963,200	15%	\$26,407,6
		Ballasted Track - Refurbish Existing	95,680	RF	\$190	\$18,179,200	15%	\$20,906,0
	Double Track	Ballasted Track Element Total	95,680	RF RF	\$480	\$0 \$41,142,400	15%	\$47,313,7
		Ziomone Fotor	23,300			Ψ,. 12,100		ψ,σ.ισ, <i>ι</i>
10.12	Track: Special (switches					00.0== 10=	4501	AC 227 -
		Special Trackwork (5% of Track Cost) Element Total	5% 1	LS		\$2,057,120 \$2,057,120	15%	\$2,365,6 \$2,365,6
			ı	LO		ΨΖ,ΟΟΙ, ΙΖΟ		Ψ2,505,0
10.13	Track: Vibration and nois	. •						
10.13	Track: Vibration and nois	e dampening N/A Element Total	1	LS		\$0		

Hillsborough County MPO Transit Study System Planning CR-East I75/ LRT Sta to US98 at CL

CAT NO.	STATIONING BEGIN ENI	D DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20	STATIONS, STOPS, TE	RMINALS, INTERMODAL						
		elter, mall, terminal, platform						
		Center Platform Station	2	EA	\$1,500,000	\$3,000,000	20%	\$3,600,000
		Element Total	2	EA		\$3,000,000		\$3,600,000
20.02	Aerial station, stop, shelt	· · · · · · · · · · · · · · · · · · ·						
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$0
		Element Total	0	EA		\$0		\$0
20.03	Underground station, sto	p, shelter, mall, terminal, platform N/A						
		Element Total	0	EA		\$0		\$0
20.04	Other stations, landings,	terminals: Intermodal, ferry, trolley, etc.						
		N/A Element Total	1	LS		\$0		\$0
20.05	Joint development	N/A						
		Element Total	1	LS		\$0		\$0
20.06	Automobile parking multi	story structure						
20.00	Automobile parking multi-	Parking Garage	0	STL	\$12,000	\$0	20%	\$0
		Element Total	1	LS	. ,	\$0		\$0
20.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	\$0
		Escalator	0	EA	\$450,000	\$0	20%	\$0
		Element Total	1	LS		\$0		\$0
40	SITEWORK & SPECIAL	CONDITIONS						
	Demolition, Clearing, Ear							
		Demolition Allowance - Low	95,680	RF	\$30	\$2,870,400	30%	\$3,731,520
		Demolition Allowance - Median	0	RF	\$50	\$0	30%	\$0
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$0
		Element Total	95,680	RF		\$2,870,400		\$3,731,520
40.02	Site Utilities, Utility Reloc	ation						
		Utility Relocation Allowance - Low	95,680	RF	\$140	\$13,395,200	30%	\$17,413,760
		Utility Relocation Allowance - Median	0	RF	\$340	\$0	30%	\$0
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$0
		Element Total	95,680	RF		\$13,395,200		\$17,413,760
40.03	Haz. mat'l, contam'd soil	removal/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	95,680	RF	\$20	\$1,913,600	30%	\$2,487,680
		Element Total	1	LS		\$1,913,600		\$2,487,680
40.04	Environmental mitigation	, e.g. wetlands, historic/archeologic, parks						
		Enviromental Mitigation Allowance	95,680	RF	\$15	\$1,435,200	30%	\$1,865,760
		Element Total	1	LS		\$1,435,200		\$1,865,760
40.05	Site structures including	retaining walls, sound walls						
		Retaining & Sound Wall Allowance (10% of						
		Ballasted Track Length)	9,568	RF	\$80	\$765,440	30%	\$995,072
		Element Total	1	LS		\$765,440		\$995,072
40.06	Pedestrian / bike access	and accommodation, landscaping						
		Landscaping Allowance - Low	95,680	RF	\$15	\$1,435,200	30%	\$1,865,760
		Landscaping Allowance - Median	0	RF	\$25	\$0	30%	\$0
		Landscaping Allowance - High	0	RF	\$40	\$0	30%	\$0
		Pedestrain Overpasses	0	EA	\$800,000	\$0	30%	\$0
		Artwork (1% of Guideway & Stations)	1%			\$269,200	30%	\$349,960
		Element Total	1	LS		\$1,704,400	·	\$2,215,720

Hillsborough County MPO Transit Study System Planning CR-East 175/ LRT Sta to US98 at CL

CAT	QTATI.	ONING				UNIT	BASE	ALLCTD	TOTAL
			DESCRIPTION	OTV	LINUT				
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
10.07	Automobile, bus,	van access	ways including roads, parking lots						
			Roadway Modifications Allow Full Intersection	48	EA	\$50,000	\$2,400,000	30%	\$3,120,00
			Parking Lots	1,000	STL	\$4,000	\$4,000,000	30%	\$5,120,00
			Element Total	1,000	LS	\$4,000	\$6,400,000	30 /0	\$8,320,00
			2.56.1. 1.544.	·			ψο, .σο,σσσ		4 0,020,00
40.08	Temporary Facili	ties and othe	er indirect costs during construction						
			Temporary Facilities (5% of Category 40)	5.0%			\$1,424,212	25%	\$1,780,26
			Element Total	1	LS		\$1,424,212		\$1,780,26
50	SYSTEMS								
50.01	Train control and	l signals							
			Signal System	95,680	RF	\$140	\$13,395,200	15%	\$15,404,48
			Element Total	95,680	RF		\$13,395,200		\$15,404,48
50.02	Traffic signals an	nd crossing p	protection						
			Crossing Protection	48	EA	\$150,000	\$7,200,000	15%	\$8,280,00
			Element Total	48	EA		\$7,200,000		\$8,280,00
50.03	Traction power s	upply: subs	tations						
	•		N/A						
			Element Total	0	EA		\$0		\$
50 04	Traction nower d	listribution: (catenary and third rail						
00.04	rraction power a	iotribution. (N/A						
			Element Total	0	RF		\$0		\$
F0 0F	0								
50.05	Communications	i	Passenger Information System, Fiber Optic	95,680	RF	\$20	\$1,913,600	15%	\$2,200,64
			Passenger Information System, Station	95,000	EA	\$70,000	\$140,000	15%	\$2,200,04
			Element Total	1	LS	Ψίο,σσο	\$2,053,600	1070	\$2,361,64
50.06	Fare collection s	ystem and e	quipment Fare Collection	2	EA	\$150,000	\$300,000	15%	\$345,00
			Element Total	1	LS	ψ100,000	\$300,000	1070	\$345,00
E0 07	Cantual Cantual								
50.07	Central Control		N/A						
			Element Total	1	LS		\$0		\$0
60	ROW, LAND, EX	(ISTING IMF	PROVEMENTS						
	Purchase or leas								
			Right of Way Allowance - At Grade	95,680	RF	\$400	\$38,272,000	50%	\$57,408,00
			Right of Way Allowance - Aerial	0	RF	\$300	\$0	50%	\$
			Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$(
			Element Total	95,680	RF		\$38,272,000		\$57,408,000

Hillsborough County MPO Transit Study System Planning CR-I4 East CR-Dwtn toward east to N County Line Rd

	SIT MODE: Commuter Rai	•			LIMIT	DACE	ALLCTD	TOTAL
CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	COST
10	GUIDEWAY & TRACK EL							
0.01	Guideway: At-grade exclus		_					_
	Single Track	At Grade - Ballasted, Open	0	RF	\$250	\$0	25%	\$
	Double Track Double Track	At Grade - Ballasted, Open At Grade - Ballasted, Highway Median	0 121,209	RF RF	\$420 \$900	\$0 \$109,088,100	25% 25%	\$ \$136,360,12
	Double Hack	Element Total	121,209	RF	\$900	\$109,088,100	25%	\$136,360,12
		Liement Total	121,209	IXI		ψ109,000,100		ψ130,300,12
10.02	Guideway: At-grade semi-	exclusive (allows cross-traffic)						
		N/A						
		Element Total	0	RF		\$0		9
10.03	Guideway: At-grade in mix							
		N/A Element Total	0	RF		\$0		\$
		Liement Total	0	IXI		ΨΟ		Ψ
10.04	Guideway: Aerial structure							
	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	\$
	Single Track	Aerial - Ballasted Over Water	0	RF	\$11,900	\$0	30%	\$
	Double Track	Aerial - Ballasted	4,200	RF	\$15,200	\$63,840,000	30%	\$82,992,00
	Double Track	Aerial - Ballasted Over Water	600	RF	\$16,500	\$9,900,000	30%	\$12,870,00
		Element Total	4,800	RF		\$73,740,000		\$95,862,00
10.05	Cuidowor Duilt fil							
10.05	Guideway: Built-up fill Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	\$
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	\$
	Double Hack	Element Total	0	RF	ψ, 10	\$0	2070	\$
10.06	Guideway: Underground co	ut & cover						
		N/A						
		Element Total	0	RF		\$0		\$
10.07	Guideway: Underground to							
		N/A Element Total	0	RF		\$0		<u></u>
		Element Total	U	KF		\$0		\$
10 08	Guideway: Retained cut or	fill						
. 0.00	Single Track	Retained Cut - Ballasted	0	RF	\$6,800	\$0	30%	\$
	Single Track	Retained Fill - Ballasted	0	RF	\$2,800	\$0	30%	\$
	Double Track	Retained Cut - Ballasted	0	RF	\$8,000	\$0	30%	\$
	Double Track	Retained Fill - Ballasted	0	RF	\$3,200	\$0	30%	\$
		Element Total	0	RF		\$0		\$
0.09	Track: Direct fixation	A1/A						
		N/A	0	DE		0.2		\$
		Element Total	Ü	RF		\$0		\$
0.10	Track: Embedded							
J. 10	aon. Embouada	N/A						
		Element Total	0	RF		\$0		\$
			_			,		·
0.11	Track: Ballasted							
	Single Track	Ballasted Track	0	RF	\$240	\$0	15%	\$
		Ballasted Track - Refurbish Existing	0	RF	\$190	\$0	15%	\$
	Double Track	Ballasted Track	126,009	RF	\$480	\$60,484,320	15%	\$69,556,96
		Element Total	126,009	RF		\$60,484,320		\$69,556,96
0 40	Trooks Chaoial (assistate 4	turnouto)						
U. 12	Track: Special (switches,	•	E0/			¢2 024 240	4 5 0 /	¢0 477 04
		Special Trackwork (5% of Track Cost) Element Total	5% 1	LS		\$3,024,216 \$3,024,216	15%	\$3,477,84 \$3,477,84
		Lienieni Totai	'	LO		φυ,υΖ4,Ζ 10		φυ,411,04
0.13	Track: Vibration and noise	e dampening						
J. 10	Vibration and Holse	N/A						
		Element Total	1	LS		\$0		\$
			•	-		7.0		•

Hillsborough County MPO Transit Study System Planning CR-I4 East

CR-Dwtn toward east to N County Line Rd

CAT	SIT MODE: Commi					LINIT	DACE	ALLOTO	TOTAL
CAT			DESCRIPTION	OTV	LIMIT	UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN	END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
20			NALS, INTERMODAL						
20.01	At-grade station, s	top, sneitei	, mall, terminal, platform Center Platform Station	4	ΕΛ	¢1 500 000	¢6 000 000	20%	\$7,200,00
			Element Total	4	EA EA	\$1,500,000	\$6,000,000 \$6,000,000	20%	\$7,200,00
			Liement Total	4	LA		φ0,000,000		φ1,200,00
20.02	Aerial station, stop	, shelter, m	nall, terminal, platform						
			Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
			Element Total	0	EA		\$0		\$
20.03	Underground station	on, stop, sh	nelter, mall, terminal, platform						
			N/A Element Total	0	EA		\$0		\$
			2.56.1. 7.5.4.	v			Ψū		*
20.04	Other stations, lan	dings, term	inals: Intermodal, ferry, trolley, etc. N/A						
			Element Total	1	LS		\$0		\$
									Ť
20.05	Joint development		N/A						
			Element Total	1	LS		\$0		\$
							4 0		¥
20.06	Automobile parking	g multi-stor	•	•	CT'	640.000	A C	000/	•
			Parking Garage Element Total	<u> </u>	STL LS	\$12,000	\$0 \$0	20%	\$ \$
			Liement Total	'	LO		ΨΟ		Ψ
20.07	Elevators, escalato	ors							
			Eleavator	8	EA	\$200,000	\$1,600,000	20%	\$1,920,00
			Escalator Element Total	<u>4</u>	EA LS	\$450,000	\$1,800,000 \$3,400,000	20%	\$2,160,00 \$4,080,00
			Liement Total	'	LO		\$3,400,000		\$4,000,00
40	SITEWORK & SPI	ECIAL CO	NDITIONS						
	Demolition, Clearing								
			Demolition Allowance - Low	121,209	RF	\$30	\$3,636,270	30%	\$4,727,15
			Demolition Allowance - Median	4,800	RF	\$50	\$240,000	30%	\$312,00
			Demolition Allowance - High	0	RF	\$90	\$0	30%	\$
			Element Total	126,009	RF		\$3,876,270		\$5,039,15
40.02	Site Utilities, Utility	Relocation	1						
			Utility Relocation Allowance - Low	121,209	RF	\$140	\$16,969,260	30%	\$22,060,03
			Utility Relocation Allowance - Median	4,800	RF	\$340	\$1,632,000	30%	\$2,121,60
			Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$
			Element Total	126,009	RF		\$18,601,260		\$24,181,63
40.03	Haz. mat'l, contam	'd soil rem	oval/mitigation, ground water treatments						
			Hazardous Material Removal Allowance	126,009	RF	\$20	\$2,520,180	30%	\$3,276,23
			Element Total	1	LS		\$2,520,180		\$3,276,23
40.04	Environmental miti	gation, e.a	. wetlands, historic/archeologic, parks						
		_ ,.9	Enviromental Mitigation Allowance	126,009	RF	\$15	\$1,890,135	30%	\$2,457,17
			Element Total	1	LS		\$1,890,135		\$2,457,17
	Site structures incl	udina retai	ning walls, sound walls						
	Site structures incl	uding retai	ning walls, sound walls Retaining & Sound Wall Allowance (10% of						
	Site structures incl	uding retai	ning walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length)	12.601	RF	\$80	\$1,008.072	30%	\$1,310.49
	Site structures incl	uding retai	Retaining & Sound Wall Allowance (10% of	12,601	RF LS	\$80	\$1,008,072 \$1,008,072	30%	\$1,310,49 \$1,310,49
40.05			Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total			\$80		30%	
40.05			Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping	1	LS		\$1,008,072		\$1,310,49
40.05			Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low	121,209	LS RF	\$15	\$1,008,072 \$1,818,135	30%	\$1,310,49 \$2,363,57
40.05			Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median	1 121,209 4,800	LS RF RF	\$15 \$25	\$1,008,072 \$1,818,135 \$120,000	30% 30%	\$1,310,49 \$2,363,57 \$156,00
40.05			Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low	121,209	LS RF	\$15	\$1,008,072 \$1,818,135	30%	\$1,310,49 \$2,363,57

Hillsborough County MPO Transit Study System Planning CR-I4 East CR-Dwtn toward east to N County Line Rd

CAT	STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN ENI	D DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
		Element Total	1	LS		\$7,026,416		\$9,134,34
0.07	Automobile, bus, van acc	essways including roads, parking lots						
		Roadway Modifications Allow Full						
		Intersection	0	EA	\$50,000	\$0	30%	\$
		Parking Lots	2,000	STL	\$4,000	\$8,000,000	30%	\$10,400,00
		Element Total	1	LS		\$8,000,000		\$10,400,00
0.08	Temporary Facilities and	other indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$2,146,117	25%	\$2,682,64
		Element Total	1	LS		\$2,146,117		\$2,682,64
50	SYSTEMS							
0.01	Train control and signals							
		Signal System	126,009	RF	\$140	\$17,641,260	15%	\$20,287,44
		Element Total	126,009	RF		\$17,641,260		\$20,287,44
0.02	Traffic signals and crossi		0	ΕΛ.	\$150,000	\$0	15%	Ş
		Crossing Protection Element Total	0	EA EA	\$150,000	\$0	13%	
0.03	Traction power supply: s	substations						
		N/A						
		Element Total	0	EA		\$0		Ç
50.04	Traction power distribution	•						
		N/A Element Total	0	RF		\$0		
0.05	Communications							
		Passenger Information System, Fiber Optic	126,009	RF	\$20	\$2,520,180	15%	\$2,898,20
		Passenger Information System, Station	<u>4</u>	EA	\$70,000	\$280,000	15%	\$322,00
		Element Total	1	LS		\$2,800,180		\$3,220,20
0.06	Fare collection system ar	nd equipment						
		Fare Collection	4	EA	\$150,000	\$600,000	15%	\$690,00
		Element Total	1	LS		\$600,000		\$690,00
0.07	Central Control	N/A						
		Element Total	1	LS		\$0		(
60	ROW, LAND, EXISTING	IMPROVEMENTS						
0.01	Purchase or lease of real							
		Right of Way Allowance - At Grade	121,209	RF	\$400	\$48,483,600	50%	\$72,725,40
		Right of Way Allowance - Aerial	4,800	RF	\$300	\$1,440,000	50%	\$2,160,00
		Right of Way Allowance - Underground	126,000	RF	\$250	\$0	50%	\$74,885,40
		Element Total	126,009	RF		\$49,923,600		\$14,885,40

Hillsborough County MPO Transit Study System Planning CR-Sarasota CL Rail (east of Acline St) to Big Bend/ LRT Sta

CAT NO.	CLVLIUWING				UNIT	BASE	ALLCTD	TOTAL
	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
10	GUIDEWAY & TRACK EI							
0.01	Guideway: At-grade exclu		FO 440	DE	ФОГО	¢44.707.000	050/	#40.400.7
	Single Track	At Grade - Ballasted, Open	59,148	RF	\$250	\$14,787,000	25%	\$18,483,7
	Double Track	At Grade - Ballasted, Open Element Total	59,148	RF RF	\$420	\$0 \$14,787,000	25%	\$18,483,7
		Element Total	59,146	KF		\$14,767,000		Φ10,403,7
0.02	Guideway: At-grade semi-	exclusive (allows cross-traffic)						
		N/A Element Total	0	RF		\$0		
0.03	Guideway: At-grade in mix	ked traffic						
		N/A						
		Element Total	0	RF		\$0		
0.04	Guideway: Aerial structure							
	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	
	Single Track	Aerial - Ballasted Over Water	2,000	RF	\$11,900	\$23,800,000	30%	\$30,940,0
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	
	Double Track	Aerial - Ballasted Over Water	0	RF	\$16,500	\$0	30%	
		Element Total	2,000	RF		\$23,800,000		\$30,940,0
n ns	Guideway: Built-up fill							
0.00	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up	0	RF	\$740	\$0	25%	
	Double Truck	Element Total	0	RF	Ψ140	\$0	2070	
0.06	Guideway: Underground of	cut & cover						
		N/A						
		Element Total	0	RF		\$0		
10.07	Guideway: Underground t	unnel						
		N/A		DE		40		
		N/A Element Total	0	RF		\$0		:
10 09	: Guidaway, Patainad cut o	Element Total	0	RF		\$0		:
10.08	Guideway: Retained cut o	Element Total			008.82		30%	
10.08	Single Track	Fill Retained Cut - Ballasted	0	RF	\$6,800 \$2,800	\$0	30% 30%	:
10.08	Single Track Single Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted	0	RF RF	\$2,800	\$0 \$0	30%	
10.08	Single Track Single Track Double Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted	0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30% 30%	
10.08	Single Track Single Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted	0	RF RF RF RF	\$2,800	\$0 \$0 \$0 \$0	30%	
10.08	Single Track Single Track Double Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted	0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track	r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
10.09	Single Track Single Track Double Track Double Track	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	30% 30%	
10.09	Single Track Single Track Double Track Double Track Track: Direct fixation	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
10.09 10.10	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	30% 30%	
10.09 10.10	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Blement Total	0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	\$16,876,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$11,618,120	30% 30% 30% 30%	\$16,876,8- \$13,360,83
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$11,675,520 \$11,618,120 \$0	30% 30% 30%	\$16,876,8* \$13,360,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$11,618,120	30% 30% 30% 30%	\$16,876,8 \$13,360,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track Element Total	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$11,675,520 \$11,618,120 \$0	30% 30% 30% 30%	\$16,876,8 \$13,360,8
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Ballasted Track Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total turnouts)	0 0 0 0 0 0 0 0 0 61,148 61,148	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$14,675,520 \$11,618,120 \$0 \$26,293,640	30% 30% 30% 30%	\$16,876,8 \$13,360,8 \$30,237,6
10.09 10.10	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track Element Total	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$11,675,520 \$11,618,120 \$0	30% 30% 30% 30%	\$16,876,8 \$13,360,8 \$30,237,6 \$1,511,8
10.09 10.10	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total turnouts) Special Trackwork (5% of Track Cost)	0 0 0 0 0 0 0 0 0 0 461,148 61,148 61,148	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$14,675,520 \$11,618,120 \$0 \$26,293,640	30% 30% 30% 30%	\$16,876,8 \$13,360,8 \$30,237,6 \$1,511,8
10.09 10.10 10.11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total turnouts) Special Trackwork (5% of Track Cost) Element Total	0 0 0 0 0 0 0 0 0 0 461,148 61,148 61,148	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$14,675,520 \$11,618,120 \$0 \$26,293,640	30% 30% 30% 30%	\$16,876,8- \$13,360,83
10.09 10.10 10.11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track Track: Special (switches,	Element Total r fill Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total turnouts) Special Trackwork (5% of Track Cost) Element Total	0 0 0 0 0 0 0 0 0 0 461,148 61,148 61,148	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$14,675,520 \$11,618,120 \$0 \$26,293,640	30% 30% 30% 30%	\$16,876,8 \$13,360,8 \$30,237,6 \$1,511,8

Hillsborough County MPO Transit Study System Planning CR-Sarasota CL Rail (east of Acline St) to Big Bend/ LRT Sta

NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20	STATIONS, STOPS, TERMI	NALS. INTERMODAL						
	At-grade station, stop, shelter							
	д	Center Platform Station	4	EA	\$1,500,000	\$6,000,000	20%	\$7,200,000
		Element Total	4	EA	¥ 1,223,223	\$6,000,000		\$7,200,000
20.02	Aerial station, stop, shelter, n	nall terminal platform						
20.02	Aeriai station, stop, shelter, n	Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$0
		Element Total	0	EA	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$0		\$(
20.03	Underground station, stop, sh	nelter, mall, terminal, platform N/A						
		Element Total	0	EA		\$0		\$(
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc. N/A						
		Element Total	1	LS		\$0		\$0
20.05	Joint development	N/A						
		Element Total	1	LS		\$0		\$0
						, -		,
20.06	Automobile parking multi-stor	·		a	440.000	•	000/	•
		Parking Garage Element Total	<u>0</u>	STL LS	\$12,000	\$0 \$0	20%	\$0 \$0
		Liement Total	'	LO		ΨΟ		Ψ
20.07	Elevators, escalators							
		Eleavator	0	EA	\$200,000	\$0	20%	\$0
		Escalator Element Total	0	EA LS	\$450,000	\$0 \$0	20%	\$C \$C
		Element Total	1	LS		Φ0		Φυ
40	SITEWORK & SPECIAL CO	NDITIONS						
40.01	Demolition, Clearing, Earthwo							
		Demolition Allowance - Low	59,148	RF	\$30	\$1,774,440	30%	\$2,306,772
		Demolition Allowance - Median	2,000	RF	\$50	\$100,000	30%	\$130,000
		Demolition Allowance - High Element Total	61,148	RF RF	\$90	\$0	30%	\$0.400.770
				I/L		\$1,874,440		
		Liement Total	01,140					\$2,436,772
40.02	Site Utilities, Utility Relocation		01,140					\$2,436,772
40.02	Site Utilities, Utility Relocation		59,148	RF	\$140	\$8,280,720	30%	
40.02	Site Utilities, Utility Relocation	n	·	RF RF	\$140 \$340	\$8,280,720 \$680,000	30% 30%	\$10,764,936
40.02	Site Utilities, Utility Relocation	n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	59,148 2,000 0	RF RF		\$680,000 \$0		\$10,764,936 \$884,000
40.02	Site Utilities, Utility Relocation	n Utility Relocation Allowance - Low Utility Relocation Allowance - Median	59,148 2,000	RF	\$340	\$680,000	30%	\$10,764,936 \$884,000
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total	59,148 2,000 0	RF RF	\$340	\$680,000 \$0	30%	\$10,764,936 \$884,000
		n Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High	59,148 2,000 0	RF RF	\$340	\$680,000 \$0	30%	\$10,764,936 \$884,000 \$0 \$11,648,936
		Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments	59,148 2,000 0 61,148	RF RF RF	\$340 \$570	\$680,000 \$0 \$8,960,720	30% 30%	\$2,436,772 \$10,764,936 \$884,000 \$0 \$11,648,936 \$1,589,848 \$1,589,848
40.03	Haz. mat'l, contam'd soil rem	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total	59,148 2,000 0 61,148	RF RF RF	\$340 \$570	\$680,000 \$0 \$8,960,720 \$1,222,960	30% 30%	\$10,764,936 \$884,000 \$0 \$11,648,936 \$1,589,848
40.03	Haz. mat'l, contam'd soil rem	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total p. wetlands, historic/archeologic, parks	59,148 2,000 0 61,148 61,148	RF RF RF LS	\$340 \$570 \$20	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960	30% 30% 30%	\$10,764,936 \$884,000 \$0 \$11,648,936 \$1,589,848 \$1,589,848
40.03	Haz. mat'l, contam'd soil rem	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total	59,148 2,000 0 61,148	RF RF RF	\$340 \$570	\$680,000 \$0 \$8,960,720 \$1,222,960	30% 30%	\$10,764,936 \$884,000 \$0 \$11,648,936 \$1,589,848
40.03 40.04	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total j. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total	59,148 2,000 0 61,148 61,148	RF RF LS	\$340 \$570 \$20	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220	30% 30% 30%	\$10,764,936 \$884,000 \$(\$11,648,936 \$1,589,846 \$1,589,846 \$1,192,386
40.03 40.04	Haz. mat'l, contam'd soil rem	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total	59,148 2,000 0 61,148 61,148	RF RF LS	\$340 \$570 \$20	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220	30% 30% 30%	\$10,764,936 \$884,000 \$(\$11,648,936 \$1,589,846 \$1,589,846 \$1,192,386
40.03 40.04	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total j. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total	59,148 2,000 0 61,148 61,148 1 61,148	RF RF RF LS	\$340 \$570 \$20 \$15	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220 \$917,220	30% 30% 30%	\$10,764,936 \$884,000 \$0 \$11,648,936 \$1,589,848 \$1,589,848 \$1,192,386 \$1,192,386
40.03 40.04	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of	59,148 2,000 0 61,148 61,148	RF RF LS	\$340 \$570 \$20	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220	30% 30% 30%	\$10,764,936 \$884,000 \$(\$11,648,936 \$1,589,848 \$1,589,848
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total s. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total	59,148 2,000 0 61,148 61,148 1 61,148	RF RF RF LS	\$340 \$570 \$20 \$15	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220 \$917,220	30% 30% 30%	\$10,764,936 \$884,000 \$(\$11,648,936 \$1,589,846 \$1,589,846 \$1,192,386 \$1,192,386
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total s. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping	59,148 2,000 0 61,148 1 61,148 1 61,148 1 6,115	RF RF RF LS	\$340 \$570 \$20 \$15	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220 \$917,220 \$489,184 \$489,184	30% 30% 30% 30%	\$10,764,936 \$884,000 \$11,648,936 \$11,589,846 \$1,589,846 \$1,192,386 \$1,192,386 \$635,936
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low	59,148 2,000 0 61,148 61,148 1 61,148 1 6,115 1	RF RF RF LS RF LS	\$340 \$570 \$20 \$15	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220 \$917,220 \$489,184 \$489,184	30% 30% 30% 30%	\$10,764,936 \$884,000 \$(\$11,648,936 \$1,589,846 \$1,589,846 \$1,192,386 \$1,192,386 \$635,936 \$635,936 \$1,153,386
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median	59,148 2,000 0 61,148 1 61,148 1 61,148 1 6,115 1 59,148 2,000	RF RF RF LS RF LS	\$340 \$570 \$20 \$15 \$80 \$15 \$25	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220 \$917,220 \$489,184 \$489,184 \$887,220 \$50,000	30% 30% 30% 30% 30%	\$10,764,936 \$884,000 \$0 \$11,648,936 \$1,589,846 \$1,589,846 \$1,192,386 \$1,192,386 \$635,936 \$635,936 \$1,153,386 \$65,000
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median Landscaping Allowance - High	59,148 2,000 0 61,148 61,148 1 61,148 1 6,115 1 59,148 2,000 0	RF RF RF LS RF LS	\$340 \$570 \$20 \$15 \$80 \$15 \$25 \$40	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220 \$917,220 \$489,184 \$489,184 \$887,220 \$50,000 \$0	30% 30% 30% 30% 30% 30% 30% 30%	\$10,764,936 \$884,000 \$11,648,936 \$11,589,846 \$1,589,846 \$1,192,386 \$1,192,386 \$635,936 \$635,936 \$635,936 \$65,000 \$65,000
40.03 40.04 40.05	Haz. mat'l, contam'd soil rem Environmental mitigation, e.g	Utility Relocation Allowance - Low Utility Relocation Allowance - Median Utility Relocation Allowance - High Element Total oval/mitigation, ground water treatments Hazardous Material Removal Allowance Element Total g. wetlands, historic/archeologic, parks Enviromental Mitigation Allowance Element Total ining walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median	59,148 2,000 0 61,148 1 61,148 1 61,148 1 6,115 1 59,148 2,000	RF RF RF LS RF LS	\$340 \$570 \$20 \$15 \$80 \$15 \$25	\$680,000 \$0 \$8,960,720 \$1,222,960 \$1,222,960 \$917,220 \$917,220 \$489,184 \$489,184 \$887,220 \$50,000	30% 30% 30% 30% 30%	\$10,764,936 \$884,000 \$(\$11,648,936 \$1,589,846 \$1,589,846 \$1,192,386 \$1,192,386 \$635,936 \$635,936 \$635,936

Hillsborough County MPO Transit Study System Planning CR-Sarasota CL Rail (east of Acline St) to Big Bend/ LRT Sta

CAT	STATIONING	c .			UNIT	BASE	ALLCTD	TOTAL
NO.		IND DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
NO.	BEGIN E	DESCRIPTION	QII	ONII	<u> </u>	CO31	CONTGI	
40.07	Automobile bus was							
40.07	Automobile, bus, van a	accessways including roads, parking lots Roadway Modifications Allow Full						
		Intersection	30	EA	\$50,000	\$1,500,000	30%	\$1,950,00
		Parking Lots	1,000	STL	\$4,000	\$4,000,000	30%	\$5,200,00
		Element Total	1	LS	ψ4,000	\$5,500,000	3070	\$7,150,00
<i>4</i> ∩ ∩8	Temporary Facilities a	nd other indirect costs during construction						
10.00	Tomporary r dominoo di	Temporary Facilities (5% of Category 40)	5.0%			\$1,017,381	25%	\$1,271,72
		Element Total	1	LS		\$1,017,381	2070	\$1,271,726
	SYSTEMS							
	Train control and signa	ale						
50.01	Trail Control and Signa	Signal System	61,148	RF	\$140	\$8,560,720	15%	\$9,844,82
		Element Total	61,148	RF	φ140	\$8,560,720	10/0	\$9,844,82
		Liomone rotal	01,110			ψ0,000,720		ψο,ο τ τ,ο2
50.02	Traffic signals and cros	ssing protection						
	· ·	Crossing Protection	30	EA	\$150,000	\$4,500,000	15%	\$5,175,00
		Element Total	30	EA		\$4,500,000		\$5,175,000
50.03	Traction power supply:	substations						
		N/A						
		Element Total	0	EA		\$0		\$0
50.04	Traction power distribu	ution: catenary and third rail						
		N/A						
		Element Total	0	RF		\$0		\$
50.05	Communications							
		Passenger Information System, Fiber Optic	61,148	RF	\$20	\$1,222,960	15%	\$1,406,40
		Passenger Information System, Station	4	EA	\$70,000	\$280,000	15%	\$322,00
		Element Total	1	LS		\$1,502,960		\$1,728,40
50.06	Fare collection system	·						
		Fare Collection	4	EA	\$150,000	\$600,000	15%	\$690,000
		Element Total	1	LS		\$600,000		\$690,000
50.07	Central Control	NIA						
		N/A Element Total	1	LS		\$0		\$(
								•
60 60.01	ROW, LAND, EXISTING Purchase or lease of re							
		Right of Way Allowance - At Grade	59,148	RF	\$400	\$23,659,200	50%	\$35,488,80
		Right of Way Allowance - Aerial	2,000	RF	\$300	\$600,000	50%	\$900,000
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	\$(
		Element Total	61,148	RF		\$24,259,200		\$36,388,800

Hillsborough County MPO Transit Study System Planning CR-Sarasota Big Bend/ LRT Sta to Sarasota/ Countyline

CAT NO.					LINUT	DAGE	ALLOTO	TOTAL
	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
40	CUIDEWAY & TDACK FLE	MENTO						
	GUIDEWAY & TRACK ELE Guideway: At-grade exclusiv							
	Single Track	At Grade - Ballasted, Open	73,984	RF	\$250	\$18,496,000	25%	\$23,120,00
	Double Track	At Grade - Ballasted, Open	0	RF	\$420	\$0	25%	
		Element Total	73,984	RF		\$18,496,000		\$23,120,00
0.02	Guideway: At-grade semi-ex	•						
		N/A Element Total	0	RF		\$0		
0.03	Guideway: At-grade in mixed	d traffic						
		N/A						
		Element Total	0	RF		\$0		
0.04	Guideway: Aerial structure							
	Single Track	Aerial - Ballasted	0	RF	\$11,000	\$0	30%	
	Single Track	Aerial - Ballasted Over Water	700	RF	\$11,900	\$8,330,000	30%	\$10,829,0
	Double Track	Aerial - Ballasted	0	RF	\$15,200	\$0	30%	
	Double Track	Aerial - Ballasted Over Water	0	RF	\$16,500	\$0	30%	# 40.000.0
		Element Total	700	RF		\$8,330,000		\$10,829,0
	Guideway: Built-up fill							
	Single Track	At Grade - Ballasted, Built-up	0	RF	\$440	\$0	25%	
	Double Track	At Grade - Ballasted, Built-up Element Total	0	RF RF	\$740	\$0 \$0	25%	
						**		
0.06	Guideway: Underground cut							
		N/A Element Total	0	RF		\$0		
		Ziomoni Total	· ·	• ••		40		
0.07	Guideway: Underground tun	inel						
		N/A						
0 00		Element Total	0	RF		\$0		
0.00	Guideway: Retained cut or fi		0	RF		\$0		
	Guideway: Retained cut or fi Single Track		0	RF RF	\$6,800	\$0 \$0	30%	
	-	ill			\$6,800 \$2,800		30% 30%	
	Single Track	ill Retained Cut - Ballasted	0	RF		\$0		
	Single Track Single Track	ill Retained Cut - Ballasted Retained Fill - Ballasted	0	RF RF	\$2,800	\$0 \$0	30%	
	Single Track Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted	0 0 0	RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
	Single Track Single Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0	30% 30%	
0.09 0.10	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total	0 0 0 0 0	RF RF RF RF	\$2,800 \$8,000	\$0 \$0 \$0 \$0 \$0 \$0	30% 30%	
0.09 0.10 0.11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total	0 0 0 0	RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	
0.09 0.10 0.11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Ballasted Track	0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	\$20,612,7
).09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$17,924,160 \$14,189,960	30% 30% 30% 30%	\$20,612,7
).10).11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Ballasted Track Ballasted Track - Refurbish Existing	0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30% 30% 30%	\$20,612,7 \$16,318,4
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$17,924,160 \$14,189,960 \$0	30% 30% 30% 30%	\$20,612,7 \$16,318,4
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total	0 0 0 0 0 0 0 74,684 74,684 0 74,684	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$17,924,160 \$14,189,960 \$0 \$32,114,120	30% 30% 30% 30%	\$20,612,7 \$16,318,4 \$36,931,2
0.09	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Retained Fill - Ballasted Element Total N/A Element Total Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total	0 0 0 0 0 0	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$17,924,160 \$14,189,960 \$0	30% 30% 30% 30%	
D.10 D.11 D.11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track Track: Special (switches, tu	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total rrnouts) Special Trackwork (5% of Track Cost) Element Total	0 0 0 0 0 0 0 74,684 74,684 74,684	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$17,924,160 \$14,189,960 \$0 \$32,114,120	30% 30% 30% 30%	\$20,612,7 \$16,318,4 \$36,931,2 \$1,846,5
D.10 D.11 D.11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track Element Total Finouts) Special Trackwork (5% of Track Cost) Element Total Element Total	0 0 0 0 0 0 0 74,684 74,684 74,684	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$17,924,160 \$14,189,960 \$0 \$32,114,120	30% 30% 30% 30%	\$20,612,7 \$16,318,4 \$36,931,2
).10).11	Single Track Single Track Double Track Double Track Track: Direct fixation Track: Embedded Track: Ballasted Single Track Double Track Track: Special (switches, tu	Retained Cut - Ballasted Retained Fill - Ballasted Retained Cut - Ballasted Retained Cut - Ballasted Retained Fill - Ballasted Element Total N/A Element Total N/A Element Total Ballasted Track Ballasted Track Ballasted Track - Refurbish Existing Ballasted Track Element Total rrnouts) Special Trackwork (5% of Track Cost) Element Total	0 0 0 0 0 0 0 74,684 74,684 74,684	RF RF RF RF RF	\$2,800 \$8,000 \$3,200 \$3,200 \$240 \$190	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$17,924,160 \$14,189,960 \$0 \$32,114,120	30% 30% 30% 30%	\$16,318, \$36,931, \$1,846,

Hillsborough County MPO Transit Study System Planning CR-Sarasota Big Bend/ LRT Sta to Sarasota/ Countyline

CAT NO.	STATIONING BEGIN END	DESCRIPTION	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
20	STATIONS, STOPS, TERMII	NALS, INTERMODAL						
20.01	At-grade station, stop, shelter	r, mall, terminal, platform						
		Center Platform Station	2	EA	\$1,500,000	\$3,000,000	20%	\$3,600,00
		Element Total	2	EA		\$3,000,000		\$3,600,00
20.02	Aerial station, stop, shelter, m	nall, terminal, platform						
		Center Platform Station	0	EA	\$15,000,000	\$0	25%	\$
		Element Total	0	EA		\$0		\$
20.03	Underground station, stop, sh	nelter, mall, terminal, platform N/A						
		Element Total	0	EA		\$0		\$
20.04	Other stations, landings, term	ninals: Intermodal, ferry, trolley, etc.						
		Element Total	1	LS		\$0		\$(
20.05	Joint development							
		N/A Element Total	1	LS		\$0		\$(
		Element Total	'	LS		ΦΟ		Φι
20.06	Automobile parking multi-stor	y structure Parking Garage	0	CTI	¢42.000	የ 0	20%	¢.
		Element Total	<u>0</u> 1	STL LS	\$12,000	\$0 \$0	20%	\$(\$(
20.07	Elevators, escalators	Eleavator	0	EA	\$200,000	\$0	20%	\$0
		Escalator	0	EA	\$450,000	\$0 \$0	20%	\$(
		Element Total	1	LS	ψ+00,000	\$0	2070	\$(
40 40.01	SITEWORK & SPECIAL CO							
		Demolition Allowance - Low	73,984	RF	\$30	\$2,219,520	30%	\$2,885,376
		Demolition Allowance - Median	700	RF	\$50	\$35,000	30%	\$45,500
		Demolition Allowance - High	0	RF	\$90	\$0	30%	\$(
		Element Total	74,684	RF		\$2,254,520		\$2,930,870
40.02	Site Utilities, Utility Relocation	1						
		Utility Relocation Allowance - Low	73,984	RF	\$140	\$10,357,760	30%	\$13,465,088
		Utility Relocation Allowance - Median	700	RF	\$340	\$238,000	30%	\$309,400
		Utility Relocation Allowance - High	0	RF	\$570	\$0	30%	\$(
		Element Total	74,684	RF		\$10,595,760		\$13,774,48
40.03	Haz. mat'l, contam'd soil rem	oval/mitigation, ground water treatments						
		Hazardous Material Removal Allowance	74,684	RF	\$20	\$1,493,680	30%	\$1,941,78
		Element Total	1	LS		\$1,493,680		\$1,941,784
40.04	Environmental mitigation, e.g	. wetlands, historic/archeologic, parks						
40.04	Environmental mitigation, e.g	Enviromental Mitigation Allowance	74,684	RF LS	\$15	\$1,120,260 \$1,120,260	30%	\$1,456,338 \$1,456,338
		Enviromental Mitigation Allowance Element Total		RF LS	\$15	\$1,120,260 \$1,120,260	30%	\$1,456,338 \$1,456,338
	Environmental mitigation, e.g	Enviromental Mitigation Allowance Element Total ning walls, sound walls			\$15		30%	
		Enviromental Mitigation Allowance Element Total	1	LS	\$15 \$80	\$1,120,260	30%	\$1,456,338
		Enviromental Mitigation Allowance Element Total ning walls, sound walls Retaining & Sound Wall Allowance (10% of						
40.05		Enviromental Mitigation Allowance Element Total ning walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total	7,468	LS RF		\$1,120,260 \$597,472		\$1,456,33 \$776,71
10.05	i Site structures including retai	Enviromental Mitigation Allowance Element Total ning walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total	7,468	LS RF		\$1,120,260 \$597,472		\$1,456,33 \$776,71
40.05	i Site structures including retai	Environmental Mitigation Allowance Element Total ning walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping	7,468	RF LS	\$80	\$1,120,260 \$597,472 \$597,472	30%	\$1,456,33 \$776,71 \$776,71 \$1,442,68
40.05	i Site structures including retai	Enviromental Mitigation Allowance Element Total ning walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low	7,468 1 73,984	RF LS	\$80 \$15	\$1,120,260 \$597,472 \$597,472 \$1,109,760	30%	\$1,456,33 \$776,71 \$776,71
40.05	i Site structures including retai	Enviromental Mitigation Allowance Element Total ning walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median	7,468 1 73,984 700	RF LS RF RF	\$80 \$15 \$25	\$1,120,260 \$597,472 \$597,472 \$1,109,760 \$17,500	30% 30% 30%	\$1,456,33 \$776,71 \$776,71 \$1,442,68 \$22,75
40.05	i Site structures including retai	Enviromental Mitigation Allowance Element Total ning walls, sound walls Retaining & Sound Wall Allowance (10% of Ballasted Track Length) Element Total accommodation, landscaping Landscaping Allowance - Low Landscaping Allowance - Median Landscaping Allowance - High	7,468 1 73,984 700 0	RF LS RF RF RF	\$80 \$15 \$25 \$40	\$1,120,260 \$597,472 \$597,472 \$1,109,760 \$17,500 \$0	30% 30% 30% 30%	\$1,456,33 \$776,71 \$776,71 \$1,442,68 \$22,75

Hillsborough County MPO Transit Study System Planning CR-Sarasota

Big Bend/ LRT Sta to Sarasota/ Countyline

CAT	STATIONING				UNIT	BASE	ALLCTD	TOTAL
NO.	BEGIN END	DESCRIPTION	QTY	UNIT	COST	COST	CONTGY	COST
0.07	Automobile, bus, van accessv	vays including roads, parking lots						
		Roadway Modifications Allow Full	07		# 50.000	04.050.000	000/	00.405.0
		Intersection	37	EA	\$50,000	\$1,850,000	30%	\$2,405,0
		Parking Lots Element Total	1,000	STL	\$4,000	\$4,000,000	30%	\$5,200,0
		Element Total	1	LS		\$5,850,000		\$7,605,0
40.08	Temporary Facilities and other	r indirect costs during construction						
		Temporary Facilities (5% of Category 40)	5.0%			\$1,166,861	25%	\$1,458,5
		Element Total	1	LS		\$1,166,861		\$1,458,5
50	SYSTEMS							
	Train control and signals							
	ŭ	Signal System	74,684	RF	\$140	\$10,455,760	15%	\$12,024,1
		Element Total	74,684	RF		\$10,455,760		\$12,024,1
50.02	Traffic signals and crossing pr	rotection						
		Crossing Protection	37	EA	\$150,000	\$5,550,000	15%	\$6,382,5
		Element Total	37	EA		\$5,550,000		\$6,382,5
50.03	Traction power supply: substa	ations						
		N/A						
		Element Total	0	EA		\$0		
50.04	Traction power distribution: c	atenary and third rail						
		N/A						
		Element Total	0	RF		\$0		
50.05	Communications							
		Passenger Information System, Fiber Optic	74,684	RF	\$20	\$1,493,680	15%	\$1,717,7
		Passenger Information System, Station	2	EA	\$70,000	\$140,000	15%	\$161,0
		Element Total	1	LS		\$1,633,680		\$1,878,7
50.06	Fare collection system and ed	quipment						
		Fare Collection	2	EA	\$150,000	\$300,000	15%	\$345,0
		Element Total	1	LS		\$300,000		\$345,0
50.07	Central Control							
		N/A						
		Element Total	1	LS		\$0		
	ROW, LAND, EXISTING IMP							
60.01	Purchase or lease of real esta							
		Right of Way Allowance - At Grade	73,984	RF	\$400	\$29,593,600	50%	\$44,390,4
		Right of Way Allowance - Aerial	700	RF	\$300	\$210,000	50%	\$315,0
		Right of Way Allowance - Underground	0	RF	\$250	\$0	50%	0.11 = 0.5
		Element Total	74,684	RF		\$29,803,600		\$44,705,4

Hillsborough County MPO Transit Study System Planning SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS

STAT	IONING		COST			UNIT	BASE	ALLCTD	TOTAL
BEGIN	END	DESCRIPTION	ID	QTY	UNIT	COST	COST	CONTGY	COST
30 SUPPORT FACIL	LITIES: YAR	DS, SHOPS, ADMIN. BLDGS							
		e, sales, storage, revenue counting							
	. 5	N/A							
		Element Total		1	LS		\$0		\$(
30.02 Light Maintenanc	e Facility								
		N/A							
		Element Total		1	LS		\$0		\$0
30.03 Heavy Maintenan	ice Facility								
		Maintenance Facility (per vehicle)		112	EA	\$1,000,000	\$112,000,000	25%	\$140,000,000
		Element Total		1	LS		\$112,000,000		\$140,000,000
30.04 Storage or Mainte	enance of Wa	ay Building							
		N/A							
		Element Total		1	LS		\$0		\$0
30.05 Yard and Yard Tr	ack								
Yard		Yard Track		1,000	RF	\$240	\$240,000	15%	\$276,000
Yard		Signal System, Single Track		1,000	RF	\$240	\$240,000	15%	\$276,000
		Element Total		1	LS		\$480,000		\$552,000
60 ROW, LAND, EX	ISTING IMP	ROVEMENTS							
60.01 Purchase or lease	e of real esta	ite							
		Right of Way Allowance		20	AC	\$500,000	\$10,000,000	50%	\$15,000,000
		Element Total		1	LS		\$10,000,000		\$15,000,000

Hillsborough County MPO Transit Study System Planning VEHICLES

H-0-0.	ISTI WODE: Comm			2007				D40E	411 OTD	T0T41
	STATIO			COST			UNIT	BASE	ALLCTD	TOTAL
	BEGIN	END	DESCRIPTION	ID	QTY	UNIT	COST	COST	CONTGY	COST
70	VEHICLES									
70.01	Light Rail									
	Commuter Rail		Diesel Locomotive	VH10	21	EA	\$2,500,000	\$51,250,000	10%	\$56,375,000
			Commuter Coach Car	VH11	41	EA	\$2,100,000	\$86,100,000	10%	\$94,710,000
			Commuter Cab Car	VH12	21	EA	\$2,400,000	\$49,200,000	10%	\$54,120,000
			Element Total		82	EA		\$186,550,000		\$205,205,000
	Regional Commute	er Rail	Diesel Locomotive	VH10	8	EA	\$2,500,000	\$18,750,000	10%	\$20,625,000
	•		Commuter Coach Car	VH11	15	EA	\$2,100,000	\$31,500,000	10%	\$34,650,000
			Commuter Cab Car	VH12	8	EA	\$2,400,000	\$18,000,000	10%	\$19,800,000
			Element Total		30	EA		\$68,250,000		\$75,075,000
				Total	112	EA				

	Hillsborough County MPO Transit Study System Planning VEHICLES									
TRAN	NSIT MODE: LRT STATIO BEGIN	ONING END	DESCRIPTION	COST	QTY	UNIT	UNIT COST	BASE COST	ALLCTD CONTGY	TOTAL COST
70 70.01	VEHICLES I Light Rail		Light Rail Vehicle		147	EA	\$3,600,000	\$529,200,000	10%	\$582,120,000

Veh Appendix A 283

APPENDIX B

Mapbooks

MAPBOOK PREFERRED TRANSIT SYSTEM PLAN-48 PAGES































































































