

CITY OF CONCORD
Safety Action Plan - Cost Estimate
Project 1: High Injury Network Corridor Improvements

Project 1: High Injury Network Corridor Improvements								
No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Clayton Rd Safety Improvements	Clayton Rd: SR-242 to Washington Blvd	Various Improvements along Corridor. See Breakdown.	LS	\$ 5,497,030.00	1	\$ 5,497,030.00	\$ 14,490,420.00
2	Monument Blvd Safety Improvements	Monument Blvd: Cowell Rd to Mohr Ln	Various Improvements along Corridor. See Breakdown.	LS	\$ 2,609,620.00	1	\$ 2,609,620.00	
3	Willow Pass Rd Safety Improvements	Willow Pass Rd: I-680 to Avila Rd	Various Improvements along Corridor. See Breakdown.	LS	\$ 2,002,960.00	1	\$ 2,002,960.00	
4	Concord Ave Safety Improvements	Concord Ave: John Glenn Dr to Salvio St	Various Improvements along Corridor. See Breakdown.	LS	\$ 1,146,310.00	1	\$ 1,146,310.00	
5	Galindo St Safety Improvements	Galindo St: Salvio St to Cowell Rd	Various Improvements along Corridor. See Breakdown.	LS	\$ 3,234,500.00	1	\$ 3,234,500.00	
Project Cost Total							\$	14,490,420.00
Contingency Cost(20%)							\$	2,898,084.00
Subtotal							\$	17,388,600.00
Environmental (5%)							\$	869,430.00
PS&E (15%)							\$	2,608,290.00
Construction Engineering (10%)							\$	1,738,860.00
Total							\$	22,605,180.00

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1.1-Clayton Rd: SR-242 to Washington Boulevard

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Speed Feedback Sign	Clayton Rd: SR-242 to Washington Boulevard	Install Dynamic/Variable Speed Warning Sign (Solar-Powered)	EA	\$ 15,000.00	8	\$ 120,000.00	\$ 120,000.00
2	Safety Lighting Upgrades	Clayton Rd & Detroit Ave Clayton Rd & Ellis St Clayton Rd & Galindo St Clayton Rd & Grant St Clayton Rd & Colfax St Clayton Rd & Oakland Ave Clayton Rd & Treat Blvd Clayton Rd & Bailey Rd Clayton Rd & Ayers Rd	Replace Existing Luminaire Fixture	EA	\$ 750.00	48	\$ 36,000.00	\$ 36,000.00
3	Street Lighting Improvements	Clayton Rd and San Carlos Ave	Install Street Light Pole, Foundation and Luminaire Fixture	EA	\$ 20,000.00	1	\$ 20,000.00	\$ 121,000.00
			Install Street Light Pull Box	EA	\$ 1,500.00	1	\$ 1,500.00	
			Install Conduit and Cabling	LF	\$ 110.00	75	\$ 8,250.00	
		Clayton Rd and Roslyn Dr	Upgrade Existing Fixtures	EA	\$ 500.00	4	\$ 2,000.00	
		Between Bailey Rd and Matheson Rd	Install Street Light Pole, Foundation and Luminaire Fixture	EA	\$ 20,000.00	3	\$ 60,000.00	
			Install Street Light Pull Box	EA	\$ 1,500.00	3	\$ 4,500.00	
Install Conduit and Cabling	LF		\$ 110.00	225	\$ 24,750.00			
4	Intersection Safety Analytics	Clayton Rd & Galindo St Clayton Rd & Treat Blvd Clayton Rd and Thornwood Dr Clayton Rd and Fry Way Clayton Rd and Ayers Rd Clayton Rd and Ellis St	Intersection Safety Analytics Camera and System	LS	\$ 40,000.00	6	\$ 240,000.00	\$ 240,000.00
5	CV2X Improvements	Clayton Rd & Galindo St Clayton Rd & Treat Blvd Clayton Rd & Fry Way Clayton Rd & Ellis St	CV2X Roadside Unit System	EA	\$ 35,000.00	4	\$ 140,000.00	\$ 140,000.00
6	EVP GPS	Clayton Rd: SR-242 to Washington Boulevard	Install GPS-Based EVP system	EA	\$ 20,000.00	28	\$ 560,000.00	\$ 560,000.00
7	High Friction Surface Treatment	Clayton and Farm Bureau Rd	Install High Friction Surface Treatment	SF	\$ 6.00	30000	\$ 180,000.00	\$ 187,300.00
			Install striping	LF	\$ 4.00	1200	\$ 4,800.00	
			Install Pavement Marking	EA	\$ 500.00	5	\$ 2,500.00	
8	PPLS	Clayton Rd & Detroit Ave Clayton Rd & Ellis St Clayton Rd & Galindo St Clayton Rd & Oakland Ave Clayton Rd & Treat Blvd Clayton Rd & Bailey Rd Clayton Rd & Claycord Ave Clayton Rd & Ayers Rd	Install Pedestrian Light Pole, Foundation and Luminaire Fixture	EA	\$ 15,000.00	27	\$ 405,000.00	\$ 573,250.00
			Install Pull Box	EA	\$ 2,000.00	27	\$ 54,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	675	\$ 74,250.00	
			Install PPLS System	EA	\$ 5,000.00	8	\$ 40,000.00	

9	ADA Compliant Curb Ramps	Clayton Rd and Washington Blvd (NE & NW)	Install Curb Ramp	EA	\$ 10,000.00	2	\$ 20,000.00	\$ 20,000.00
10	High Visibility Crosswalks and Advance Stop Bar	Clayton Rd and Galindo St	Install High Visibility Crosswalk	EA	\$ 1,000.00	4	\$ 4,000.00	\$ 9,040.00
		Clayton Rd and Oakland Ave	Install High Visibility Crosswalk	EA	\$ 1,000.00	4	\$ 4,000.00	
			Install Stop Bar	LF	\$ 8.00	130	\$ 1,040.00	
11	Pedestrian Passive Detection and LPI	Clayton Rd & Detroit Ave	Modify Signal Phasing to Implement a Lead Pedestrian Interval	LS	\$ 3,000.00	8	\$ 24,000.00	\$ 386,500.00
		Clayton Rd & Ellis St	Install Pedestrian Passive Detection	LS	\$ 20,000.00	8	\$ 160,000.00	
		Clayton Rd and Galindo St		EA	\$ 7,500.00	27	\$ 202,500.00	
12	Curb Line Reconfiguration	Clayton Rd and Thornwood Dr	Curb line Reconfiguration	EA	\$ 25,000.00	2	\$ 50,000.00	\$ 150,000.00
		Clayton Rd and Galindo St, NE & NW	Curb line Reconfiguration	EA	\$ 25,000.00	2	\$ 50,000.00	
		Clayton Rd & Bailey Rd	Curb line Reconfiguration	EA	\$ 25,000.00	2	\$ 50,000.00	
13	Fill Sidewalk Gaps	Fabian Way to Julia Ln	Site Preparation and Removal	SF	\$ 20.00	3925	\$ 78,500.00	\$ 384,000.00
			Install Sidewalk	SF	\$ 40.00	3925	\$ 157,000.00	
			Install Curb and Gutter	LF	\$ 80.00	785	\$ 62,800.00	
			Install Curb Ramp	EA	\$ 10,000.00	7	\$ 70,000.00	
			Striping Reconfiguration	LS	\$ 4.00	3925	\$ 15,700.00	
14	Crosswalk Enhancements	Clayton and Mt Diablo Mid Block Crossing	Curb line Reconfiguration	EA	\$ 25,000.00	2	\$ 50,000.00	\$ 97,000.00
			Install Pull Box	EA	\$ 2,000.00	2	\$ 4,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	100	\$ 11,000.00	
			Install Pole and Foundation	EA	\$ 13,000.00	2	\$ 26,000.00	
			Install New 3- Section Signal Head	EA	\$ 3,000.00	2	\$ 6,000.00	

15	Install Shared Use Path	Ellis St to Grant St	Site Preparation and Removal	SF	\$ 8.00	24000	\$ 192,000.00	\$ 1,860,200.00
			Install Sign and Post	EA	\$ 750.00	20	\$ 15,000.00	
			Remove Striping	LF	\$ 2.50	16800	\$ 42,000.00	
			Install Striping	LF	\$ 4.00	16800	\$ 67,200.00	
			Remove Curb and Gutter	LF	\$ 30.00	2400	\$ 72,000.00	
			Install Curb and Gutter	LF	\$ 80.00	2400	\$ 192,000.00	
			Install Curb Ramp	EA	\$ 10,000.00	20	\$ 200,000.00	
			Install PCC Shared Use Path	SF	\$ 45.00	24000	\$ 1,080,000.00	
16	Remove Slip Lane	Clayton Rd and Farm Bureau Rd	Site Preparation and Removal	SF	\$ 8.00	780	\$ 6,240.00	\$ 112,740.00
			Install Curb and Gutter	LF	\$ 80.00	130	\$ 10,400.00	
			Install Sidewalk	SF	\$ 40.00	480	\$ 19,200.00	
			Install Stamped Concrete	SF	\$ 30.00	480	\$ 14,400.00	
			Install Curb Ramp	EA	\$ 10,000.00	1	\$ 10,000.00	
			Remove Existing Mast Arm Pole and Equipment	EA	\$ 7,500.00	1	\$ 7,500.00	
			Install New Mast arm pole and Equipment	EA	\$ 45,000.00	1	\$ 45,000.00	
17	Protected Bike Intersection	Clayton and Galindo Clayton and Grant	Install Bike Protected Intersection	EA	\$ 250,000.00	2	\$ 500,000.00	\$ 500,000.00
Project Cost Total							\$ 5,497,030.00	
Contingency Cost(20%)							\$ 1,099,406.00	
Subtotal							\$ 6,596,500.00	
Environmental (5%)							\$ 329,830.00	
PS&E (15%)							\$ 989,470.00	
Construction Engineering (10%)							\$ 659,650.00	
Total							\$ 8,575,450.00	

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1.2-Monument Blvd: Cowell Road to Mohr Lane

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Speed Feedback Sign	Cowell Road to Mohr Lane	Install Dynamic/Variable Speed Warning Sign (Solar-Powered)	EA	\$ 15,000.00	4	\$ 60,000.00	\$ 60,000.00
2	Safety Lighting Upgrades	Mohr Ln Carey Dr Reganti Dr Virginia Ln Oak Grove Rd Systron Dr Cowell Rd	Replace Existing Luminaire Fixture	EA	\$ 750.00	29	\$ 21,750.00	\$ 21,750.00
3	Street Lighting Improvements	Mohr to Detroit	Install Street Light Pole, Foundation and Luminaire Fixture	EA	\$ 20,000.00	3	\$ 60,000.00	\$ 114,000.00
			Install Street Light Pull Box	EA	\$ 1,500.00	3	\$ 4,500.00	
			Install Conduit and Cabling	LF	\$ 110.00	450	\$ 49,500.00	
4	Intersection Safety Analysis	Monument Boulevard & Oak Grove/Meadow Lane Monument Boulevard & Virginia Lane Cowell Rd and Cowell Rd Monument Blvd & Mohr Ln Monument Blvd & Systron Dr	Intersection Safety Analytics Camera and System	LS	\$ 40,000.00	6	\$ 240,000.00	\$ 240,000.00
5	CV2X	Monument Boulevard & Meadow Lane Monument Boulevard & Virginia Lane	CV2X Roadside Unit System	EA	\$ 35,000.00	2	\$ 70,000.00	\$ 70,000.00
6	EVP GPS	Corridor Wide	Install GPS-Based EVP system	EA	\$ 20,000.00	10	\$ 200,000.00	\$ 200,000.00
7	Access Management (Median)	Mohr Ln to Virginia Ln	Site Preparation and Removal	SF	\$ 8.00	35090	\$ 280,720.00	\$ 991,520.00
			Landscaping	SF	\$ 10.00	31900	\$ 319,000.00	
			Install Median Curb	LF	\$ 60.00	6380	\$ 382,800.00	
			Install Sign and Post	EA	\$ 750.00	12	\$ 9,000.00	
8	PPLS	Monument Blvd & Mohr Ln Monument Blvd & Carey Dr Monument Blvd & Reganti Dr Monument Blvd & Virginia Ln Monument Blvd & Systron Dr	Install Pedestrian Light Pole, Foundation and Luminaire Fixture	EA	\$ 15,000.00	19	\$ 285,000.00	\$ 400,250.00
			Install Pull Box	EA	\$ 2,000.00	19	\$ 38,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	475	\$ 52,250.00	
			Install PPLS System	EA	\$ 5,000.00	5	\$ 25,000.00	
9	Curb Ramps	Monument Blvd & Mohr Ln Monument Blvd & Carey Dr	Install Curb Ramp	EA	\$ 10,000.00	5	\$ 50,000.00	\$ 50,000.00
10	Pedestrian Passive Detection & Leading Pedestrian Interval	Monument Blvd & Mohr Ln Monument Blvd & Carey Dr Monument Blvd & Reganti Dr Monument Blvd & Virginia Ln Monument Blvd & Systron Dr	Modify Signal Phasing to Implement a Lead Pedestrian Interval	LS	\$ 3,000.00	5	\$ 15,000.00	\$ 257,500.00
			Install Pedestrian Passive Detection	LS	\$ 20,000.00	5	\$ 100,000.00	
			Install Blankout Sign	EA	\$ 7,500.00	19	\$ 142,500.00	
11	Curb line Reconfiguration	Monument Blvd and Lacey Ln	Curb line Reconfiguration	EA	\$ 25,000.00	2	\$ 50,000.00	\$ 50,000.00
12	Bus Stop Improvements	Cowell Road to Mohr Lane	Install Bus Shelter, Trash Can and Bench	LS	\$ 15,000.00	10	\$ 150,000.00	\$ 150,000.00
13	Crosswalk Enhancements	Monument Blvd and Mohr Lane	Install High Visibility Crosswalk	EA	\$ 1,000.00	4	\$ 4,000.00	\$ 4,600.00
			Install Stop Bar	LF	\$ 8.00	75	\$ 600.00	
							Project Cost Total	\$ 2,609,620.00
							Contingency Cost(20%)	\$ 521,924.00
							Subtotal	\$ 3,131,600.00
							Environmental (5%)	\$ 156,580.00
							PS&E (15%)	\$ 469,740.00
							Construction Engineering (10%)	\$ 313,160.00
							Total	\$ 4,071,080.00

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1.3-Willow Pass Rd: I-680 to Avila Road

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Speed Feedback Sign	I-680 to Avila Road	Install Dynamic/Variable Speed Warning Sign (Solar-Powered)	EA	\$ 15,000.00	4	\$ 60,000.00	\$ 60,000.00
2	Safety Lighting Upgrades	Diamond Blvd Franquette Ave Market St Mt Diablo East St Port Chicago Hwy	Replace Existing Luminaire Fixture	EA	\$ 750.00	22	\$ 16,500.00	\$ 16,500.00
3	Street Lighting Improvements	Saint Philips Ct Between 5th and 6th St 3rd St North of Lynwood	Install Street Light Pole, Foundation and Luminaire Fixture	EA	\$ 20,000.00	6	\$ 120,000.00	\$ 195,000.00
			Install Street Light Pull Box	EA	\$ 1,500.00	6	\$ 9,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	600	\$ 66,000.00	
4	Intersection Safety Analysis	Willow Pass Rd & Fry Way Willow Pass Road & I-680 Willow Pass Road & Farm Bureau Road Willow Pass Road & Market Street	Intersection Safety Analytics Camera and System	LS	\$ 40,000.00	4	\$ 160,000.00	\$ 160,000.00
5	CV2X	Willow Pass Rd & Fry Way Willow Pass Road & I-680 Willow Pass Road & Farm Bureau Road Willow Pass Road & Market Street	CV2X Roadside Unit System	EA	\$ 20,000.00	4	\$ 80,000.00	\$ 80,000.00
6	EVP GPS	Corridor Wide	Install GPS-Based EVP system	EA	\$ 20,000.00	18	\$ 360,000.00	\$ 360,000.00
7	Access Management (Median)	Parkside - Farm Bureau	Site Preparation and Removal	SF	\$ 8.00	30070	\$ 240,560.00	\$ 837,460.00
			Landscaping	SF	\$ 10.00	27320	\$ 273,200.00	
			Install Median Curb	LF	\$ 60.00	5320	\$ 319,200.00	
			Install Sign and Post	EA	\$ 750.00	6	\$ 4,500.00	
8	PPLS	Willow Pass Rd & Diamond Blvd Willow Pass Rd & Fry Way	Install Pedestrian Light Pole, Foundation and Luminaire Fixture	EA	\$ 15,000.00	8	\$ 120,000.00	\$ 168,000.00
			Install Pull Box	EA	\$ 2,000.00	8	\$ 16,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	200	\$ 22,000.00	
			Install PPLS System	EA	\$ 5,000.00	2	\$ 10,000.00	
9	Curb Ramps	Willow Pass Rd & Diamond Blvd	Install Curb Ramp	EA	\$ 10,000.00	2	\$ 20,000.00	\$ 20,000.00
10	Pedestrian Passive Detection & Leading Pedestrian Interval	Willow Pass Rd & Diamond Blvd Willow Pass Rd & Fry Way	Modify Signal Phasing to Implement a Lead Pedestrian Interval	LS	\$ 3,000.00	2	\$ 6,000.00	\$ 106,000.00
			Install Pedestrian Passive Detection	LS	\$ 20,000.00	2	\$ 40,000.00	
			Install Blankout Sign	EA	\$ 7,500.00	8	\$ 60,000.00	
Project Cost Total							\$ 2,002,960.00	
Contingency Cost(20%)							\$ 400,592.00	
Subtotal							\$ 2,403,600.00	
Environmental (5%)							\$ 120,180.00	
PS&E (15%)							\$ 360,540.00	
Construction Engineering (10%)							\$ 240,360.00	
Total							\$ 3,124,680.00	

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1.4 - Concord Ave: John Glenn Drive to Salvio Street

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Speed Feedback Sign	Concord Ave: John Glenn Drive to Salvio Street	Install Dynamic/Variable Speed Warning Sign (Solar-Powered)	EA	\$ 15,000.00	2	\$ 30,000.00	\$ 30,000.00
2	Safety Lighting Upgrades	Pacheco St Via De Mercados New Dr	Replace Existing Luminaire Fixture	EA	\$ 750.00	8	\$ 6,000.00	\$ 6,000.00
3	Street Lighting Improvements	Fremont St Between Pacheco and Salvio Between Stanwell and Sams Club Signal	Install Street Light Pole, Foundation and Luminaire Fixture	EA	\$ 20,000.00	3	\$ 60,000.00	\$ 147,000.00
			Install Street Light Pull Box	EA	\$ 1,500.00	3	\$ 4,500.00	
			Install Conduit and Cabling	LF	\$ 110.00	750	\$ 82,500.00	
4	Intersection Safety Analysis	Concord Ave & Market St Concord Avenue & Salvio Street	Intersection Safety Analytics Camera and System	LS	\$ 40,000.00	2	\$ 80,000.00	\$ 80,000.00
5	CV2X	Concord Ave & Market St Concord Avenue & Salvio Street	CV2X Roadside Unit System	EA	\$ 20,000.00	2	\$ 40,000.00	\$ 40,000.00
6	EVP GPS	Corridor Wide	Install GPS-Based EVP system	EA	\$ 20,000.00	8	\$ 160,000.00	\$ 160,000.00
7	PPLS	Concord Ave and New Dr Concord Ave and Commerce Ave Concord Ave and Harrison St Concord Ave and Pacheco St Concord Ave and Salvio St	Install Pedestrian Light Pole, Foundation and Luminaire Fixture	EA	\$ 15,000.00	19	\$ 285,000.00	\$ 400,250.00
			Install Pull Box	EA	\$ 2,000.00	19	\$ 38,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	475	\$ 52,250.00	
			Install PPLS System	EA	\$ 5,000.00	5	\$ 25,000.00	
8	Curb Ramps	Concord Ave and Fremont St	Install Curb Ramp	EA	\$ 10,000.00	2	\$ 20,000.00	\$ 20,000.00
9	High Visibility Crosswalks & Advance Stop Bar	Concord Ave and New Dr	Install High Visibility Crosswalk	EA	\$ 1,000.00	4	\$ 4,000.00	\$ 5,560.00
			Install Stop Bar	LF	\$ 8.00	195	\$ 1,560.00	
10	Pedestrian Passive Detection & Leading Pedestrian Interval	Concord Ave and New Dr Concord Ave and Commerce Ave Concord Ave and Harrison St Concord Ave and Pacheco St Concord Ave and Salvio St	Modify Signal Phasing to Implement a Lead Pedestrian Interval	LS	\$ 3,000.00	5	\$ 15,000.00	\$ 257,500.00
			Install Pedestrian Passive Detection	LS	\$ 20,000.00	5	\$ 100,000.00	
			Install Blankout Sign	EA	\$ 7,500.00	19	\$ 142,500.00	
Project Cost Total							\$ 1,146,310.00	
Contingency Cost(20%)							\$ 229,262.00	
Subtotal							\$ 1,375,600.00	
Environmental (5%)							\$ 68,780.00	
PS&E (15%)							\$ 206,340.00	
Construction Engineering (10%)							\$ 137,560.00	
Total							\$ 1,788,280.00	

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1.5 - Galindo St: Salvio St to Cowell Rd								
No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Speed Feedback Sign	Salvio St to Cowell Rd	Install Dynamic/Variable Speed Warning Sign (Solar-Powered)	EA	\$ 15,000.00	2	\$ 30,000.00	\$ 30,000.00
2	Safety Lighting Upgrades	Salvio St Clayton Rd Laguna St	Replace Existing Luminaire Fixture	EA	\$ 750.00	10	\$ 7,500.00	\$ 7,500.00
3	Intersection Safety Analysis	Galindo St & Clayton Rd Galindo St & Concord Blvd	Intersection Safety Analytics Camera and System	LS	\$ 40,000.00	2	\$ 80,000.00	\$ 80,000.00
4	CV2X	Galindo St & Clayton Rd Galindo St & Concord Blvd	CV2X Roadside Unit System	EA	\$ 20,000.00	2	\$ 40,000.00	\$ 40,000.00
5	EVP GPS	Corridor Wide	Install GPS-Based EVP system	EA	\$ 20,000.00	6	\$ 120,000.00	\$ 120,000.00
6	Optimize change and Clearance Interval	Galindo St & Clayton Rd Galindo St & Concord Blvd	Modify Signal Timing	LS	\$ 5,000.00	2	\$ 10,000.00	\$ 10,000.00
7	PPLS	Galindo St & Clayton Rd Galindo St & Concord Blvd	Install Pedestrian Light Pole, Foundation and Luminaire Fixture	EA	\$ 15,000.00	8	\$ 120,000.00	\$ 168,000.00
			Install Pull Box	EA	\$ 2,000.00	8	\$ 16,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	200	\$ 22,000.00	
			Install PPLS System	EA	\$ 5,000.00	2	\$ 10,000.00	
8	Class-I Shared Use Path	Galindo Street: Salvio Street to Cowell Road	Site Preparation and Removal	SF	\$ 25.00	38400	\$ 960,000.00	\$ 2,688,000.00
			Install PCC Shared Use Path	SF	\$ 45.00	38400	\$ 1,728,000.00	
9	Pedestrian Passive Detection & Leading Pedestrian Interval	Galindo St & Clayton Rd Galindo St & Concord Blvd	Modify Signal Phasing to Implement a Lead Pedestrian Interval	LS	\$ 3,000.00	2	\$ 6,000.00	\$ 91,000.00
			Install Pedestrian Passive Detection	LS	\$ 20,000.00	2	\$ 40,000.00	
			Install Blankout Sign	EA	\$ 7,500.00	6	\$ 45,000.00	
Project Cost Total							\$	3,234,500.00
Contingency Cost(20%)							\$	646,900.00
Subtotal							\$	3,881,400.00
Environmental (5%)							\$	194,070.00
PS&E (15%)							\$	582,210.00
Construction Engineering (10%)							\$	388,140.00
Total							\$	5,045,820.00

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Project 2: Complete Streets Design and Construction

2-Complete Streets Design and Construction

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total	
1	Cowell Rd Complete Streets Improvements	Cowell Rd: Monument Boulevard to Ygnacio Valley Road	Complete Streets Design and Construction	LS	\$10,000,000.00	1	\$ 10,000,000.00	\$ 45,000,000.00	
2	Monument Blvd Complete Streets Improvements	Monument Boulevard: Cowell Road to Mohr Lane	Complete Streets Design and Construction	LS	\$20,000,000.00	1	\$ 30,000,000.00		
3	Galindo St Complete Streets Improvements	Galindo Street: Concord Blvd to Cowell Road	Complete Streets Design and Construction	LS	\$5,000,000.00	1	\$ 5,000,000.00		
							Project Cost Total	\$ 45,000,000.00	
							Contingency Cost(20%)	\$ 9,000,000.00	
							Subtotal	\$ 54,000,000.00	
							Environmental (5%)	\$ 2,700,000.00	
							PS&E (20%)	\$ 10,800,000.00	
							Construction Engineering (10%)	\$ 5,400,000.00	
							Total	\$ 72,900,000.00	

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Project 5: Concord Blvd Safety Improvements

5 - Concord Boulevard: Galindo Street to Yolanda Cir

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Fill Sidewalk Gaps	240' West of Alary Dr to Woodside Ct	Site Preparation and Removal	SF	\$ 8.00	5500	\$ 44,000.00	\$ 442,700.00
			Install Curb and Gutter	LF	\$ 80.00	550	\$ 44,000.00	
			Landscaping	SF	\$ 10.00	2750	\$ 27,500.00	
			Install ADA Compliant Curb Ramp	EA	\$ 10,000.00	3	\$ 30,000.00	
			Install Sidewalk	SF	\$ 40.00	2750	\$ 110,000.00	
			Install Sidewalk	SF	\$ 40.00	2750	\$ 110,000.00	
Sutter St to Galindo St (North Side of Island)	Site Preparation and Removal	SF	\$ 8.00	3900	\$ 31,200.00	\$ 156,000.00		
	Install Sidewalk	SF	\$ 40.00	3900	\$ 156,000.00			
2	Enhance Pedestrian Crossings	At 2nd St Convert Existing RRFB controlled Crosswalk to HAWK with Advance LED Flashing Warning Sign	Install HAWK Signal	LS	\$ 650,000.00	1	\$ 650,000.00	\$ 684,600.00
			Remove Sign and Post	EA	\$ 400.00	2	\$ 800.00	
			Install Advance LED Flashing Pedestrian Crossing Warning Sign	EA	\$ 7,500.00	2	\$ 15,000.00	
			Remove and Salvage Existing RRFB System	LS	\$ 3,000.00	1	\$ 3,000.00	
			Remove Sign and Post	EA	\$ 400.00	2	\$ 800.00	
			Install Advance LED Flashing Warning Sign for Ex PED Crossing	EA	\$ 7,500.00	2	\$ 15,000.00	
Contra Costa Trail Crossing	Remove Sign and Post	EA	\$ 400.00	2	\$ 800.00	\$ 15,000.00		
	Install Advance LED Flashing Pedestrian Crossing Warning Sign	EA	\$ 7,500.00	2	\$ 15,000.00			
3	Sight Distance Improvements	Minor Approaches with broadside collisions having sight distance issues due to trees, poles and objects	Relocate Obstruction	EA	\$ 10,000.00	10	\$ 100,000.00	\$ 100,000.00
4	Speed Feedback Signs	Concord Blvd: Highway 242 to Kirker Pass Rd	Install Dynamic/Variable Speed Warning Sign (Solar-Powered)	EA	\$ 15,000.00	10	\$ 150,000.00	\$ 150,000.00
							Project Cost Total	\$ 1,377,300.00
							Contingency Cost(20%)	\$ 275,460.00
							Subtotal	\$ 1,652,800.00
							Environmental (5%)	\$ 82,640.00
							PS&E (20%)	\$ 330,560.00
							Construction Engineering (10%)	\$ 165,280.00
							Total	\$ 2,231,280.00

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Project 6: Port Chicago Hwy Safety Improvements

6 - Port Chicago Hwy Safety Improvements

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Speed Feedback Signs	North of High School Ave	Install Dynamic/Variable Speed Warning Sign (Solar-	EA	\$ 15,000.00	2	\$ 30,000.00	\$ 30,000.00
2	Sight Distance Improvements	Minor Approaches with broadside collisions having sight distance issues due to trees, poles and objects	Relocate Obstruction	EA	\$ 10,000.00	5	\$ 50,000.00	\$ 50,000.00
3	Median and Access Management	6th St to Gehringer	Site Preparation and Removal	SF	\$ 8.00	6760	\$ 54,080.00	\$ 200,830.00
			Landscaping	SF	\$ 10.00	5000	\$ 50,000.00	
			Install Median Curb	LF	\$ 60.00	1130	\$ 67,800.00	
			Install Median Concrete	SF	\$ 40.00	630	\$ 25,200.00	
			Install Sign and Post	EA	\$ 750.00	5	\$ 3,750.00	
4	Modify Signal Timing and Hardware	Bonifacio St	Remove Existing Signal Head	EA	\$ 500.00	2	\$ 1,000.00	\$ 121,000.00
			Remove Existing Pole and Equipment	EA	\$ 2,500.00	2	\$ 5,000.00	
			Install New Mast arm pole and Equipment	EA	\$ 45,000.00	2	\$ 90,000.00	
			Modify Signal Timing	LS	\$ 5,000.00	1	\$ 5,000.00	
			Install New 4- Section Signal Head	EA	\$ 3,000.00	2	\$ 6,000.00	
5	Protected Left Turn	N 6th St	Install New 3-Section Signal Head	EA	\$ 3,500.00	4	\$ 14,000.00	\$ 20,000.00
			Remove Existing Signal Head	EA	\$ 500.00	2	\$ 1,000.00	
			Modify Signal Timing	LS	\$ 5,000.00	1	\$ 5,000.00	
			Install New 3-Section Signal Head	EA	\$ 3,500.00	4	\$ 14,000.00	
6	Pedestrian Crossing Improvements	Bonifacio St E Olivera Rd	Install ADA Compliant Curb Ramp	EA	\$ 10,000.00	4	\$ 40,000.00	\$ 48,440.00
			Install Stop Bar	LF	\$ 8.00	180	\$ 1,440.00	
			Install High Visibility Crosswalk	EA	\$ 1,000.00	7	\$ 7,000.00	
Project Cost Total							\$ 470,270.00	
Contingency Cost(20%)							\$ 94,054.00	
Subtotal							\$ 564,400.00	
Environmental (5%)							\$ 28,220.00	
PS&E (20%)							\$ 112,880.00	
Construction Engineering (10%)							\$ 56,440.00	
Total							\$ 761,940.00	

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Project 7: Willow Pass Rd Northern Improvements

7 - Willow Pass Rd Northern Improvements

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Delineators, Wider Edgeline, and Rumble Strips	North of Lynwood to City Limits	Install Edgeline Rumble Strips	EA	\$ 5.00	11420	\$ 57,100.00	\$ 197,900.00
			Remove Striping	LF	\$ 2.50	12800	\$ 32,000.00	
			Install Wider Edge Lines	LF	\$ 8.00	12800	\$ 102,400.00	
			Install Delineators	EA	\$ 75.00	85	\$ 6,400.00	
2	Street Lighting	North of Lynwood to City Limits	Install Street Light Pole, Foundation and Luminaire Fixture	EA	\$ 20,000.00	3	\$ 60,000.00	\$ 178,500.00
			Install Street Light Pull Box	EA	\$ 1,500.00	3	\$ 4,500.00	
			Install Conduit and Cabling	LF	\$ 110.00	900	\$ 99,000.00	
			Install Service Point	EA	\$ 15,000.00	1	\$ 15,000.00	
3	Enhance Curve Delineation	North of Lynwood to City Limits	Remove Sign and Post	EA	\$ 400.00	2	\$ 800.00	\$ 34,350.00
			Install Flashing Beacon System (per pole) with curve warning Signs	EA	\$ 15,000.00	2	\$ 30,000.00	
			Install Sign on Existing Post	EA	\$ 300.00	6	\$ 1,800.00	
			Install Delineators	EA	\$ 75.00	24	\$ 1,750.00	
4	Signs and Object Markers	North of Lynwood to City Limits	Install Object Markers	EA	\$ 250.00	20	\$ 5,000.00	\$ 7,500.00
			Instll Reflectors on Existing Guardrail	EA	\$ 50.00	50	\$ 2,500.00	
Project Cost Total							\$ 418,250.00	
Contingency Cost(20%)							\$ 83,650.00	
Subtotal							\$ 501,900.00	
Environmental (5%)							\$ 25,100.00	
PS&E (20%)							\$ 100,380.00	
Construction Engineering (10%)							\$ 50,190.00	
Total							\$ 677,570.00	

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Project 8: Treat Blvd Safety Improvements

8 - Treat Blvd Safety Improvements

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Upgrading pedestal mounted left turn heads to mast arm mounted	Winton Dr, San Simeon Dr, San Miguel Rd, Navaronne Way, Turtle Creek, Bel Air Dr	Remove Existing Pole and Equipment	EA	\$ 2,500.00	12	\$ 30,000.00	\$ 915,000.00
			Modify Signal Timing	LS	\$ 5,000.00	6	\$ 30,000.00	
			Install New Mast arm pole and Equipment	EA	\$ 75,000.00	10	\$ 750,000.00	
			Install 1-A Pole and Equipment	EA	\$ 15,000.00	7	\$ 105,000.00	
2	Fill Sidewalk Gaps	Lancelot Dr to San Miguel Rd	Site Preparation and Removal	SF	\$ 8.00	45150	\$ 361,200.00	\$ 2,565,200.00
			Install Sidewalk	SF	\$ 40.00	45150	\$ 1,806,000.00	
			Install Curb and Gutter	LF	\$ 80.00	1600	\$ 128,000.00	
			Install Curb Ramp	EA	\$ 10,000.00	27	\$ 270,000.00	
3	Advanced Traffic Signal beacon	Navaronne Way WB	Install Mast Arm Pole and Warning Beacons	EA	\$ 75,000.00	1	\$ 75,000.00	\$ 130,000.00
			Install Conduit and Cabling	LF	\$ 110.00	500	\$ 55,000.00	
4	Leading Pedestrian Interval	Corridor Wide Traffic Signals with Crossings	Modify Signal Phasing to implement a Lead Pedestrian Interval	LS	\$ 3,000.00	9	\$ 27,000.00	\$ 27,000.00
5	HAWK Signal	Blarney Ave	Install HAWK Signal	LS	\$ 650,000.00	1	\$ 650,000.00	\$ 650,000.00
6	Speed Feedback Signs	Corridor Wide	Install Dynamic/Variable Speed Warning Sign (Solar-	EA	\$ 15,000.00	6	\$ 90,000.00	\$ 90,000.00
7	Enhanced Curve Delineation	Between Navaronne Way and Cowell Rd	Install LED Signs or Beacons	EA	\$ 13,000.00	4	\$ 52,000.00	\$ 62,000.00
			Install Sign and Post	EA	\$ 500.00	20	\$ 10,000.00	
							Project Cost Total	\$ 4,439,200.00
							Contingency Cost(20%)	\$ 887,840.00
							Subtotal	\$ 5,327,100.00
							Environmental (5%)	\$ 266,360.00
							PS&E (20%)	\$ 1,065,420.00
							Construction Engineering (10%)	\$ 532,710.00
							Total	\$ 7,191,590.00

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Project 9: Oak Grove Rd Safety Improvements

9 - Oak Grove Road Safety Improvements

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Median and Access Management	Gilly Ln to City Limits	Site Preparation and Removal	SF	\$ 8.00	32580	\$ 260,640.00	\$ 2,235,440.00
			Landscaping	SF	\$ 50.00	32580	\$ 1,629,000.00	
			Install Median Curb	LF	\$ 60.00	5430	\$ 325,800.00	
			Install Sign and Post	EA	\$ 500.00	40	\$ 20,000.00	
2	Speed Feedback Signs	Various Locations Throughout Corridor	Install Dynamic/Variable Speed Warning Sign (Solar-Powered)	EA	\$ 15,000.00	6	\$ 90,000.00	\$ 90,000.00
3	Sight Distance Improvements	Unsignalized Intersections	Remove Obstruction	EA	\$ 10,000.00	8	\$ 80,000.00	\$ 80,000.00
4	Pedestrian Crossing Enhancements	Contra Costa Trail	Install Curb Ramp	EA	\$ 10,000.00	2	\$ 20,000.00	\$ 41,000.00
			Install Median Refuge	EA	\$ 10,000.00	2	\$ 20,000.00	
			Install High Visibility Crosswalk	EA	\$ 1,000.00	1	\$ 1,000.00	
Project Cost Total							\$ 2,446,440.00	
Contingency Cost(20%)							\$ 489,288.00	
Subtotal							\$ 2,935,800.00	
Environmental (5%)							\$ 146,790.00	
PS&E (20%)							\$ 587,160.00	
Construction Engineering (10%)							\$ 293,580.00	
Total							\$ 3,963,330.00	

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Project 10: Ygnacio Valley Rd/Kirker Pass Rd Safety Improvements

10 - Ygnacio Valley Rd/Kirker Pass Rd Safety Improvements

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Fill Sidewalk Gaps	Ygnacio Valley Rd Crystl Ranch to Pine Hollow	Site Preparation and Removal	SF	\$ 8.00	45000	\$ 360,000.00	\$ 3,864,100.00
			Install Sidewalk	SF	\$ 40.00	45000	\$ 1,800,000.00	
			Install Curb and Gutter	LF	\$ 80.00	4500	\$ 360,000.00	
			Install Curb Ramp	EA	\$ 10,000.00	5	\$ 50,000.00	
			Remove Median	SF	\$ 15.00	3000	\$ 45,000.00	
			Install Median Curb	LF	\$ 60.00	500	\$ 30,000.00	
		Ygnacio Valley Rd Michigan to Park Highlands	Site Preparation and Removal	SF	\$ 8.00	6300	\$ 50,400.00	
			Install Sidewalk	SF	\$ 40.00	6300	\$ 252,000.00	
			Install Curb Ramp	EA	\$ 10,000.00	2	\$ 20,000.00	
			Remove Curb	LF	\$ 30.00	1050	\$ 31,500.00	
			Install Curb and Gutter	LF	\$ 80.00	1050	\$ 84,000.00	
			Kirker Pass Rd Concord to Myrtle	Site Preparation and Removal	SF	\$ 8.00	14400	
Install Sidewalk	SF	\$ 40.00		14400	\$ 576,000.00			
Install Curb Ramp	EA	\$ 10,000.00		9	\$ 90,000.00			
2	Traffic Signal Warning Beacons	Ygnacio and Cowell EB		Install Mast Arm Pole and Warning Beacons Equipment	EA	\$ 75,000.00	1	\$ 75,000.00
			Remove Existing Pole and Equipment	EA	\$ 2,500.00	2	\$ 5,000.00	
			Install Conduit and Cabling	LF	\$ 110.00	50	\$ 5,500.00	
3	High Friction Surface Treatment	Ayers/Alberta	Install High Friction Surface Treatment	SF	\$ 6.00	20000	\$ 120,000.00	\$ 564,400.00
			Install Striping	LF	\$ 4.00	1500	\$ 6,000.00	
			Install Pavement Marking	EA	\$ 500.00	8	\$ 4,000.00	
		Myrtle to 1,000 feet past ClearBrook	Install High Friction Surface Treatment	SF	\$ 6.00	70000	\$ 420,000.00	
			Install Striping	LF	\$ 4.00	3600	\$ 14,400.00	
			Install Pavement Marking	EA	\$ 500.00	5	\$ 2,500.00	
4	Raised Median or Barrier	City Limits to Michigan	Site Preparation and Removal	SF	\$ 8.00	2500	\$ 20,000.00	\$ 1,625,000.00
			Install Median Concrete	SF	\$ 40.00	18750	\$ 750,000.00	
			Install Median Curb	LF	\$ 60.00	2500	\$ 150,000.00	
			Install Sign and Post	EA	\$ 500.00	10	\$ 5,000.00	
			Install Median Barrier	LF	\$ 100.00	7000	\$ 700,000.00	
			5	Street Lighting	City Limits to Michigan	Install Street Light Pole, Foundation and Luminaire	EA	
Install Street Light Pull Box	EA	\$ 1,500.00				32	\$ 48,000.00	
Install Conduit and Cabling	LF	\$ 110.00				16800	\$ 1,848,000.00	
Service Location	EA	\$ 12,000.00				4	\$ 48,000.00	
6	Upgrade Striping	Corridor Limits				Remove Striping	LF	\$ 2.50
			Install Striping	LF	\$ 4.00	79200	\$ 316,800.00	
			7	Install Guardrail and Impact Attenuator	City East Limit Mast Arm Pole	LF	\$ 250.00	100
East of Pavilion at Start of Median barrier	Install Impact Attenuator	EA			\$ 6,000.00	1	\$ 6,000.00	
8	Curb Line Reconfiguration	Alberta Way/ Pine Hollow Road	Install Curb Extension	EA	\$ 25,000.00	3	\$ 75,000.00	\$ 197,000.00
		Alberta Way/ Pine Hollow Road	Install Curb Ramp	EA	\$ 10,000.00	6	\$ 60,000.00	
		Alberta Way/ Pine Hollow Road	Striping Improvements	LS	\$ 5,000.00	1	\$ 5,000.00	
		Park Highlands Blvd	Install Curb Extension	EA	\$ 25,000.00	1	\$ 25,000.00	
		Park Highlands Blvd	Install Curb Ramp	EA	\$ 10,000.00	3	\$ 30,000.00	
		Park Highlands Blvd	Striping Improvements	LS	\$ 2,000.00	1	\$ 2,000.00	
							Project Cost Total	\$ 9,385,800.00
							Contingency Cost(20%)	\$ 1,877,160.00
							Subtotal	\$ 11,263,000.00
							Environmental (5%)	\$ 563,150.00
							PS&E (20%)	\$ 2,252,600.00
							Construction Engineering (10%)	\$ 1,126,300.00
							Total	\$ 15,205,050.00

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Project 11: Citywide Pedestrian Sidewalk Improvements

11 - Citywide Pedestrian Sidewalk Improvements

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Fill Sidewalk Gaps	Citywide	Site Preparation and Removal	SF	\$ 8.00	3041280	\$ 24,330,240.00	\$ 156,119,040.00
			Install Sidewalk	SF	\$ 40.00	3041280	\$ 121,651,200.00	
			Install Curb and Gutter	LF	\$ 80.00	126720	\$ 10,137,600.00	
Project Cost Total							\$ 156,119,040.00	
Contingency Cost(20%)							\$ 31,223,808.00	
Subtotal							\$ 187,342,900.00	
Environmental (5%)							\$ 9,367,150.00	
PS&E (20%)							\$ 37,468,580.00	
Construction Engineering (10%)							\$ 18,734,290.00	
Total							\$ 252,912,920.00	

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Project 12: Citywide Pedestrian Signal Improvements

1.3-Willow Pass Rd: I-680 to Avila Road

No.	Improvement	Locations	Description	Unit	Unit Cost	Quantity	Subtotal	Total
1	Leading Pedestrian Interval	Citywide (~15 Locations)	Modify Signal Phasing to Implement a Lead Pedestrian Interval	LS	\$ 12,000.00	15	\$ 180,000.00	\$ 180,000.00
							Project Cost Total	\$ 180,000.00
							Contingency Cost(20%)	\$ 36,000.00
							Subtotal	\$ 216,000.00
							Environmental (5%)	\$ 10,800.00
							PS&E (20%)	\$ 43,200.00
							Construction Engineering (10%)	\$ 21,600.00
							Total	\$ 291,600.00