

Capital Programming Update Project Descriptions

Ten Battery-Electric Buses

The ten battery-electric buses will be 40-foot standard low floor Orange County Transportation Authority (OCTA)-equipped battery-electric buses with seating for 37 passengers, or 33 passengers and two wheelchairs, internal and external camera system, WIFI and mobile routers, a farebox equipped for mobile ticketing, automated passenger counters, radio system and automatic vehicle location, and a three-position exterior bike rack.

Utility and depot upgrades are necessary to charge the battery-electric buses and, according to Southern California Edison (SCE), the current available energy required at the Garden Grove Bus Base to support this project is currently available through SCE's transformer installed at that location. However, electrical cabling, trenching, dedicated charging stations, smart energy management controllers, and other devices similar in nature are still required.

Purchasing these ten buses with the required infrastructure will allow OCTA to test them, along with the hydrogen fuel cell electric buses, in the local environment and geography to see how both technologies perform within the OC Bus Service Plan.

The proposed funding plan is provided below:

Item	Cost Escalated to FY 2019-20	SCCP	HVIP	FY 2018-19 LCTOP	FY 2019-20 SGR	VW Settlement	FY 2019-20 LCTOP
Heavy Duty Battery-Electric Buses	\$ 10,721,130	\$ 3,699,424	\$ 1,205,000	\$ 1,083,000	\$ 2,070,281	\$ 900,000	\$ 1,763,425
Diagnostic Tools, Resident Inspector, Technical Assistance, Training for Ten buses	\$ 1,261,952	\$ 630,976	\$ -	\$ -	\$ -		\$ 630,976
Depot Chargers and Installation	\$ 775,800	\$ -	\$ -	\$ 485,158	\$ -		\$ 290,642
Depot Construction (3)	\$ 809,999	\$ -	\$ -	\$ 769,999	\$ -		\$ 40,000
Depot Design / Construction Management	\$ 369,686	\$ -	\$ -	\$ 184,843	\$ -		\$ 184,843
TOTAL	\$ 13,938,567	\$4,330,400	\$ 1,205,000	\$ 2,523,000	\$ 2,070,281	\$ 900,000	\$ 2,909,886

Acronyms:

FY - Fiscal Year

HVIP – Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project

LCTOP – Low Carbon Transit Operations Program

SCCP – Solutions for Congested Corridors Program

SGR – State of Good Repair

VW – Volkswagen

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San Juan Creek Bridge Replacement

The San Juan Creek Bridge is a 100-year old bridge that crosses over San Juan Creek between Control Point (CP) Oso and CP Capistrano on the Orange Subdivision owned by OCTA in the Los Angeles-San Diego Rail Corridor. This project will support the replacement and construction of a new bridge that will significantly reduce the amount of maintenance required and will meet current design standards and rail load capabilities. On March 26, 2020, the project received environmental clearance. Meanwhile, design for the project is underway and the cost estimate for the construction phase has been updated. The revised total project cost is \$43,091,000. The existing and proposed funding plans are provided below. There is a savings of \$1,200,000 in Federal Transit Administration (FTA) Section 5337 funds that was provided to the Southern California Regional Rail Authority (SCRRA) for their support of the environmental and design phases. OCTA has requested that SCRRA move these funds into construction and will fund SCRRA costs to support the project through construction. Additional Measure M2 (M2), federal FY 2020-21 FTA Section 5337 funds, and Congestion Mitigation and Air Quality (CMAQ) funds from the Orange Transportation Center Parking Structure Project are proposed to support the estimated funding need.

Existing and proposed funding levels are depicted below.

Existing Funding (in 000s)*	FTA 5337	CMAQ	Demo	Proposition 1B TSSSDRA	M2	Total
Environmental*	1,000					\$ 1,000
Design*	1,500					\$ 1,500
Right-of-Way				59	1,175	\$ 1,234
Construction	35,714	472	913			\$ 37,099
TOTAL	\$ 38,214	\$ 472	\$ 913	\$ 59	\$ 1,175	\$ 40,833

Demo – Federal Demonstration funds

TSSSDRA - Transit System Safety, Security and Disaster Response Account

Proposed Funding (in 000s)*	FTA 5337	CMAQ	Demo	Proposition 1B TSSSDRA	M2	Total
Environmental*	520					\$ 520
Design*	780					\$ 780
Right-of-Way				59	1,379	\$ 1,438
Construction	38,532	908	913			\$ 40,333
TOTAL	\$ 39,832	\$ 908	\$ 913	\$ 59	\$ 1,379	\$ 43,091
Increase/(Decrease)	\$ 1,618	\$ 436	\$ 0	\$ 0	\$ 204	\$ 2,258

*Funding may differ from staff report due to rounding

**SCRRA funds

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Interstate 5 (I-5) High-Occupancy Vehicle (HOV) Lane, Avenida Pico to San Juan Creek Road

This project constructed an HOV lane in each direction along three segments: Avenida Pico to Vista Hermosa (Segment 1), Vista Hermosa to Pacific Coast Highway (Segment 2), and Pacific Coast Highway to San Juan Creek Road (Segment 3). The project also reconstructed the Avenida Pico interchange along with various other improvements. Construction all three segments was completed in 2018. Staff is proposing to reconcile the funding across all three segments to align with the latest Capital Action Plan.

I-5 HOV, Avenida Pico to Vista Hermosa (Segment 1)

Programmed Funding (in 000s)	CMAQ	STBG	M2	STIP	IMD Earmark	Total
Environmental			2,100			\$ 2,100
Design	4,246		2,654			\$ 6,900
Right-of-Way	8,000		2,620			\$ 10,620
Construction	1,053	18,442	5,991	43,735	1,600	\$ 70,821
Total	\$ 13,299	\$ 18,442	\$ 13,365	\$ 43,735	\$ 1,600	\$ 90,441

STBG – Surface Transportation Block Grant

STIP – State Transportation Improvement Program

IMD – Interstate Maintenance Discretionary

Actual Funding Used (in 000s)	CMAQ	STBG	M2	STIP	IMD Earmark	Total
Environmental			1,686			\$ 1,686
Design	3,363		4,827			\$ 8,190
Right-of-Way	4,009		2,022			\$ 6,031
Construction	1,053	18,442	2,763	43,735	1,600	\$ 67,594
Total	\$ 8,425	\$ 18,442	\$ 11,298	\$ 43,735	\$ 1,600	\$ 83,500
Increase/(Decrease)	(\$ 4,874)	\$ 0	(\$ 2,067)	\$ 0	\$ 0	(\$ 6,941)

I-5 HOV, Vista Hermosa to Pacific Coast Highway (Segment 2)

Programmed Funding (in 000s)	CMAQ	M2	STIP	Total
Environmental		1,500		\$ 1,500
Design	3,687	1,753		\$ 5,440
Right-of-Way		666		\$ 666
Construction	9,785	6,930	46,779	\$ 63,494
Total	\$ 13,472	\$10,849	\$ 46,779	\$ 71,100

Actual Funding Used (in 000s)	CMAQ	M2	STIP	Total
Environmental		1,686		\$ 1,686
Design	2,280	4,594		\$ 6,874
Right-of-Way		2,197		\$ 2,197
Construction	9,785	7,979	46,779	\$ 64,544
Total	\$ 12,065	\$ 16,456	\$ 46,779	\$ 75,300
Increase/(Decrease)	(\$ 1,407)	\$ 5,607	\$ 0	\$ 4,200

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I-5 HOV, Pacific Coast Highway to San Juan Creek Road (Segment 3)

Programmed Funding (in 000s)	CMAQ	M2	SLPP	Total
Environmental		1,686		\$ 1,686
Design	2,067	3,683		\$ 5,750
Right-of-Way		168		\$ 168
Construction	9,729	33,436	20,789	\$ 63,954
Total	\$ 11,796	\$ 38,973	\$ 20,789	\$ 71,558

SLPP – State Local Partnership Program

Actual Funding Used (in 000s)	CMAQ	M2	SLPP	Total
Environmental		1,686		\$ 1,686
Design	1,597	4,361		\$ 5,958
Right-of-Way		977		\$ 977
Construction	9,729	35,161	20,789	\$ 65,680
Total	\$ 11,326	\$ 42,185	\$ 20,789	\$ 74,300
Increase/(Decrease)	(\$ 470)	\$ 3,212	\$ 0	\$ 2,742

I-5 HOV, Avenida Pico to San Juan Creek Road (Segments 1,2, and 3)

Programmed Funding (in 000s)	CMAQ	M2	STIP	STBG	SLTPP	IMD Earmark	Total
Environmental		5,286					5,286
Design	10,000	8,090					18,090
Right-of-Way	8,000	3,454					11,454
Construction	20,567	46,357	90,514	18,442	20,789	1,600	198,269
Total	38,567	63,187	90,514	18,442	20,789	1,600	233,099

Actual Funding (in 000s)	CMAQ	M2	STIP	STBG	SLTPP	IMD Earmark	Total
Environmental		5,058					5,058
Design	7,240	13,782					21,022
Right-of-Way	4,009	5,196					9,205
Construction	20,567	45,903	90,514	18,442	20,789	1,600	197,815
Total	31,816	69,939	90,514	18,442	20,789	1,600	233,100

I-5 Improvements from Interstate 405 (I-405) to Yale Avenue (Segment 1 [Construction])

This project will add one general purpose lane in both directions of the I-5 from the I-405 to State Route 55. Additional features of the project include improvements to various interchanges. Auxiliary lanes will be added in some segments and re-established in others within the project limits. The overall project length is approximately nine miles.

Currently, this segment of the I-5 corridor is experiencing congestion and long traffic delays due to demand exceeding capacity, primarily resulting from local, regional, and interregional traffic demand. In addition, forecasted local and regional traffic demand is expected to increase by over 10,000 vehicles per day by the year 2040. This is Project B in the Next 10 Delivery Plan.

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I-5 Improvements from Interstate 405 (I-405) to Yale Avenue (Segment 1)

Existing Funding (in 000s)	STBG	STIP	LPP-F*	M2	Total
Environmental	4,473				\$4,473
Design			7,395	7,396	\$14,791
Right-of-Way	27,459			6,729	\$34,188
Construction	20,425	95,338	37,396	13,292	\$166,451
TOTAL	\$52,357	\$95,338	\$44,791	\$27,417	\$219,903

LPP-F – Local Partnership Program – Formula

*Pending CTC Approval