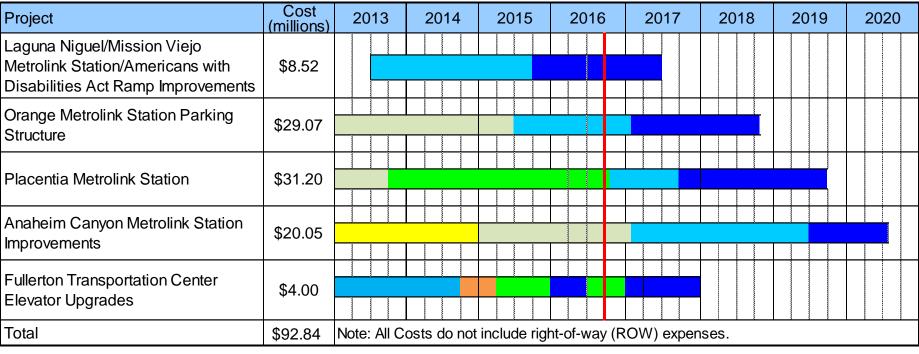
# Rail Programs and Facilities Engineering Quarterly Report



## Station Improvements









# Rail Corridor Improvements



Schedule / Cost

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Project	Cost (millions)		2013		2014	2015	2016	2017	2018	2019	
San Clemente Beach Trail Crossings Audible Warning System	\$	4.50	***************************************					***************************************			
17th Street Grade Separation	\$	55.00	***************************************								
Laguna Niguel-San Juan Capistrano Passing Siding	\$	25.27	***************************************								
San Juan Creek Bridge Replacement	\$	34.20	***************************************								
Control Point Fourth	\$	8.51									
Positive Train Control Program (Orange County Transportation Authority (OCTA) Share)	\$	39.92									
Rail ROW Slope Stabilization	\$	2.00									
Total	\$	164.90	·	, ,	, , , ,	. , , , ,		. , , ,		, , ,	

### Transit Extensions to Metrolink: Santa Ana/Garden Grove Fixed-Guideway



Schedule	2013	2014	2015	2016	2017	2018	2019	2020
Alternatives Analysis, state/federal environmental clearance, and conceptual engineering				000000000000000000000000000000000000000	***************************************			
Project Development/Preliminary Engineering/ Engineering*			3 8 8	8 8	, ,,,,,			
Construction**			000000000000000000000000000000000000000		2000			

<sup>\*</sup> Phases partially funded (Future programming and budget action subject to Board of Directors' approval)

<sup>\*\*</sup> Pursuing federal New Starts

### Rail Operations

#### **Metrolink Operations**

Fiscal Year 2016-17 First Quarter Update

#### **Angels Express**

- Special Friday Inland Empire Orange County Line trains
- Over 250 people attended the opening event at the Irvine
- More than 26,000 boardings through the end of June 201
- · Kids ride free in July and August 2016.

#### Perris Valley Extension of the 91 Line

- · An extension to the 91 Line (Riverside to Los Angeles via
- Passengers can ride to Los Angeles via Orange County free Riverside Hunter Park (UCR), Moreno Valley/March Field,

#### New Tier 4 Locomotives

- The first of 40 new Metrolink Tier 4 clean emissions locomotive arrived in Los Angeles mid-June 2016.
- Clean diesel locomotive will reduce particulate matter and nitrogen oxide emissions by up to 85 percent.





BUENA PARK

CORONA-WEST

CORONA-NORTH MAIN

RIVERSIDE-LA SIERRA

RIVERSIDE-DOWNTOWN

RIVERSIDE-HUNTER PARK/UCR - NEW

MORENO VALLEY/MARCH FIELD - NEW

PERRIS-DOWNTOWN - NEW

DEDDIC COLITH - NEW

# Facilities Engineering

Project	Cost (millions)		2015			2016			2017		7		
Ana, GG Bases - LNG Underground Storage Tanks Removal	\$	1.50											
Irv CC Base - Maintenance Building Heating, Ventilating, Cooling	\$	0.21		///	///	////					mamama		
LBTC - Bridge Assessment and Repair	\$	0.35				1					5		
FPNR - Bus Dock Platform Minor Rehabilitation	\$	0.15											//
GG Base - Maintenance Building HV Unit Replacement	\$	0.25								///			
GG Base - Vehicle Inspection Station Equipment Canopy	\$	0.26			///	////	///						
All Bases - Bus Wash Run-Off Mitigation	\$	1.00				////		///					
All Bases - Fall Protection at Maintenance Bays / Skylights	\$	0.17		///									
SA Base - Facility Modifications for Hydrogen Buses	\$	1.13									///	//	
GG, FPNR - Pavement Repairs	\$	0.28				,		///					
SA, GG Bases - Video Surveillance System	\$	1.20				,						///	
TSOC - Preliminary Engineering and Environmental Clearance	\$	0.90											
TOTAL	\$	7.40											



Construction

#### OCTA Facility Legend:

Ana	Anaheim Bus Base
FPNR	Fullerton Park-and-Ride
GG	Garden Grove Bus Base
Irv CC	Irvine Construction Circle Bus Base
Irv SC	Irvine Sand Canyon Bus Base
BPNR	Brea Park-and-Ride
GWTC	Golden West Transportation Center
NPTC	Newport Transportation Center
LBTC	Laguna Beach Transportation Center
SA	Santa Ana Bus Base
TSOC	Transit Security Operations Center



FPNR Asphalt Pavement Replacement



GG Asphalt Pavement Overlay