

**Board Report**

File #: 2017-0180, **File Type:** Program**Agenda Number:** 16.

**FINANCE BUDGET & AUDIT COMMITTEE
APRIL 19, 2017****SUBJECT: FUNDING RECOMMENDATION FOR METROLINK TRACK AND STRUCTURE
REHABILITATION WORK****ACTION: APPROVE PROGRAMMING OF MEASURE R FUNDS****RECOMMENDATION**

CONSIDER:

- A. APPROVING the SCRRA's request for additional funding for urgent structure and rail tie rehabilitation work up to \$18,381,025.
- B. PROGRAMMING up to \$18,381,025 in **Measure R 3% funds**.
- C. AUTHORIZING the Chief Executive Officer, or his designee, to negotiate and execute all necessary agreements between LACMTA and the SCRRA for the approved funding.

ISSUE

On December 1, 2016 Board of Director's meeting, the Board authorized the CEO to provide Metrolink with "pre-contract award authority" action plan that authorizes Metrolink to proceed with the development of the necessary scope(s) of work, advertise the contract opportunities, and structure the procurements with a series of options to provide flexibility with respect to the amount of funding available. Metrolink's actual award of contracts would not be authorized until such time as Metro's Board approves an appropriation by April 30, 2017 (refer to Attachment A).

Since then, staff in collaboration with SCRRA has performed several due diligence reviews between November 23, 2016 and February 28, 2017 inspecting 29 "Priority A" bridges, culverts and rail ties. Staff has completed the first round of due diligence review of Metrolink's "Priority A" urgent structure and rail tie rehabilitation work. Staff intends to work with SCRRA on a multi-phase approach and recommending an approval of up to \$18,381,025 of additional funding for Metrolink's urgent structure and rail tie rehabilitation work for the first phase. Metro along with the other SCRRA Joint Power Authority members have committed to working with SCRRA to fund the urgent structure and rail tie rehabilitation work to prevent slow orders.

DISCUSSION

Background

On November 18, 2016, Metrolink staff provided its Board of Directors with a report for track and structure rehabilitation funding that will be required in the next 18 months for track and within 36 months for bridges and culverts totaling approximately \$45,357,800 that were divided into two sets of priority groupings, A and B. Priority A is comprised of a total of \$29,417,000 and is regarded as a higher priority than Priority B projects totaling \$15,940,300. However, Metrolink indicated that both A & B projects are necessary to prevent the imposition of slow orders and service disruptions on the impacted segments beginning as early as June 2017. Metrolink staff has indicated that if funding is not made available by the Member Agencies, Metrolink will need to develop a plan for operations with deferred rehabilitation that will likely result in “slow orders” and service disruptions on the impacted segments beginning June 2017 (refer to Attachment B). A slow order is generally initiated when the railroad agency believes that conditions on or about the Rights of Way (ROW) prevent trains from operating at normally designated speeds which could result in substantial delays to riders or a reduction in service. Metrolink has estimated that Metro’s share of this appropriation is up to \$26,855,000 for Priority A and up to \$5,009,316 for Priority B for a total of \$31,864,316 million.

Due Diligence Review

In order to provide assurance to the Metro Board, prior to any multi-million dollar commitment of funding, that the highest priority rehabilitation projects are addressed in the most expeditious manner, particularly in the event of a risk to the operational safety of our passengers, staff performed due diligence review of Metrolink’s “Priority A” urgent structure and rail tie rehabilitation work from November 23, 2016 through March 27, 2017. Staff inspected as many ties, bridges, turnouts and culverts within the aforementioned time period to corroborate and validate Metrolink’s priority list so that it can be used to provide guidance for programming of funds for urgent structure and rail tie rehabilitation work (refer to Attachment C). Staff has also hired a consultant, WSP, to review and validate SCRRA’s state of good repair projects including performing a condition risk assessment to be used as a diagnostic tool for budget allocation.

Staff is working with SCRRA on a multi-phasing approach to Metrolink’s urgent structure and rail tie rehabilitation work totaling up to \$31,864,316, beginning with “Priority A” projects and followed by “Priority B” projects. Staff has inspected 29 bridges and culverts and over 10 miles of rail ties in the Valley, Ventura, San Gabriel and River Subdivisions under the “Priority A” projects. For the 29 bridges and culverts under “Phase A” projects inspected as part of phase 1, staff concurs with SCRRA that at least 10 bridges and culverts including ties and turnouts need to be replaced immediately within the next three years. The remaining 19 bridges and culverts under “Phase A” projects inspected as part of phase 1 appear to be in “fair to satisfactory” conditions and do not require immediate replacement within the next 3 years even though these structures are at least over 29 years old and older. However, since these structures are old and approaching their service life, staff is recommending that it be programmed for replacement within the next ten (10) years with continuous annual inspections. SCRRA staff concurs with Metro’s inspection report and has agreed to work with Metro to reprioritize their urgent structure rehabilitation work based on Metro’s due diligence review (refer to Attachment

F). Staff is recommending approval of up to \$18,381,025 of additional funding for Metrolink's urgent structure and rail tie rehabilitation work (refer to Attachment D). The list in Attachment D is meant to be used as a diagnostic tool for allocation of funds only. It is SCRRA's responsibility to provide an independent condition risk assessment to determine which structures should be replaced and in which order. In addition, staff included rehabilitation work on Los Angeles Union Station canopies, Sierra and Juniper crossing improvements on the San Gabriel Subdivision and East Bank improvements under "Priority B" on the River Subdivision as part of the \$18,381,025 since Union Pacific Railroad and other Joint Powers Authority (JPA) members have all committed to their share of the costs for the work.

SCRRA indicated that if the funding has been secured by all the JPA members by April 2017, they will award the contract in May 2017 and complete construction by May 2019 (refer to Attachment E). Staff has asked SCRRA for a more detailed project delivery and schedule including cash flow forecast on the urgent structure and rail tie rehabilitation work for the four Metrolink subdivisions on the Valley, Ventura, River and San Gabriel. Metro along with the other SCRRA Joint Power Authority members have committed to working with SCRRA to fund the urgent structure and rail tie rehabilitation work to prevent slow orders.

DETERMINATION OF SAFETY IMPACT

Maintaining Metro owned assets and infrastructure in a state of good repair will eliminate system failures which could result in additional cost to LACMTA or exposure to liability.

FINANCIAL IMPACT

Metro staff is requesting the programming of up to \$18,381,025 of Measure R 3%. Metro staff will appropriate additional funding on an annual basis in correlation to Metrolink's work plan and cash flow to complete the slow order projects.

ALTERNATIVES CONSIDERED

The Board could chose not to approve funding the Metrolink rehabilitation work of Metro owned ROW. This is not recommended since passenger safety and operational efficiency are among our agency's highest priorities. Further, if this rehabilitation work is not funded slow orders could be imposed.

NEXT STEPS

1. Continue to perform the due diligence review on the remaining balance of Metrolink's urgent structure and rail tie rehabilitation work totaling up to \$31,864,316.
2. Report back to the board with staff's assessment and a funding plan of the remaining urgent track and structure rehabilitation work as part of phase 2 by December 2017.

ATTACHMENTS

Attachment A - Metro Board Report, November 16, 2016

Attachment B - SCRRRA Board Report, November 18, 2016

Attachment C- Metrolink Asset Inspection Summary, March 23, 2017

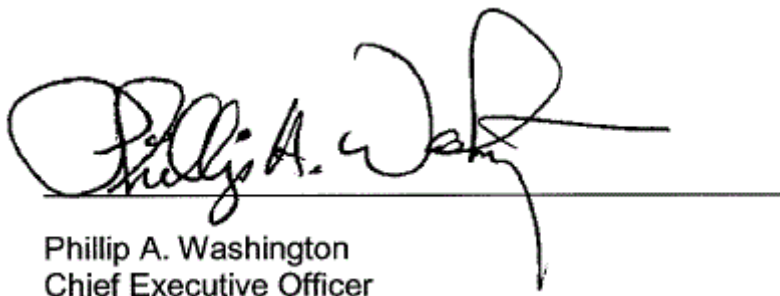
Attachment D- Funding Request for Metrolink's Urgent Structure and Rail Tie Rehabilitation (Slow Order) Work

Attachment E- SCRRRA Proposed Project Delivery Schedule for Urgent Structure and Rail Tie Rehabilitation (Slow Order) Work

Attachment F- MTA/SCRRRA Joint Review on Valley Subdivision

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Phillip A. Washington
Chief Executive Officer



SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY

TRANSMITTAL DATE: November 11, 2016
MEETING DATE: November 18, 2016 **ITEM 11**
TO: Board of Directors
FROM: Arthur T. Leahy *ATL*
SUBJECT: Preliminary FY2016-17 Budget Amendment for Additional Rehabilitation Funding

Issue

At the September 23, 2016 and October 28, 2016 Board Meetings, staff provided reports on the need for additional rehabilitation funding and the strategy for completing the track and structures projects throughout the system. In those reports, the Board was advised that certain track segments would require rehabilitation to be completed within the next eighteen months, and that certain bridges and culverts would require rehabilitation to be completed within the next thirty-six months. Funding commitments for these track and structures rehabilitation projects are required to allow work to be completed within those time frames. If additional funding is not approved, safety considerations would recommend slow orders and weight restrictions to be applied to the affected areas, principally along line segments operating on the Valley, Ventura, River and San Gabriel Subdivisions.

Recommendations

It is recommended that the Board approve a preliminary FY2016-17 budget amendment totaling \$49,202,650, including:

- 1) An amount of \$45,357,800 to allow the initiation of projects required to bring the track, bridges, and culverts to a sufficient condition to preclude the necessity for slow orders or weight restrictions;
- 2) An amount of \$3,351,500 to provide additional required funding for the Los Angeles Union Station Canopy Rehabilitation Project, a portion of which was approved in the FY2016-17 (FY17) capital budget; and
- 3) An amount of \$493,350 to provide funds covering the rehabilitation portion of crossing improvements at Sierra and Juniper on the San Bernardino Line.

Alternatives

The Board could:

- 1) Choose to reduce the amounts of any or all of the proposed spending authority, which may necessitate slow orders and/or weight restrictions in those areas for which projects are unfunded; or
- 2) Not approve any or all of the proposed spending authority, which would result in slow orders and/or weight restrictions within the next six to eighteen months.

Strategic Goal Alignment

This report aligns with the strategic goal to *ensure a safe operating environment*.

Background

Rehabilitation to Avoid Slow Orders

The Authority is responsible for maintaining rail network assets including nearly 400 miles of track in a state of good repair. The breakdown of key track and structure assets includes 3.8 million feet of rail, 1.1 million concrete or wood ties with fasteners, 285 crossing surfaces, 442 turnouts, 261 bridges, 580 culverts and 6 tunnels. In addition to track and structure assets, various system assets including signals, communications, train control centers, Positive Train Control (PTC) and specialized Maintenance-of-Way (MOW) equipment must be maintained to a State of Good Repair.

As shown on Attachment A, funding for overall rehabilitation and replacement has fluctuated between \$18 million (M) and \$47M per year during the past 10 years, and has increasingly become inadequate to sustain necessary rehabilitation of track, bridges and culverts, specifically for the Valley, Ventura, San Gabriel and River line segments.

For FY2015-16 (FY16), there was no funding for rehabilitation of track assets on the Ventura (Los Angeles), Valley, River, or Pasadena subdivisions. As a consequence of the lack of funding, the condition of the track, bridge, tunnel and culvert assets continues to steadily degrade, and in some cases will reach an unsafe condition for normal operation within the next eighteen to thirty-six months. With the recent levels of funding obtained, the Authority is only able to address projects on a "worst-first" basis, and therefore assets that require rehabilitation but are not in the very worst condition, have been deferred. Attachment B provides the historic funding for track and structures over the past five years.

The FY 2016-17 Preliminary Budget included approximately \$103 million for rehabilitation projects, but this amount was reduced to \$30 million in the FY 2016-17 Adopted Budget. Staff has continued to monitor and assess the condition of track and structures, and additional funding is required to address immediate needs for rehabilitation or replacement. Attachments C and D provide a table and corresponding maps listing the locations and work that is recommended.

A prioritized list of the individual projects by subdivision is provided in Attachment E. The amounts requested are in addition to any previously programmed amounts, but were requested in the Preliminary FY 2016-17 budget. The table and maps are also divided into an "A" and "B" list. The "A" list is for the highest priority and the "B" list is for the next-highest priority work necessary. The lists do not include separately programmed or yet-to-be programmed rehabilitation work such as signal, communication, train control system work and work on other line segments.

If funding is not made available, staff would need to develop a plan for operations on the track segments with deferred rehabilitation. This would result in slow orders on the impacted segments and cause significant service impacts. Slow orders would be imposed beginning in June 2017. The corresponding typical increase in run-times for a Valley, Ventura or San Bernardino Line train trip could be 10 to 15 minutes. Weight limits on bridges may also need to be imposed,

restricting the gross weight for freight cars from 315,000 down to 286,000 pounds. The freight railroads would be very concerned about this course of action and likely reduce their freight revenue contributions to the Authority or take other action.

Los Angeles Union Station Canopies

During the FY17 Budget Process, a letter from the Los Angeles County Metropolitan Transportation Authority (Metro) was provided to the Authority describing an urgent need for the Rehabilitation of the Los Angeles Union Station (LAUS) Canopies as shown on Attachment F. As a result of reduced funding for rehabilitation in the FY17 adopted budget, this project was cut from the original five platforms to only two. In the course of bid solicitation, it has been found that original estimates did not take into account railroad specific requirements, and that performing rehabilitation work on only two platforms, instead of all five at the same time, will be far more expensive per platform. Therefore, staff is requesting the funding to rehabilitate all platform canopies at the same time. Member shares for additional platform canopy funding are as shown on Attachment G.

Grade Crossings at Sierra and Juniper Avenues

The City of Fontana and San Bernardino Line Bernardino Associated Governments (SANBAG) are undertaking a project to improve the Sierra Avenue and Juniper Avenue highway-rail crossings on the San Bernardino Line. Funding is requested in order to complete the Authority's rehabilitation portion of the project concurrently with the crossing improvement work being undertaken by SANBAG. This rehabilitation project requires an amount of \$493,350, which would be shared by SANBAG and Metro.

Total Member Agency Shares

Total Member Agency shares associated with this preliminary budget amendment are as shown on Attachment H. This request has been discussed multiple times with the Technical Advisory Committee (TAC) and the Member Agencies. Staff will continue to work with the TAC with Member Agencies regarding rehabilitation project delivery timelines and cash flow requirements. Budget amendments would be brought before the Member Agencies' Boards to request amounts for specific projects as those projects are agreed to by Member Agencies, with the timing based on budget authorization necessary to make contract awards. For the all-share projects for LAUS and the East Bank on the River Subdivision, all Member Agencies' contributions are required, otherwise the projects cannot proceed.

Budget Impact

Board approval of these recommended actions would not increase the amount of the FY 2016-17 Budget – Capital Rehabilitation until such time as amendments to the FY 2016-17 Budget covering specific projects are presented to and approved by the Board, which may total up to \$49,202,650. Staff will return to the Board with requested amendments to the FY 2016-17 Adopted Budget as funding amounts and timing of Member Agency approvals are finalized.

Prepared by: Christine Wilson, Manager, Budgets and Financial Analysis



Ronnie Campbell
Chief Financial Officer



Elissa K. Konove
Deputy Chief Executive Officer

ATTACHMENT A

HISTORICAL REHABILITATION PROGRAM BUDGET (Excluding Rotem Settlement):
(000's)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
\$ 32,441	\$ 28,542	\$ 45,165	\$ 46,728	\$ 25,086	\$ 17,954	\$ 27,836	\$ 33,837	\$ 25,796	\$ 21,054	\$ 29,779

ATTACHMENT B

Historic Metrolink Rehabilitation Funding for Track and Structures

Row Labels	2012-13	2013-14	2014-15	2015-16	2016-17	Grand Total	Average	# of Bridges	# of Culverts	# of Tunnels	Track Miles
Structures	\$1,986,786	\$545,000	\$11,563,594	\$3,466,107	\$4,060,460	\$21,621,947	\$4,324,389	261	580	6	
Olive			\$693,362			\$693,362	\$138,672	6	13		
Orange	\$1,242,000	\$75,000	\$7,074,482	\$2,725,000	\$485,000	\$11,601,482	\$2,320,296	54	108		
River	\$155,250		\$76,976			\$232,226	\$46,445	14	5		
San Gabriel			\$80,000	\$112,000	\$168,000	\$360,000	\$72,000	33(LA)/ 26(SB)	66(LA)/ 36(SB)		
Valley	\$372,600	\$350,000	\$2,086,056		\$867,860	\$3,676,516	\$735,303	57	207	3	
Ventura (LA)	\$197,032		\$497,941			\$694,973	\$138,995	25	19	3	
Ventura (VC)	\$19,904	\$120,000	\$1,054,777	\$629,107	\$2,539,600	\$4,363,388	\$872,678	18	35		
Track	\$5,449,694	\$10,310,233	\$7,132,621	\$4,910,650	\$14,849,853	\$42,653,050	\$8,530,610				400
Olive		\$397,936	\$6,638	\$318,000		\$722,574	\$144,515				5.98
Orange	\$3,245,916	\$3,643,416	\$462,300	\$2,137,750	\$6,912,120	\$16,401,502	\$3,280,300				78.93
Pasadena		\$745,531	\$375,000			\$1,120,531	\$224,106				16.52
Redlands				\$300,000		\$300,000	\$60,000				
River	\$310,501	\$200,000	\$3,623,024		\$4,899,216	\$9,032,741	\$1,806,548				32.53
San Gabriel	\$496,800	\$1,340,000	\$1,438,000	\$1,640,200	\$1,305,300	\$6,220,300	\$1,244,060				45.60(LA)/ 33.43(SB)
System	\$310,500	\$1,677,000	\$800,000			\$2,787,500	\$557,500				
Valley	\$335,603	\$1,375,000	\$82,228		\$1,400,000	\$3,192,831	\$638,566				98.73
Ventura (LA)	\$543,375	\$178,350	\$25,896			\$747,621	\$149,524				32.85
Ventura (VC)	\$207,000	\$753,000	\$319,535	\$514,700	\$333,217	\$2,127,452	\$425,490				20.06

Rehabilitation Projects to Avoid Slow Orders

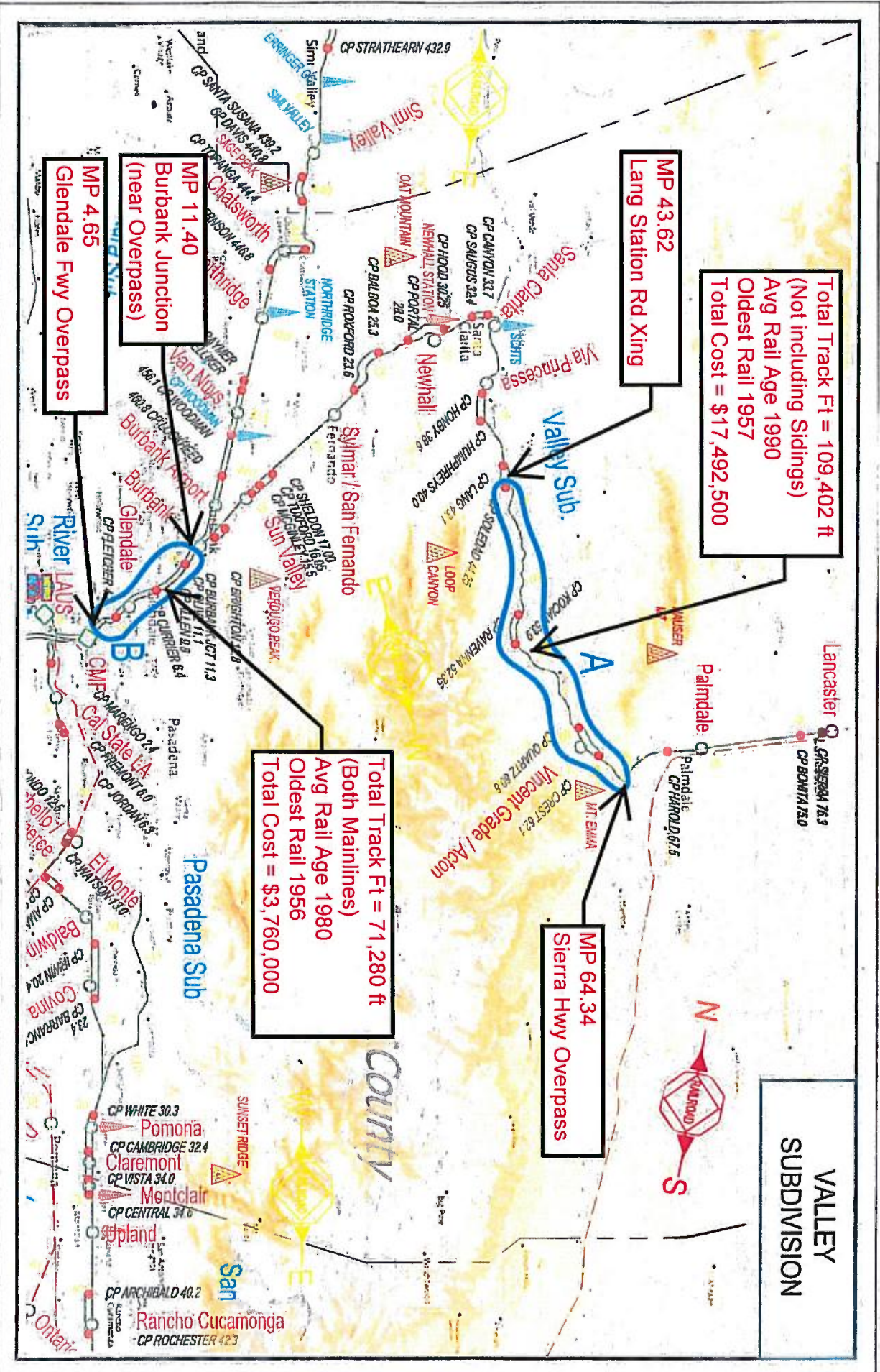
Subdivision	Location	Quantity/Cost										Speed	Project Type	Advertise Contract	Award Contract	Begin Construction	End Construction												
		Rail	Ties	Crossing	Turnouts	Subtotal ¹ Track	Bridge	Culvert	Subtotal ² Bridges/Culverts	Total Track and Structures																			
Valley	A: Santa Clara to Palmdale		8450	\$2,112,500	1	\$400,000	1	\$500,000	\$3,012,500	13	\$9,160,000	15	\$5,320,000	\$14,480,000	\$17,492,500	10 MPH Speed Reduction Reduce Gross Weight from 315,000 to 285,000 lbs.	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017								
	B: Glendale to Burbank		8000	\$2,000,000					\$2,000,000	2	\$1,760,000	0	\$0	\$1,760,000	\$3,760,000	10 MPH Speed Reduction ** (See above)	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017								
Ventura	A: Chatsworth to Burbank Airport		12000	\$3,000,000					\$3,375,000	2	\$2,800,000	0	\$0	\$2,800,000	\$6,175,000	10 MPH Speed Reduction ** (See above)	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017								
	B: Moorpark to Santa Valley	3150*	\$412,500	7600	\$1,900,000	2	\$800,000	1	\$375,000	2	\$3,487,500	1	\$150,000	\$1,460,400	\$4,947,900	10 MPH Speed Reduction ** (See above)	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017								
San Gabriel	A: Mendocino to Rialto									9000	\$2,250,000	1	\$1,400,000	\$0	\$3,650,000	10 MPH Speed Reduction ** (See above)	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017								
	B: Baldwin Park to Covina									1	\$400,000	0	\$0	\$0	\$400,000	10 MPH Speed Reduction	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017								
River	A: LAUS	1800	\$225,000	5300	\$1,325,000					1	\$550,000	0	\$0	\$2,100,000	\$2,100,000	10 MPH Speed Reduction	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017								
	B: East Bank	31680	\$3,960,000	5000	\$1,350,000					3*	\$1,622,400	0	\$0	\$0	\$5,832,400	\$5,832,400	10 MPH Speed Reduction	Track Projects Bridge Projects Culvert Projects	2/28/2017 8/1/2017 2/28/2017	4/30/2017 10/1/2017 4/30/2017	6/1/2017 11/1/2017 6/1/2017	12/31/2017 11/1/2018 12/31/2017							
TOTAL FUNDING NEED TO AVOID SLOW ORDERS															\$45,357,800														

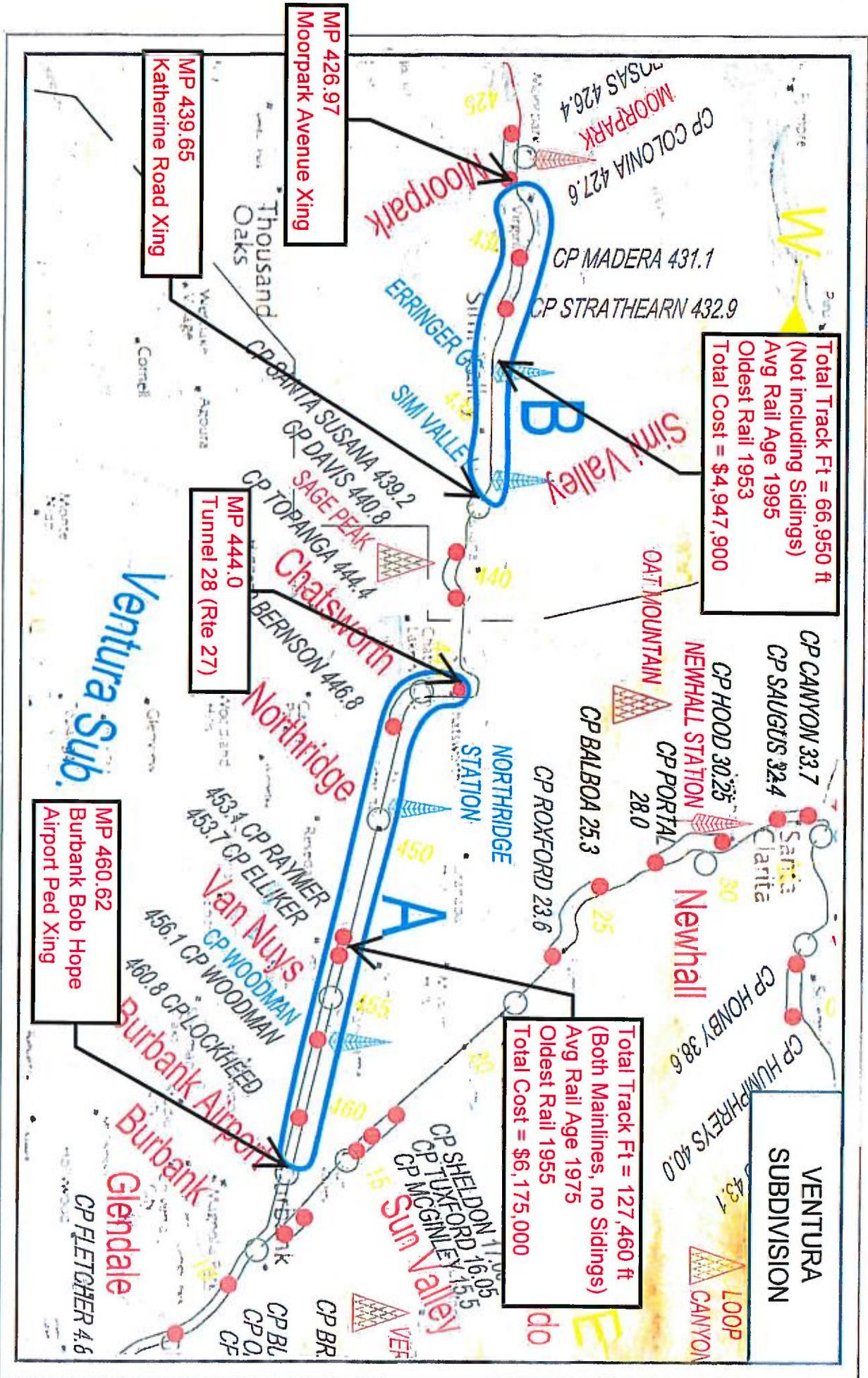
* Reduced from Previous Totals

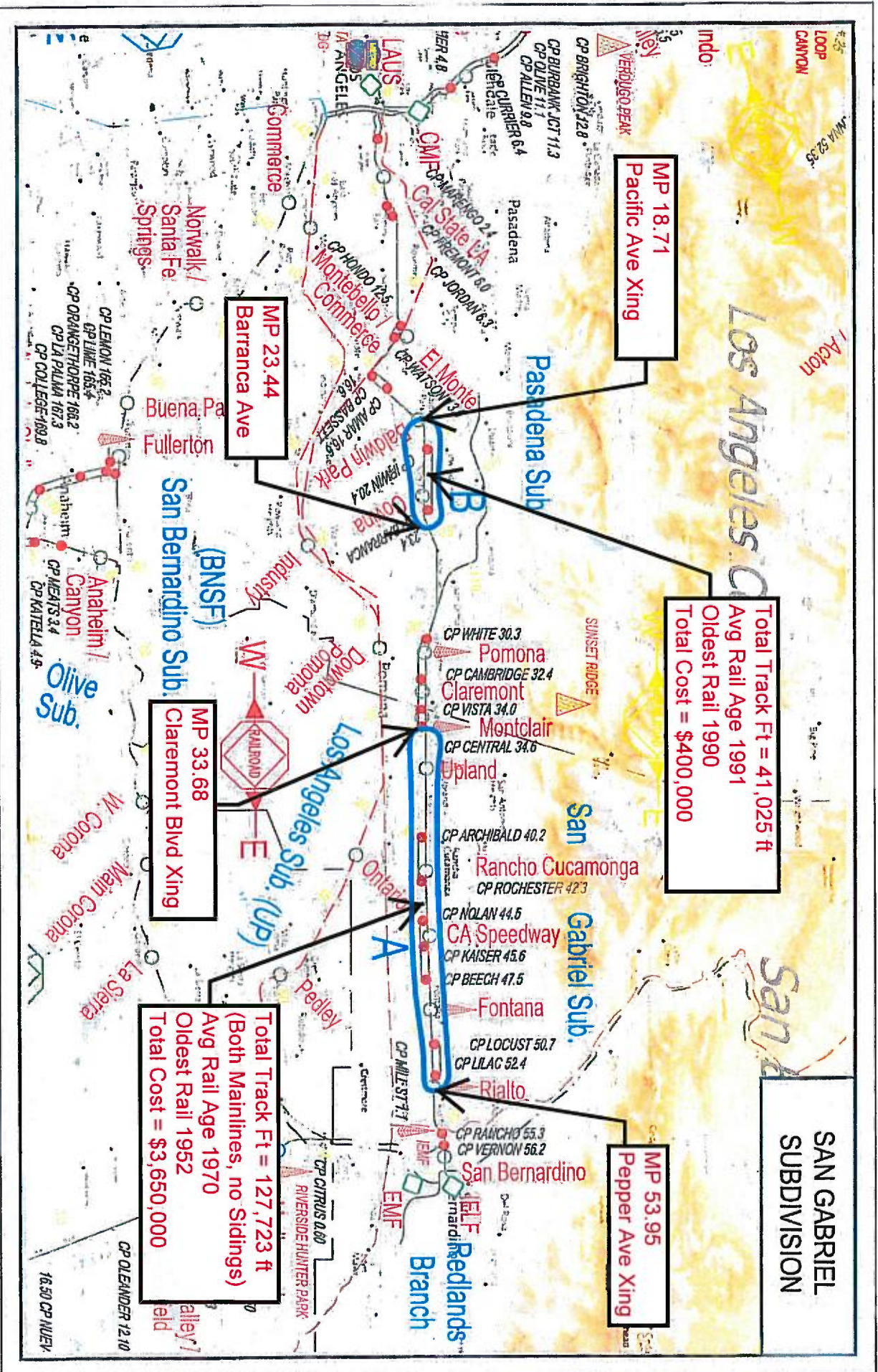
Summary Table by Member Agency

Subdivision	Location	TOTAL	METRO	OCTA	RTIC	SANBAG	VCTC	UPRR
Valley	A SCR to PMD	\$17,492,500	\$17,492,500					
	B GDL to BUR	\$3,760,000	\$3,760,000					
Ventura	A GWT to BBA	\$6,175,000	\$6,175,000					
	B MKK-SM	\$4,947,900				\$4,947,900		
San Gabriel	A MCL-HIA	\$3,650,000				\$1,460,000		
	B BWP-COV	\$400,000	\$240,000			\$160,000		
River	A LAUS	\$2,100,000	\$997,500	\$415,800	\$233,100	\$302,400	\$151,200	
	B East Bank	\$6,832,400	\$1,099,316	\$420,726	\$235,861	\$305,982	\$152,991	\$4,707,524
Sub-Total (A)	A	\$29,417,500	\$26,655,000	\$415,800	\$233,100	\$1,762,400	\$151,200	\$0
	B	\$15,940,300	\$5,099,316	\$420,726	\$235,861	\$465,982	\$5,100,891	\$4,707,524
Grand Total		\$45,357,800	\$31,864,316	\$836,526	\$468,961	\$2,228,382	\$5,252,091	\$4,707,524

* For Costing Purposes, East Bank assumes Zone 2 location and UPRR Share of 68.9%







ATTACHMENT E

Track and Structures Rehab Projects Priority List

Sub Category	Priority	Cost	Scope	Year Built	Condition of Asset		Inspection Date	Track Speed (Pass/Frt)	Advertis Contract	Award Contract	Begin Construction	End Construction	
					Engineer's Assessment Rating	Inspector's Condition Rating							
Priority A Bridges	1	\$840,000	50.64: Replace rail top	1909	3.2	5	7/14/16	35/30	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
	2	\$840,000	50.51: Replace rail top	1909	3.3	5	7/14/16	35/30	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
	3	\$840,000	46.91: Replace rail top	1938	3.3	5	7/22/16	44/30	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
	4	\$840,000	50.77: Replace rail top	1909	3.4	5	7/13/16	35/30	8/1/2017	10/1/2017	2/1/2018	5/1/2018	
	5	\$500,000	47.45: Replace rail top	1938	3.4	5	7/20/16	35/30	8/1/2017	10/1/2017	2/1/2018	5/1/2018	
	6	\$840,000	50.46: Replace rail top	1909	3.5	5	7/15/16	35/30	8/1/2017	10/1/2017	2/1/2018	5/1/2018	
	7	\$500,000	52.66: Replace rail top	1930	3.5	5	7/12/16	28/25	8/1/2017	10/1/2017	2/1/2018	5/1/2018	
	8	\$500,000	44.38: Replace rail top	1944	3.5	5	8/4/16	34/30	8/1/2017	10/1/2017	5/1/2018	8/1/2018	
	9	\$500,000	55.19: Replace rail top	1944	3.5	5	7/11/16	50/35	8/1/2017	10/1/2017	5/1/2018	8/1/2018	
	10	\$840,000	47.03: Replace rail top	1938	3.6	5	7/21/16	44/30	8/1/2017	10/1/2017	5/1/2018	8/1/2018	
	11	\$1,120,000	47.33: Replace rail top	1938	3.6	5	7/21/16	35/30	8/1/2017	10/1/2017	5/1/2018	8/1/2018	
	12	\$500,000	48.08: Replace rail top	1938	3.6	4	7/19/16	35/30	8/1/2017	10/1/2017	5/1/2018	8/1/2018	
	13	\$500,000	54.05: Replace rail top	1946	3.6	5	7/12/16	50/35	8/1/2017	10/1/2017	5/1/2018	8/1/2018	
	Subtotal		\$9,160,000										
	Priority B Bridges	1	\$500,000	8.41: Replace rail top	1906	3.9	5	9/20/16	79/55	8/1/2017	10/1/2017	8/1/2018	11/1/2018
2		\$1,260,000	10.63: Replace rail top	1906	3.9	5	9/19/16	79/55	8/1/2017	10/1/2017	8/1/2018	11/1/2018	
Subtotal		\$1,760,000											
Priority A Culverts Valley	1	\$350,000	55.91: Replace clay pipe - collapsed	1922	3.2	4	8/13/15	59/45	2/28/2017	4/30/2017	6/1/2017	8/1/2017	
	2	\$350,000	53.84: Replace timber box	1904	3.3	4	8/17/15	59/25	2/28/2017	4/30/2017	6/1/2017	8/1/2017	
	3	\$280,000	49.99: Replace timber box	1922	3.4	4	1/19/15	29/25	2/28/2017	4/30/2017	6/1/2017	8/1/2017	
	4	\$280,000	44.16: Replace timber box	1939	3.4	4	1/5/16	39/30	2/28/2017	4/30/2017	7/1/2017	9/1/2017	
	5	\$280,000	50.57: Replace timber box	1950	3.4	4	10/30/15	35/30	2/28/2017	4/30/2017	7/1/2017	9/1/2017	
	6	\$280,000	55.75: Replace timber box	1927	3.5	5	8/13/15	47/35	2/28/2017	4/30/2017	7/1/2017	9/1/2017	
	7	\$280,000	48.74: Replace clay pipe - joint displacement	1900	3.5	4	11/11/15	29/25	2/28/2017	4/30/2017	8/1/2017	10/1/2017	
	8	\$280,000	displacement	1922	3.6	5	8/17/15	50/35	2/28/2017	4/30/2017	8/1/2017	10/1/2017	
	9	\$350,000	displacement	1922	3.6	4	8/13/15	50/35	2/28/2017	4/30/2017	8/1/2017	10/1/2017	
	10	\$420,000	66.78: Replace RCP - separated joints	1921	3.7	4	8/4/15	79/60	2/28/2017	4/30/2017	9/1/2017	11/1/2017	
	11	\$700,000	52.99: Replace aged cast iron pipe added	1900	3.7	3	10/26/15	39/25	2/28/2017	4/30/2017	9/1/2017	11/1/2017	
	12	\$280,000		1988	3.8	4	11/9/15	29/25	2/28/2017	4/30/2017	9/1/2017	11/1/2017	
	13	\$420,000	49.53: Replace aged cast iron pipe	1900	3.8	5	11/10/15	29/25	2/28/2017	4/30/2017	10/1/2017	12/31/2017	
	14	\$350,000	52.32: Replace aged cast iron pipe	1900	3.9	5	10/27/15	35/30	2/28/2017	4/30/2017	10/1/2017	12/31/2017	
	15	\$420,000	52.38: Replace aged cast iron pipe	1900	3.9	5	10/27/15	35/30	2/28/2017	4/30/2017	10/1/2017	12/31/2017	
Subtotal		\$5,320,000											

Track and Structures Rehab Projects Priority List

Sub Category	Priority	Cost	Scope	Condition of Asset			Track Speed (Pass/Frt)	Advertise Contract	Award Contract	Timeline	
				Year Built	Engineer's Assessment Rating	Inspector's Condition Rating				Inspection Date	Begin Construction
Priority A Track	1	\$500,000	2500 Ties between MP 46 - MP 48, MP 63 - MP 64				49/35	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	2	\$825,000	3000 Ties between MP 52 - MP 54		Approximately 25% of the wood ties in this segment need to be replaced.		40/30	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	3	\$400,000	Lang Station Rd Crossing		Crossing and track structure need to be replaced (Main Track and Siding)		39/30	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	4	\$787,500	2950 Ties between MP 54 - MP 59		Up to 20% of the wood ties in this segment need to be replaced.		59/45	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	5	\$500,000	Action Spur Turnout		Spur was constructed in 1966. Speed in siding was just raised due to Action Project. Turnout needs to be replaced.		49/35	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	Subtotal	\$3,012,500									
Priority B Track	1	\$1,000,000	4000 Ties Between MP 9 - MP 11		Over 30% of the wood ties in this segment need to be replaced.		79/55	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	2	\$1,000,000	4000 Ties Between MP 6 - MP 8		Approximately 25% of the wood ties in this segment need to be replaced.		79/55	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	Subtotal	\$2,000,000									
Priority A Bridges	1	\$1,960,000	458.71: Replace Timber Trestle - major cracking	1925	3.0	4	79/40	8/1/2017	10/1/2017	11/1/2017	2/1/2018
	2	\$840,000	452.1: Replace rail top	1916	3.3	5	70/40	8/1/2017	10/1/2017	11/1/2017	2/1/2018
	Subtotal	\$2,800,000									
Priority B Bridges	1	\$655,200	436.96: Replace rail top	1939	3.9	5	79/60	8/1/2017	10/1/2017	8/1/2018	11/1/2018
	2	\$655,200	434.12: Replace rail top	1901	3.9	5	73/60	8/1/2017	10/1/2017	8/1/2018	11/1/2018
	Subtotal	\$1,310,400									
Priority B Culverts	1	\$150,000	436.46: Replace culvert - part rail top	1925	3.9	4	79/60	2/28/2017	4/30/2017	10/1/2017	12/31/2017
	Subtotal	\$150,000									
	Priority	Cost	Scope	Condition Notes			Speed	Timeline			
	1	\$675,000	2700 Ties between MP 447 - MP 450	Over 30% of the wood ties in this segment need to be replaced.			70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	2	\$325,000	1300 Ties between MP 444 - MP 446	Approximately 25% of the wood ties in this segment need to be replaced.			70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017

Track and Structures Rehab Projects Priority List

Sub Category	Priority	Cost	Scope	Condition of Asset			Track Speed (Pass/Frt)	Advertise Contract	Award Contract	Begin Construction	End Construction
				Year Built	Engineer's Assessment Rating	Inspector's Condition Rating					
Priority A Track	3	\$375,000	Turnout at MP 460				79/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	4	\$200,000	800 Ties Between MP 451 - MP 452				70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	5	\$900,000	3600 Ties Between MP 458 - MP 462				79/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	6	\$900,000	3600 Ties Between MP 454 - MP 458				79/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	Subtotal	\$3,375,000									
	1	\$850,000	3400 Ties between MP 434 - MP 439				79/60	2/28/2017	4/30/2017	6/1/2017	12/31/2017
Priority B Track	2	\$600,000	2400 Ties Between MP 430 - MP 433				73/60	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	3	\$247,500	Rail Replacement - Curve 439.24 (1650')				70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	4	\$300,000	1200 Ties Between MP 427 - MP 429				70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	5	\$375,000	Turnout at CP Santa Susana				70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	6	\$400,000	Katherine Rd Crossing				70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	7	\$165,000	Rail Replacement - Curve 433.1 (1100')				73/60	2/28/2017	4/30/2017	6/1/2017	12/31/2017
8	\$400,000	Hidden Ranch Drive Crossing				70/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017	
9	\$150,000	600 Ties Between MP 433 - MP 434				73/60	2/28/2017	4/30/2017	6/1/2017	12/31/2017	
Subtotal	\$3,487,500										
Priority A Bridges	1	\$1,400,000	40.12: Replace rail top - Under xing				79/55	8/1/2017	10/1/2017	2/1/2018	5/1/2018
	Subtotal	\$1,400,000									
	1	\$875,000	3500 Ties between MP 34 - MP 38				79/55	2/28/2017	4/30/2017	6/1/2017	12/31/2017

Note: 1350' of rail on another project was removed from the list resulting in a reduction for the Subdivision of \$150,000.

Condition Notes
Over 30% of the wood ties in this segment need to be replaced.

Speed

Timeline

Track and Structures Rehab Projects Priority List

Sub	Category	Priority	Cost	Scope	Condition of Asset			Track Speed (Pass/Fri)	Advertise Contract	Award Contract	Begin Construction	End Construction	
					Engineer's Assessment Built Rating	Inspector's Condition Rating	Inspection Date						
San Gabriel	Priority A Track	2	\$700,000	2800 Ties Between MP 47 - MP 51	Approximately 25% of the wood ties in this segment need to be replaced.			79/55	2/28/2017	4/30/2017	6/1/2017	12/31/2017	
		3	\$300,000	1200 Ties Between MP 52 - MP 54	Approximately 20% of the wood ties in this segment need to be replaced.			79/55	2/28/2017	4/30/2017	6/1/2017	12/31/2017	
		4	\$375,000	1500 Ties Between MP 42 - MP 45	Approximately 15% of the Wood Ties in this segment need to be replaced.			79/55	2/28/2017	4/30/2017	6/1/2017	12/31/2017	
		Subtotal	\$2,250,000										
		1	\$400,000	Lark Ellen Crossing	Crossing needs rehabilitation.			60/30	2/28/2017	4/30/2017	6/1/2017	12/31/2017	
River Sub	Priority B Track	Subtotal	\$400,000										
		Priority	Cost	Scope	Condition Notes	Speed	Timeline						
		1	\$225,000	Replace Leads into Union Station	Leads into union station have curve wear and need new rail.	25/5	2/28/2017	4/30/2017	6/1/2017	12/31/2017			
		2	\$1,325,000	Replace 5300 Ties on West Bank	Approximately 21% of the wood ties on the West Bank need to be replaced.	79/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017			
River Sub	Priority A Track	3	\$550,000	Replace Turnouts at CP Taylor	2 Turnouts at CP Taylor already replaced, 2 more need to be replaced.	50/40	2/28/2017	4/30/2017	6/1/2017	12/31/2017			
		Subtotal	\$2,100,000										
River Sub	Priority B Track	1	\$5,210,000	Replace 3 miles of Rail and 25% Ties	MT2 several areas that are susceptible for rail defects due to the high density of train traffic, the amount of plugged rail through the years, and the age of the existing 133 lb rail which does not meet SCRRA standards. This project was initially proposed as rail and ties separately, and the agency only received funding for 2/3's of the ties needed and none of the rail. Ideally we would complete these projects together, along with the funding for FY15, where we are doing the same scope of work for MT1. Funding for this project is efficient use of member agency funds due to high UPRR contribution percentages. However, it does take longer to obtain funds from UPRR and plan the work due to their contributions and funding agreements.	70/30	2/28/2017	4/30/2017	6/1/2017	12/31/2017			
		Subtotal	\$5,210,000										

Track and Structures Rehab Projects Priority List

Sub Category	Priority	Cost	Scope	Condition of Asset									
				Year Built	Engineer's Assessment Rating	Inspector's Condition Rating	Inspection Date	Track Speed (Pass/Frt)	Advertise Contract	Award Contract	Begin Construction	End Construction	
	2	\$1,622,400	Replace 3 turn outs on East Bank	Turnouts on the East Bank are heavily used, and some are over 50 years, while others haven't been replaced since Metrolink began service. Ideally, funding for these would be lined up with the rail and ties, so projects can be completed concurrently.					70/30	2/28/2017	4/30/2017	6/1/2017	12/31/2017
	Subtotal	\$5,832,400	<i>Note: 2 turnouts were removed from the list resulting in a reduction for the subdivision of \$1,000,000.</i>										
Bridge Condition Code													
Condition 1: Failed, immediately stop trains, detailed inspection may be necessary.													
Condition 2: Imminent failure, failure could occur at any time, take appropriate action to protect trains, detailed inspection is necessary.													
Condition 3: Poor, condition is sound but with serious or advancing problems, take appropriate action to protect trains, detailed inspection may be necessary or note requirement for Interim Inspections.													
Condition 4: Fair, defect is sound with minor problems, Interim inspections may be necessary.													
Condition 5: Satisfactory, minor exceptions or developing problem noted, monitor for next Periodic Maintenance (General) inspection.													
Condition 6: Good, no problems are detected.													

**Metro**Los Angeles County
Metropolitan Transportation AuthorityOne Gateway Plaza,
Los Angeles, CA 90012-2952Phillip A. Washington
Chief Executive Officer
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January 15, 2016

Mr. Arthur Leahy
Chief Executive Officer
Metrolink
One Gateway Plaza, 12th Floor
Los Angeles, CA 90012

Dear Mr. Leahy:

RECEIVED**JAN 19 2016****OFFICE OF THE CEO**

I am writing as a follow-up to our meeting to recap the serious state of good repair issue at Union Station ("LAUS") that requires your attention. Under the terms of the easement agreement under which Metrolink operates the rail yard at Union Station, Metrolink is required to maintain improvements in the yard, including the platforms (attached). Over the last three years, Metro staff has brought to the attention of Metrolink staff the continuing deterioration of the canopies and surface area of the platforms. Metrolink staff, while not disputing Metrolink's obligation with respect to maintenance, has failed to budget for or make the needed improvements.

The canopies that shade the platforms are seriously deteriorated. In addition to the canopies being part of the historic designation of LAUS on the National Registry of Historic Places and thus require protection, the failure to maintain has created a potentially serious safety condition. The lead based paint has not been appropriately cared for and now is flaking and peeling. Rust of the canopies is in some areas so serious that sections of steel are in danger of failing and falling. One in particular is being held up by a "C" clamp. The canopies are designed with a drain system that runs through the center of the structures. The steel has rusted through and rain water is now entering the electrical light system. Water is draining out of energized light fixtures onto the center of the ramps raising concern of potential electrocution. This draining water has caused slip and fall incidents. Some of the eroded drains now deposit water on the platforms causing slick conditions. Concrete spalling on the platforms have created uneven surfaces and trip hazards.

With the looming prospect of El Niño, we agreed it is time for Metrolink to meet their obligations and correct these conditions. I respectfully request that you include in Metrolink's 2017 budget for consideration by the member agencies, sufficient capital funding for these needed improvements, including repairs to the canopies in accordance with Secretary of the Interior's Guidelines for listed properties. My staff is prepared to work with you to develop a work plan and scope such that the improvements can be implemented early in the coming fiscal year.

I appreciate your attention to these issues.

Sincerely,

Phillip A. Washington
Chief Executive Officer

Attachment: Easement

ATTACHMENT G

SCOPE OF WORK - LAUS Platforms 2 thru 6

- (1) Remove loose paint from underside of canopies
- (2) Repair damaged sheet metal and gutter, seal gutter
- (3) Encapsulate lead paint on underside of canopies

	Quantity	Unit	Est Unit Cost	Total Est Cost
Protective enclosure (rented for one year)	1	ea	\$ 200,000	\$ 200,000
Enclosure installation/dismantle/relocation	50	ea	\$ 15,000	\$ 750,000
Lift rental (3 total)	6000	hr	\$ 50	\$ 300,000
Light plant	2	ea	\$ 10,000	\$ 20,000
Environmental equipment (decontamination trailer & supplies)	12	mo	\$ 20,000	\$ 240,000
Remove loose paint (assumed 33% of total sq ft)	50000	sf	\$ 15	\$ 750,000
Encapsulation	152000	sf	\$ 5	\$ 760,000
Sheet metal/gutter repair (assumed 20% of total sq ft)	30000	sf	\$ 15	\$ 450,000
Subtotal				\$ 3,470,000
Contingency (15%)				\$ 520,500
Permits and insurance	1	ls	\$ 75,000	\$ 75,000
Flagging	240	day	\$ 1,500	\$ 360,000
Safety & project management	240	day	\$ 800	\$ 192,000
Total				\$ 4,617,500
			Approved in FY17 Capital Budget	\$ 1,266,000
			Additional funding required	\$ 3,351,500

Member Shares:

	TOTAL	LACMTA	OCTA	RCTC	SANBAG	VCTC	OTHER
\$	3,351,500	\$ 1,225,811	\$ 510,970	\$ 286,453	\$ 371,614	\$ 185,807	\$ 770,845

ATTACHMENT H

TOTAL MEMBER AGENCY SHARES

REHABILITATION TO AVOID SLOW ORDERS

Subdivision	Location	TOTAL	METRO	OCTA	RCTC	SANBAG	VCTC	UPRR	AMTRAK
Valley	SCR to PMD	\$17,492,500	\$17,492,500						
Valley	GDL to BUR	\$3,760,000	\$3,760,000						
Ventura	CWT-BBA	\$6,175,000	\$6,175,000						
Ventura	MPK-SIM	\$4,947,900					\$4,947,900		
San Gabriel	MCL-RIA	\$3,650,000	\$2,190,000			\$1,460,000			
San Gabriel	BWP-COV	\$400,000	\$240,000			\$160,000			
River	LAUS	\$2,100,000	\$997,500	\$415,800	\$233,100	\$302,400	\$151,200		
River EB*	East Bank	\$6,832,400	\$1,009,316	\$420,726	\$235,861	\$305,982	\$152,991	\$4,707,524	
Sub-Total (A)	A	\$29,417,500	\$26,855,000	\$415,800	\$233,100	\$1,762,400	\$151,200	\$0	
Sub-Total (B)	B	\$15,940,300	\$5,009,316	\$420,726	\$235,861	\$465,982	\$5,100,891	\$4,707,524	
REHABILITATION TO AVOID SLOW ORDERS TOTAL		\$45,357,800	\$31,864,316	\$836,526	\$468,961	\$2,228,382	\$5,252,091	\$4,707,524	

Union Station Platform Rehabilitation

Juniper- Sierra Crossing Rehabilitation

		\$3,351,500	\$1,225,811	\$510,970	\$286,453	\$371,614	\$185,807		\$770,845
		\$493,350	\$296,010			\$197,340			
TOTAL		\$49,202,650	\$33,386,137	\$1,347,496	\$755,414	\$2,797,336	\$5,437,898	\$4,707,524	\$770,845



Board Report

File #:2016-0891, File Type:Policy

Agenda Number:39.

**FINANCE, BUDGET & AUDIT COMMITTEE
NOVEMBER 16, 2016**

SUBJECT: METROLINK REQUEST FOR ADDITIONAL FUNDING FOR TRACK AND STRUCTURE REHABILITATION WORK

ACTION: APPROVE LIMITED PRE-CONTRACT AWARD AUTHORITY TO METROLINK TO INITIATE PROCUREMENT ACTIVITIES

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to provide Metrolink with “**pre-contract award authority**” to procure the contracts required for the urgent track and structure rehabilitation work reported by Metrolink at its Board Meeting on September 23, 2016.

ISSUE

On September 23, 2016, Metrolink staff provided its Board of Directors with a report for track and structure rehabilitation funding that will be required in the next 18 months for track and within 36 months for bridges and culverts totaling approximately \$46.5 million. Metrolink staff has indicated that if funding is not made available by the Member Agencies, Metrolink will need to develop a plan for operations with deferred rehabilitation that will likely result in “slow orders” and service disruptions on the impacted segments beginning June 2017 (Please See Attachment A). A slow order is generally initiated when the railroad agency believes that conditions on or about the Rights of Way (ROW) prevent trains from operating at normally designated speeds which could result in substantial delays to riders or a reduction in service. Metrolink has estimated that Metro’s share of this appropriation is \$32.0 million.

DISCUSSION

In October, Metrolink staff provided the Member Agencies with a report for track and structure rehabilitation funding that will be required in the next 18 months for track and within 36 months for bridges and culverts totaling approximately \$46.5 million that were divided into two sets of priority groupings, A and B. Priority A is comprised of a total of \$29.4 million and is regarded as a higher priority than Priority B projects totaling \$17.1 million. However, Metrolink indicated that both A & B projects are necessary to prevent the imposition of slow orders and service disruptions on the impacted segments beginning as early as June 2017.

While staff agrees that some level of state of good repair is required on the ROW, the prudent

approach is to provide assurance to the Metro Board, prior to any multi-million dollar commitment of funding, that the highest priority rehabilitation projects are addressed in the most expeditious manner, particularly in the event of a risk to the operational safety of our passengers. Therefore, staff has requested Metrolink to provide a prioritized list that identifies the most critical track and structure rehabilitation projects along with a condition assessment rating and provide a detailed project delivery work plan and corresponding cash flow expenditure plan.

Simultaneously, in cooperation with Metrolink, Metro staff is also performing a due diligence review and intends to secure the services of a qualified professional railroad engineering firm from the Regional Rail engineering bench by December 2016 with specialized staffing in railroad track & structures engineering to assist in the verification of project requirements, priorities, current ROW conditions, and validate the estimated costs. However, in the meantime to ensure there is no delay in addressing these potential operational efficiencies or passenger safety issues, staff is proposing a “pre-contract award authority” action plan that authorizes Metrolink to proceed with the development of the necessary scope(s) of work, advertise the contract opportunities, and structure the procurements with a series of options to provide flexibility with respect to the amount of funding available. Metrolink’s actual award of contracts would not be authorized until such time as Metro’s Board approves an appropriation, which is anticipated to occur prior to April 30, 2017.

As reported to the Board previously, Metro continues to work with Metrolink staff to provide an accounting and reconciliation of previously appropriated funding of approximately \$40 million for state of good repair projects dating back to FY11. Finally, in an effort to improve the communication and collaboration between the agencies, a Metrolink/Metro collaborative working group began in May 2016 meeting on a bi-weekly basis to discuss capital project status, agency agreements, risk management, community outreach, funding, operations, planning and performance.

DETERMINATION OF SAFETY IMPACT

The adoption of this recommendation has no safety impact.

FINANCIAL IMPACT

Staff anticipates that an appropriation request with a corresponding work plan could be brought to the Board by April 2017. Funding for the bench consultant is Measure R 3%. These funds are restricted for commuter rail related capital/rehabilitation projects.

ALTERNATIVES CONSIDERED

The Board could chose to not grant “pre-contract award authority” to Metrolink or not engage a consultant to analyze Metrolink’s rehabilitation needs of Metro owned ROW. This is not recommended especially since passenger safety and operational efficiency are among the agency’s highest priorities. The Board could also instruct staff to defer this request until the consideration of the FY18 Budget. This is not recommended as the process outlined above allows Metrolink to proceed with the procurement of the necessary scope(s) of work, advertise the contract opportunities, and

structure the procurements to lead a more efficient and informed FY18 budget development process.

NEXT STEPS

Upon approval of the Board, staff will:

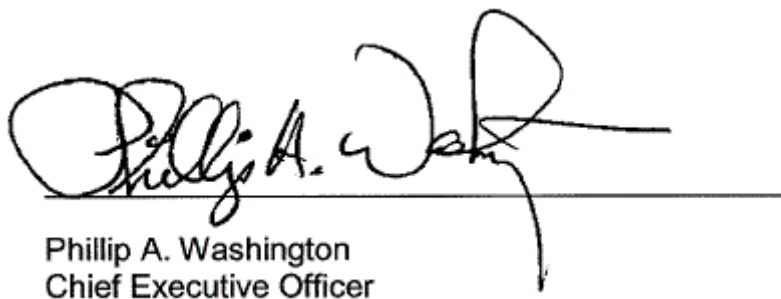
1. Notify Metrolink of the Board's actions.
2. Continue to perform the due diligence review and secure specialized railroad engineering consultant services from the established Regional Rail bench by December 2016 to evaluate Metrolink's track and structure rehabilitation and SOGR projects.
3. Report back to the Board with an appropriate funding recommendation for track and structures rehabilitation work by April 2017 or sooner.

ATTACHMENTS

Attachment A- Metrolink Board Item #22 dated September 23, 2016

Prepared by: Yvette Reeves, Principal Transportation Planner (213) 922-4612
Drew Phillips, Director of Budget (213) 922-2109
Jeanet Owens, Sr. Executive Officer, Program Management
(213) 922-6877

Reviewed by: Nalini Ahuja, Chief Financial Officer (213) 922-3088
Rick Clark, Chief Program Management Officer (213) 922-7557



Phillip A. Washington
Chief Executive Officer



Metro

Los Angeles County
Metropolitan Transportation Authority

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Los Angeles, CA 90012-2952

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March 24, 2017

ATTACHMENT C

**SUBJECT: METROLINK ASSET INSPECTION SUMMARY:
VALLEY, VENTURA & SAN GABRIEL LINES - SUMMARY FINDINGS**

MetroLink is responsible for maintaining approximately 400 miles of track in a State of Good Repair. This includes among other assets, the maintenance of 1.1 million rail ties and fasteners, 261 bridges and 580 culverts. In September 2016, MetroLink informed the Board of their intent to implement slow orders predicated on a request for track and structure rehabilitation funding. At that time, MetroLink produced a list of the structures which they had evaluated were in need of immediate repair (Refer to Attachment A: “Priority List”).

In response, Metro Engineering staff was directed to inspect as many ties, bridges and culverts to as possible to corroborate and validate the MetroLink Priority List. It was not possible for Metro staff to visit and inspect each asset listed on the Priority List produced by MetroLink due to the urgent nature of the request. Instead, between November 23, 2016 and February 28, 2017 Metro staff inspected twenty nine (29) “Priority A” bridges or culverts from the MetroLink provided Valley, Ventura and San Gabriel Subdivision Line Lists as well as rail ties within the locations visited. In addition to this summary, staff produced individual inspection & observation reports for each of these twenty nine assets inspected.

The following two tables present Metro’s independently derived Condition Ratings and Recommendations for each of the inspected assets. Table 1 below, presents the list of inspected structures which Metro Engineering staff have rated as being in ‘Poor’ structural condition. These ten (10) structures have been identified by Metro staff as requiring replacement within the next 3 years and should be programmed for replacement in the next fiscal cycle. Table 2 below, provides the assessed structural conditions of the remaining 19 structures which were inspected. The structures listed in Table 2 were determined, at the time of inspection, to be in fair to satisfactory condition. (*Individual inspection reports for these 29 structures are available separately upon request*):

Table 1: Subdivision Structures – Identified for Replacement within 3 years:

Line:	Mile Point:	Name:	Age:	Metro Condition Rating:	Metro Recommendation:
Valley	47.45	Bridge 5	79 yrs.	3 (POOR)	Replace.
Valley	50.46	Bridge 6	108 yrs.	3 (POOR)	Replace.
Valley	50.51	Bridge 2	107 yrs.	3 (POOR)	Replace.
Valley	50.64	Bridge 1	107 yrs.	3 (POOR)	Replace.
Valley	50.77	Bridge 4	107 yrs.	3 (POOR)	Replace.

Valley	53.84	Culvert 2	113 yrs.	3 (POOR)	Replace.
Valley	54.13	Culvert 8	95 yrs.	3 (POOR)	Replace.
Valley	55.91	Culvert 1	94 yrs.	3 (POOR)	Replace.
Valley	66.78	Culvert 10	96 yrs.	3 (POOR)	Replace.
Ventura	458.71	Bridge 1	91 yrs.	3 (POOR)	Replace.

Table 2: Subdivision Structures – Which do not Require Immediate Replacement:

Line:	Mile Point:	Name:	Age:	Metro Condition Rating:	Metro Recommendation:
Valley	44.16	Culvert 4	78 yrs.	4 (FAIR)	Replace or reinforce timber ballast & headwalls. Recondition downstream channel.
Valley	44.38	Bridge 8	73 yrs.	5 (SATISFACTORY)	Recondition ballast over bridge due to excessive fine soils deposited.
Valley	46.91	Bridge 3	79 yrs.	4 (FAIR)	Continue monitoring. Consider replacement within ten years.
Valley	47.03	Bridge 10	79 yrs.	4 (FAIR)	Continue monitoring. Consider replacement within ten years.
Valley	47.33	Bridge 11	79 yrs.	4 (FAIR)	Continue monitoring. Consider replacement within ten years.
Valley	48.08	Bridge 12	79 yrs.	5 (SATISFACTORY)	Maintain bridge approach and channel.
Valley	49.53	Culvert 13	117 yrs.	4 (FAIR)	Maintain north bridge approach.
Valley	49.69	Culvert 12	29 yrs.	4 (FAIR)	Maintain bridge approach and channel.
Valley	49.99	<i>Culvert 3</i>	95 yrs.	<i>N/A</i>	<i>Could not inspect – culvert buried.</i>
Valley	50.57	Culvert 5	66 yrs.	4 (FAIR)	No specific recommendation.
Valley	52.32	Culvert 14	117 yrs.	5 (SATISFACTORY)	No specific recommendation.
Valley	52.38	Culvert 15	117 yrs.	4 (FAIR)	Remove downstream excessive vegetation.
Valley	52.66	Bridge 7	86 yrs.	4 (FAIR)	Maintain approach channel.
Valley	52.99	Culvert 11	117 yrs.	5 (SATISFACTORY)	No specific recommendation.
Valley	54.05	Bridge 13	71 yrs.	4 (FAIR)	Maintain bridge approach and channel.
Valley	55.19	Bridge 9	72 yrs.	5 (SATISFACTORY)	No specific recommendation.
Valley	55.42	Culvert 9	95 yrs.	4 (FAIR)	Clear culvert debris within 1 year.
Valley	55.75	Culvert 6	90 yrs.	4 (FAIR)	No specific recommendation.
Ventura	452.1	Bridge 2	100 yrs.	4 (FAIR)	Clear debris within channel and approach.

ANALYSIS: BRIDGES & CULVERTS

For the twenty-nine (29) ‘Priority A’ assets inspected, Metro believes that ten (10) of these structures (Table 1) are candidates for near term replacement (within 3 years). The remaining 19 structures (Table 2) were, in Metro’s opinion of “fair to satisfactory” condition and do not require immediate replacement within the next three years. Appropriate recommendations for the structures in Table 2 are presented in the right hand column.

Of the ten (10) structures identified for replacement in Table 1, six (6) of these structures are bridges and four (4) are culverts. Metro Cost Estimating Staff has contributed their experience in developing a Rough Order of Magnitude (ROM) cost estimate required to replace these ten assets. Once Design,

Construction and Administrative (Soft) Costs are factored in, Metro’s cost estimate did not significantly differ from the amounts requested by Metrolink on a per asset basis. Therefore, Metro agrees with the estimated Life of Project costs for replacement of these 10 structures which are presented in Table 3 below.

Table 3: Estimated Replacement Cost for Structures Identified for Near Term Replacement:

Line:	Mile Point:	Name:	Metrolink’s Total: (Dollars)
Valley	47.45	Bridge 5	\$ 500,000
Valley	50.46	Bridge 6	\$ 840,000
Valley	50.51	Bridge 2	\$ 840,000
Valley	50.64	Bridge 1	\$ 840,000
Valley	50.77	Bridge 4	\$ 840,000
Valley	53.84	Culvert 2	\$ 350,000
Valley	54.13	Culvert 8	\$ 280,000
Valley	55.91	Culvert 1	\$ 350,000
Valley	66.78	Culvert 10	\$ 420,000
Ventura	458.71	Bridge 1	\$ 1,960,000
Total:			\$ 7,220,000

ANALYSIS: RAIL TIES, RAIL, RAIL TURNOUTS, CROSSINGS & COMPONENTS

Metro’s Director of Track Work Engineering, Zoric Sheynman, observed the condition of the ties along the Valley Subdivision and agrees that the ties within the zones indicated by Metrolink in *Attachment A*, do require replacement. This would include the 8,450 ‘Group A’ ties and 8,000 Group B Ties identified. The ties are spaced at approximately 20 inches on center; therefore this would result in a total of 5 miles of replacement on the Valley Subdivision. Replacement of these ties would be in compliance with FRA Track Safety Standards Compliance Manual. Therefore, Metro agrees with the estimated costs for replacement of the rail ties for Priority A projects as shown in Attachment A. Staff will work with Metrolink as part of the second phase due diligence review for rail ties on Priority B projects. Elements not inspected by Metro staff during the site visits include track turnouts, crossings, rail tie replacement. Metro staff did not generate independent cost estimates for these components or for the requested new rail spikes, tie plugs, anchors, surfacing and stabilizing procedures required during installation of the ties. These amounts are listed in the Metrolink report.

CONCLUSION:

In conclusion, Metro Engineering’s Assessment of Metrolink’s provided “Rehabilitation Project Priority List” of ‘Priority A’ structures (bridges and culverts) is in Metro’s opinion, that approximately one-third (33%) of the structures inspected are in “poor” structural condition and should be programmed for replacement (*within 3 years*). However, it should be noted that despite the observed condition ratings, the majority of the inspected structures presented in both Tables 1 and 2 are approaching or exceeding a service life of 100 years and should be programmed for replacement within the next ten years (10).

Metro does not intend the list of 10 structures (Table 1) recommended for replacement to be a binding requirement for Metrolink. Instead, this list is meant to provide guidance for programming of funds for the replacement of these assets. Metrolink shall provide an independent assessment to determine which structures should be replaced and in which order. Metro's Independent Cost Estimates (ICE) for these elements did not significantly vary with the estimates provided by Metrolink and Metro agrees with the amounts requested by Metrolink on an asset by asset basis.

Metro agrees that an investment is required to achieve a state of good repair for the areas inspected. As a first investment in a multiyear state of good repair program, Metro recommends the initial allocation of funds to replace the highest priority structures and rail ties requiring remediation. Additional funding can be allocated in future fiscal cycles as needed. The specific assets requiring replacement shall be determined and managed by Metrolink.

Metro has recently contacted (as of early March 2017) a Consultant (WSP/Parsons Brinkerhoff) who will provide a separate independent assessment to further validate the amount of requested structure rehabilitation funding. In the coming months, their effort will further refine the scope required for this SOGR issue.

Regards,

Craig Remley P.E.
Metro Senior Structural Engineer
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remleyc@metro.net

Attachments:

Attachment A:

Bridge & Rail Tie Rehabilitation Project Priority List (As Provided by Metrolink, November 2016).

Attachment B:

SCRRA: Bridge and Safety Management Condition and Priority Defect Rating System.

ATTACHMENT A:

Bridge & Culvert - Rehabilitation Project Priority List (As Provided by Metrolink, November 2016):

Bridge Rehab Projects Priority List																	
Subdivision	Category	Priority	M/P	Cost	Scope	Year Built	Engineer's Assessment Rating	Inspector's Condition Rating	Inspection Date	Begin Contract	Finalize Contract Pkg	Advertise Contract	Award Contract	Begin Construction	End Construction		
Valley	Priority A Bridges	1		50.64	\$840,000	Replace rail top	1909	3.2	5	7/14/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		2		50.51	\$840,000	Replace rail top	1909	3.3	5	7/14/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		3		46.91	\$840,000	Replace rail top	1938	3.3	5	7/22/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		4		30.77	\$840,000	Replace rail top	1909	3.4	5	7/13/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		5		47.45	\$500,000	Replace rail top	1909	3.5	5	7/15/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		6		30.46	\$840,000	Replace rail top	1909	3.5	5	7/15/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		7		52.66	\$500,000	Replace rail top	1930	3.5	5	7/12/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		8		44.38	\$500,000	Replace rail top	1944	3.5	5	8/4/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		9		55.19	\$500,000	Replace rail top	1944	3.5	5	7/11/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		10		47.03	\$840,000	Replace rail top	1938	3.6	5	7/21/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		11		47.33	\$1,120,000	Replace rail top	1938	3.6	5	7/21/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		12		48.08	\$500,000	Replace rail top	1938	3.6	4	7/19/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		13		54.05	\$500,000	Replace rail top	1946	3.6	5	7/12/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
					Subtotal	\$9,160,000											
		Priority B Bridges	1		8.41	\$500,000	Replace rail top	1906	3.9	5	9/20/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
			2		10.69	\$1,260,000	Replace rail top	1906	3.9	5	9/19/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
					Subtotal	\$1,760,000											
		Priority A Culverts	1		55.91	\$350,000	Replace clay pipe - collapsed	1922	3.2	4	8/13/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/3/2017	8/1/2017
			2		53.84	\$350,000	Replace timber box	1904	3.3	4	8/17/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/3/2017	8/1/2017
			3		49.99	\$280,000	Replace timber box	1922	3.4	4	11/9/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/3/2017	8/1/2017
			4		44.16	\$280,000	Replace timber box	1939	3.4	4	1/5/16	11/1/2016	1/31/2017	2/28/2017	4/30/2017	7/1/2017	9/1/2017
			5		50.57	\$280,000	Replace timber box	1950	3.4	4	10/30/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	7/1/2017	9/1/2017
			6		55.75	\$280,000	Replace timber box	1927	3.5	5	8/13/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	7/1/2017	9/1/2017
			7		48.74	\$280,000	Replace clay pipe - joint displacement	1900	3.5	4	11/11/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	8/1/2017	10/1/2017
			8		54.13	\$280,000	Replace clay pipe - crushing, displacement	1922	3.6	5	8/17/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	8/1/2017	10/1/2017
			9		55.42	\$350,000	Replace cast iron pipe - cracking, displacement	1922	3.6	5	8/13/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	8/1/2017	10/1/2017
			10		66.78	\$420,000	Replace RCP - separated joints	1921	3.7	4	8/4/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	9/1/2017	11/1/2017
			11		52.99	\$700,000	Replace aged cast iron pipe	1900	3.7	3	10/26/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	9/1/2017	11/1/2017
	12			49.69	\$280,000	Replace CMP - deflected; strut added	1988	3.8	4	11/9/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	9/1/2017	11/1/2017	
	13			49.53	\$420,000	Replace aged cast iron pipe	1900	3.8	5	11/10/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	10/1/2017	12/31/2017	
	14			52.32	\$350,000	Replace aged cast iron pipe	1900	3.9	5	10/27/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	10/1/2017	12/31/2017	
	15			52.38	\$420,000	Replace aged cast iron pipe	1900	3.9	5	10/27/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	10/1/2017	12/31/2017	
				Subtotal	\$5,320,000												
Ventura	Priority A Bridges	1		458.71	\$1,950,000	Replace Timber Trestle - major cracking	1925	3.0	4	3/8/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		2		452.1	\$840,000	Replace rail top	1916	3.5	5	3/16/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
				Subtotal	\$2,800,000												
	Priority B Bridges	1		436.96	\$655,200	Replace rail top	1939	3.9	5	4/1/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
		2		434.32	\$655,200	Replace rail top	1901	3.9	5	4/4/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018	
				Subtotal	\$1,310,400												
	Priority B Culverts	1		436.46	\$150,000	Replace culvert - part rail top	1925	3.9	4	10/16/14	11/1/2016	1/31/2017	2/28/2017	4/30/2017	10/1/2017	12/31/2017	
				Subtotal	\$150,000												
San Gabriel	Priority A Bridges	1		40.12	\$1,400,000	Replace rail top - Under xing	1930	3.4	5	6/29/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	2/1/2018	5/1/2018	
				Subtotal	\$1,400,000												

Rail Tie - Rehabilitation Project Priority List (As Provided by Metrolink, November 2016):

Track Projects Priority List					
Priority Designation	Priority A Projects	Value	Condition Notes	Timeline	
1	2500 Ties between MP 46 - MP 48, MP 63 - MP 64	\$500,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
2	3000 Ties between MP 52 - MP 54	\$825,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
3	Lang Station Rd Crossing	\$400,000	Crossing and track structure need to be replaced (Main Track and Siding)	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
4	2950 Ties between MP 54 - MP 59	\$787,500	Up to 20% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
5	Acton Spur Turnout	\$500,000	Spur was constructed in 1966. Speed in siding was just raised due to Acton Project. Turnout needs to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
	Total Priority A Track Projects:	\$3,012,500			
	Priority B Projects				
1	4000 Ties Between MP 9 - MP 11	\$1,000,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
2	4000 Ties Between MP 6 - MP 8	\$1,000,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
	Total Priority B Track Projects:	\$2,000,000			

Ventura Subdivision	Priority Designation	Priority A Projects	Value	Condition Notes	Timeline
	1	2700 Ties between MP 447 - MP 450	\$675,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	2	1300 Ties between MP 444 - MP 446	\$325,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	3	Turnout at MP 460	\$375,000	Turnout needs to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	4	800 Ties Between MP 451 - MP 452	\$200,000	Up to 20% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	5	3600 Ties Between MP 458 - MP 462	\$900,000	Approximately 15% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	6	3600 Ties Between MP 454 - MP 458	\$900,000	Approximately 10%-15% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
		Total Priority A Track Projects:	\$3,375,000		
Ventura Subdivision	Priority Designation	Priority B Projects	Value	Condition Notes	Timeline
	1	3400 Ties between MP 434 - MP 439	\$850,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	2	2400 Ties Between MP 430 - MP433	\$600,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	3	Rail Replacement - Curve 439.24 (1650')	\$247,500	Curve needs to be transposed from high side to low side, with new rail on the high side. Low Rail has already been transposed and was originally placed in 1966. High Rail is experiencing some gauge and head wear and still has some life in it. Head-Free rail to be replaced as well.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	4	1200 Ties Between MP 427 - MP 429	\$300,000	Approximately 20% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	5	Turnout at CP Santa Susana	\$375,000	Turnout needs to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	6	Katherine Rd Crossing	\$400,000	Crossing and track structure need to be replaced (Main Track and Siding)	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	7	Rail Replacement - Curve 433.1 (1100')	\$165,000	Curve needs to be transposed.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	8	Hidden Ranch Drive Crossing	\$400,000	Crossing is 33 years old and needs to be rehabilitated.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	9	600 Ties Between MP 433 - MP 434	\$150,000	Approximately 15% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	Total Priority B Track Projects:	\$3,487,500			
			<i>Note: 2350' of rail on another project was removed from the list resulting in a reduction for the Subdivision of \$150,000.</i>		

San Gabriel Subdivision	Priority Designation	Priority A Projects	Value	Condition Notes	Timeline
	1	3500 Ties between MP 34 - MP 38	\$875,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	2	2800 Ties Between MP 47 - MP 51	\$700,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	3	1200 Ties Between MP 52 - MP 54	\$300,000	Approximately 20% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	4	1500 Ties Between MP 42 - MP 45	\$375,000	Approximately 15% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	Total Priority A Track Projects:	\$2,250,000			
San Gabriel Subd.	Priority Designation	Priority B Projects	Value	Condition Notes	Timeline
	1	Lark Ellen Crossing	\$400,000	Crossing needs rehabilitation.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
		Total Priority B Track Projects:	\$400,000		

River Sub	Priority Designation	Priority A Projects	Value	Condition Notes	Timeline
	1	Replace Leads into Union Station	\$225,000	Leads into union station have curve wear and need new rail.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
2	Replace 5300 Ties on West Bank	\$1,325,000	Approximately 21% of the wood ties on the West Bank need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
3	Replace Turnouts at CP Taylor	\$550,000	2 Turnouts at CP Taylor already replaced, 2 more need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017	
		Total Priority A Track Projects:	\$2,100,000		
River Subdivision	Priority Designation	Priority B Projects	Value	Condition Notes	Timeline
	1	Replace 3 miles of Rail and 25% Ties	\$5,210,000	MT2 several areas that are susceptible for rail defects due to the high density of train traffic, the amount of plugged rail through the years, and the age of the existing 133 lb rail which does not meet SCRRA standards. This project was initially proposed as rail and ties separately, and the agency only received funding for 2/3's of the ties needed and none of the rail. Ideally we would complete these projects together, along with the funding for FY15, where we are doing the same scope of work for MT1. Funding for this project is efficient use of member agency funds due to high UPRR contribution percentages. However, it does take	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017 If funding is not approved on this project it delays progress with UPRR for obtaining funds. It takes 1-2 years to get an agreement from UP for this rehabilitation work. Slow orders or weight restrictions will be implemented on MT2 by June 30, 2019 if project remains unfunded.
2	Replace 5 turn outs on East Bank *	\$1,622,400 \$2,622,400 *	Turnouts on the East Bank are heavily used, and some are over 50 years, while others haven't been replaced since Metrolink began service. Ideally, funding for these would be lined up with the rail and ties, so projects can be completed concurrently.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017 If funding is not approved on this project it delays progress with UPRR for obtaining funds. It takes 1-2 years to get an agreement from UP for this rehabilitation work. Slow orders or weight restrictions will be implemented on MT2 by June 30, 2019 if project remains unfunded.	
		Total Priority B Track Projects:	\$7,832,400		

ATTACHMENT B:

SCRRRA: Bridge and Safety Management Policy 7.4.1 Condition and Priority Defect Rating System:

Condition Codes:

1	Failed, Stop Trains.
2	Imminent Failure, Take appropriate action. Provide detailed inspection.
3	Poor, Defects are sound with serious or advancing defects. Interim inspections warranted.
4	Fair, Defects are sound with minor problems. Interim inspections warranted.
5	Satisfactory, Minor defects or exceptions.
6	Good, No defects or exceptions noted.

Priority Codes:

Code:	Correction Period:	Description:
A	15 days	Imminent safety issue (non-redundant failure or failure of direct load path)
B	1 year	Early or Pre-failure (redundant systems or indirect load path)
C	3 years	Non-critical defects (not immediate safety concern).
D	5 years	Monitor Defects.

ATTACHMENT D

FUNDING REQUEST FOR METROLINK'S URGENT STRUCTURE & RAIL TIE REHAB (SLOW ORDER) WORK

VALLEY SUBDIVISION	Priority Designation	Track Priority A Projects	Value	Condition Notes
	1	2500 Ties between M 46-MP48, MP63-MP64	\$ 500,000	Replace
	2	3000 Ties between MP52-MP54	\$ 825,000	Replace
	4	2950 Ties between MP54-MP59	\$ 787,500	Replace
	1	Bridge MP50.64	\$ 840,000	Replace
	2	Bridge MP50.51	\$ 840,000	Replace
	4	Bridge MP50.77	\$ 840,000	Replace
	5	Bridge MP47.45	\$ 500,000	Replace
	6	Bridge MP50.46	\$ 840,000	Replace
	1	Culvert MP55.91	\$ 350,000	Replace
2	Culvert MP53.84	\$ 350,000	Replace	
8	Culvert MP54.13	\$ 280,000	Replace	
10	Culvert MP66.78	\$ 420,000	Replace	
METRO SHARE SUBTOTAL			\$ 7,372,500	

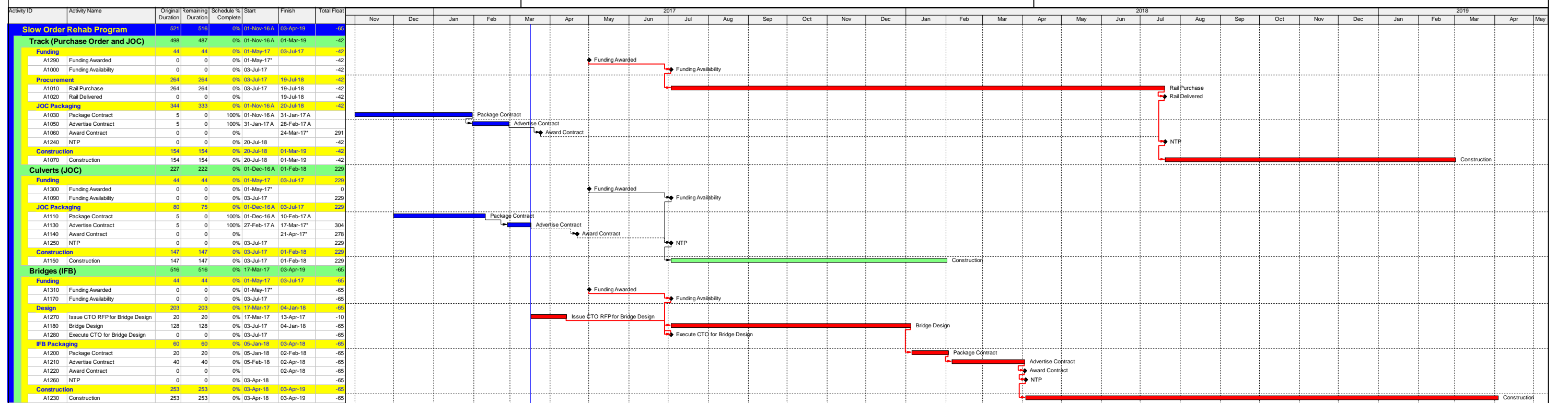
VENTURA SUBDIVISION	Priority Designation	Track Priority A Projects	Value	Condition Notes
	1	2700 Ties between M 447-MP450	\$ 675,000	Replace
	2	1300 Ties between MP444-MP446	\$ 325,000	Replace
	3	Turnout at MP460	\$ 375,000	Replace
	4	800 Ties between MP451-MP452	\$ 200,000	Replace
	5	3600 Ties between MP458-MP462	\$ 900,000	Replace
	6	3600 Ties between MP454-MP458	\$ 900,000	Replace
	1	Bridge MP458.71	\$ 1,960,000	Replace
METRO SHARE SUBTOTAL			\$ 5,335,000	

SAN GABRIEL SUBDIVISION	Priority Designation	Track Priority A Projects	Value	Condition Notes
	1	3500 Ties between M 34-MP38	\$ 875,000	Replace
	2	2800 Ties between MP47-MP51	\$ 700,000	Replace
	3	1200 Ties between MP52-MP54	\$ 300,000	Replace
	4	1500 Ties between MP42-MP45	\$ 375,000	Replace
	1	Bridge MP40.12 Rail top underxing	\$ 1,400,000	Replace
		Juniper-Sierra Crossing Rehab	\$ 493,350	
SUBTOTAL			\$ 4,143,350	
METRO SHARE SUBTOTAL			\$ 2,486,010	

RIVER SUBDIVISION	Priority Designation	Track Priority A & B Projects	Value	Condition Notes
	1	Replace leads into Union Station	\$ 225,000	Replace
	2	5300 Ties on West Bank	\$ 1,325,000	Replace
	3	Replace turnouts at CP Taylor	\$ 550,000	Replace
	1	LAUS Canopy	\$ 3,351,500	Replace
	1	East Bank-Priority B	\$ 6,526,600	Replace
SUBTOTAL			\$ 11,978,100	
METRO SHARE SUBTOTAL			\$ 3,187,515	

GRAND TOTAL \$ 18,381,025

Note: This list is meant to be used as a diagnostic tool for allocation of funds only. It is SCRRA's responsibility to provide an independent condition risk assessment to determine which structures should be replaced and in which order.



█ Remaining Level of Effort
 █ Remaining Work
 ◆ Milestone
█ Actual Work
 █ Critical Remaining Work

MTA / SCRRA JOINT REVIEW – VALLEY SUBDIVISION



Picture 1: One of two SCRRA Hy-Rail Vehicles used to complete the field visit with MTA.

As part of SCRRA's on-going efforts to secure Track and Structures rehabilitation funding SCRRA and MTA staff took part in a joint review of portions of the Valley Subdivision deemed to be at risk for potential speed reductions if rehabilitation work is delayed.

On November 23, 2016 6 staff from MTA and 5 from SCRRA conducted a Hy-Rail trip from approximately Milepost 58 (Aliso

Canyon Road) to Milepost 48 (Burke Road Private Crossing). The purpose of the trip was for MTA staff to review proposed rehabilitation work locations, priorities, and provide context as to what projects MTA provided funding would address.

The primary focus of the review was wood crosstie and structure condition but other aspects of railroad rehabilitation work such as rail, crossings, and embankments were reviewed, including potential mud slide conditions caused by the Sand brush fire in July.



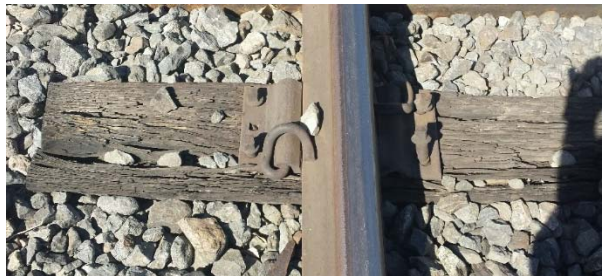
Picture 2: SCRRA Staff and MTA Staff Inspecting a Wood Box Culvert on the Valley Subdivision

In addition to reviewing general conditions from the Hy-Rail vehicles the group stopped several times to more carefully examine crosstie and structure conditions, particularly of the older bridges of the "Rail Top" design type.

Overall, it was the consensus of the MTA team that certain segments of the crosstie conditions visited, as reported by SCRRA, were approaching serious levels of deterioration, and while still meeting FRA Track Safety Standards it is reasonable that substantial crosstie replacement projects should begin as soon as possible.



Picture 3: Failed Tie Condition on the Valley Subdivision



Picture 4: Failed Tie with Raised Lags



Picture 5: The inside of one of the top 3 Priority "Rail-Top" Bridges on the Valley Subdivision

Similarly, it was agreed that 2 of the 5 of SCRRRA's highest priority bridges visited for replacement were sufficiently justified for replacement as soon as possible. It was also determined that three of the lower priority bridges visited, likely could be further assessed and possibly deferred a number of years in order to concentrate available funding on the most urgent candidates.

The MTA and SCRRRA representatives intend to conduct similar reviews of the

Ventura, San Gabriel and River Subdivisions in order to more effectively prioritize and allocate rehabilitation funding.

Participants in this Hy-Rail Review were:

MTA:

Sam Mayman, Jeanet Owens, Androush Danielians, Zoric Sheynman, Craig Remley, Dan Mahgerefteh

SCRRRA:

Darrell Maxey, Wayne Mauthe, Aaron Azevedo, Daniel Villagomez, Ivan Robles



Picture 6: SCRRRA and MTA Staff inspecting a "Rail-Top" Bridge on the Valley Subdivision