

8.0 APPENDICES

The following Appendices incorporate the extent of materials used to support the development of the WRCOG TUMF Nexus Study and, where appropriate, specifically the 2016 Update. The respective Appendices also incorporate an explanation of the methodology and assumptions used to develop the various elements of the Nexus Study.

These Appendices represent a compilation of materials derived from a variety of technical resources. Each of the following Appendices relate to the development of a specific element of the Nexus Study. These Appendices are as follows:

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Appendix A - List of TUMF Committees

WRCOG Executive Committee

Deborah Franklin (Chairperson)	City of Banning
Chuck Washington (Vice-Chairperson)	County of Riverside Dist. 3
Bonnie Wright (Second Vice-Chairperson)	City of Hemet
Lloyd White	City of Beaumont
Jeff Hewitt	City of Calimesa
Jordan Ehrenkranz	City of Canyon Lake
Eugene Montanez	City of Corona
Adam Rush	City of Eastvale
Bonnie Wright	City of Hemet
Laura Roughton	City of Jurupa Valley
Brian Tisdale	City of Lake Elsinore
John Denver	City of Menifee
Yxstian Gutierrez	City of Moreno Valley
Kelly Seyarto	City of Murrieta
Kevin Bash	City of Norco
Rita Rogers	City of Perris
Rusty Bailey	City of Riverside
Crystal Ruiz	City of San Jacinto
Mike Naggar	City of Temecula
Ben Benoit (Past Chairperson)	City of Wildomar
Kevin Jeffries	County of Riverside Dist. 1
John Tavaglione	County of Riverside Dist. 2
Marion Ashley	County of Riverside Dist. 5
David Slawson	Eastern Municipal Water District
Brenda Dennstedt	Western Municipal Water District
Robert Martin	Morongo Band of Mission Indians
Judie White	Riverside County Superintendent of Schools (ex-officio)

WRCOG Technical Advisory Committee

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George Johnson (Vice-Chairperson)	County of Riverside
Alex Meyerhoff (Second Vice-Chairperson)	City of Hemet
Todd Parton	City of Beaumont
Bonnie Johnson	City of Calimesa
Aaron Palmer	City of Canyon Lake
Darrell Talbert	City of Corona
Michele Nissen	City of Eastvale
Gary Thompson	City of Jurupa Valley
Grant Yates	City of Lake Elsinore
Jeff Wyman	City of Menifee
Michelle Dawson	City of Moreno Valley
Kim Summers	City of Murrieta
Andy Okoro	City of Norco
Richard Belmudez	City of Perris
John Russo	City of Riverside
Rob Johnson	City of San Jacinto
Aaron Adams	City of Temecula
Alex Diaz	City of Wildomar
Roxanne Rountree	Eastern Municipal Water District
John Rossi	Western Municipal Water District
Danielle Wheeler	March Joint Power Authority
Roger Meyer	Morongo Band of Mission Indians
Matt Snellings	Riverside County Office of Education

WRCOG Planning Directors' Committee

Patty Nevins (Chairperson)	City of Banning
Deanna Elliano (Vice-Chairperson)	City of Hemet
Charissa Leach (Second Vice-Chairperson)	County of Riverside
Rebecca Deming	City of Beaumont
Keith Gardner	City of Calimesa
Jim Morrisey	City of Canyon Lake
Joanne Coletta	City of Corona
Eric Norris	City of Eastvale
Deanna Elliano	City of Hemet
Tom Merrell	City of Jurupa Valley
Richard MacHott	City of Lake Elsinore
Jeff Wyman	City of Menifee
Richard Sandzimier	City of Moreno Valley
Cynthia Kinser	City of Murrieta
Steve King	City of Norco
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Sharon Paisley	City of San Jacinto
Luke Watson	City of Temecula
Matthew Bassi (Past Chairperson)	City of Wildomar
Dan Fairbanks	March Joint Powers Authority
Shane Helms	Morongo Band of Mission Indians
Rohan Kuruppu	Riverside Transit Agency

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Kristen Jensen (Second Vice-Chairperson)	City of Hemet
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Mike Thornton	City of Calimesa
Margaret Morison	City of Canyon Lake
Nelson Nelson	City of Corona
Joe Indrawan	City of Eastvale
Steve Loriso	City of Jurupa Valley
Brad Fagrell	City of Lake Elsinore
Jonathan Smith	City of Menifee
Ahmad Ansari	City of Moreno Valley
Bob Moehling	City of Murrieta
Chad Blais	City of Norco
Habib Motlagh	City of Perris
Kris Martinez	City of Riverside
Lynn Merrill	City of San Jacinto
Patrick Thomas	City of Temecula
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Dan Fairbanks	March Joint Powers Authority
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Rohan Kuruppu	Riverside Transit Agency

WRCOG Finance Directors' Committee

Rochelle Clayton (Chairperson)	City of Banning
Ed Corser (Vice-Chairperson)	County of Riverside
Jessica Hurst (Second Vice-Chairperson)	City of Hemet
Melana Taylor	City of Beaumont
Bonnie Johnson	City of Calimesa
Terry Shea	City of Canyon Lake
Kerry Eden	City of Corona
James Riley	City of Eastvale
Alan Kreimeier	City of Jurupa Valley
Shannon Buckley	City of Lake Elsinore
Bruce Foltz	City of Menifee
Marshall Eyerman	City of Moreno Valley
Londa Bock-Helms	City of Murrieta
Gina Schuchard	City of Norco
Jennifer Erwin	City of Perris
Scott Miller	City of Riverside
Thomas Prill	City of San Jacinto
Jennifer Hennessy	City of Temecula
James Riley (Past Chairperson)	City of Wildomar
Charles Turner	Eastern Municipal Water District
Rod LeMond	Western Municipal Water District
Matthew Schenk	March Joint Power Authority
Steve Garwood	Morongo Band of Mission Indians
Teresa Hyden	Riverside County Office of Education

Appendix B - Western Riverside County Population and Employment Growth 2008 – 2035

Although a variety of alternate demographic information is available for the purpose of quantifying population and household growth in Western Riverside County, it was determined that the data developed by SCAG to support the 2016 RTP/SCS represented the most comprehensive source of socioeconomic data for Riverside County. For this reason, the SCAG 2016 RTP/SCS demographic information was utilized to support this update of the TUMF Nexus. The data provided by SCAG and used as the basis for the Nexus Update is summarized in this Appendix.

The SCAG employment data for 2012 and 2040 was provided for thirteen employment sectors consistent with the California Employment Development Department (EDD) Major Groups including: Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Retail Trade; Transportation, Warehousing and Utilities; Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service; and Government. For the purposes of the Nexus Study, the EDD Major Groups were aggregated to Industrial (Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Transportation, Warehousing and Utilities), Retail (Retail Trade), Service (Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service) and Government/Public Sector (Government). These four aggregated sector types were used as the basis for calculating the fee as described in **Section 6.2**. This Appendix includes tables detailing the EDD Major Groups and corresponding North American Industry Classification System (NAICS) Categories that are included in each non-residential sector type.

To support the development of the TUMF Nexus Study and the determination of the TUMF Schedule of Fees, and in particular to support the RivTAM analysis required as part of the study effort, the SCAG 2016 RTP/SCS SED required redistribution from the SCAG TAZ structure into the RivTAM TAZ structure for the entire RivTAM modeling region. In the RivTAM model, there are 5,571 TAZs, among which 40 are external zones and 93 are spare zones with no associated SED. Of the remaining 5,438 zones 1,807 are within Riverside County, and 3,631 are outside Riverside County. Based on the correspondence between the RivTAM TAZ and SCAG TAZ, the SED conversion process was divided into two steps: 1) to convert the TAZs within the Riverside County, and 2) to convert the TAZs outside Riverside County.

B.1 – Primary SED Conversion Within Riverside County

The RivTAM TAZs within the Riverside County area mostly follow the SCAG Tier 3 zone boundaries. The SCAG 2016 RTP/SCS data are at the SCAG Tier 2 zone level, so split ratios were developed to factor the SED from SCAG Tier 2 level to SCAG Tier 3 level and to further convert the data into the RivTAM zone structure. The Riverside County area covers 1,532 SCAG Tier 2 zones and 1,808 SCAG Tier 3 zones, which were aggregated into 1,807 RivTAM zones. To convert the SCAG SED into the RivTAM TAZ structure, the RivTAM TAZs were spatially joined to correspond with the SCAG TAZs.

Five sets of split ratios were developed including total population, number of households, employment, K12 enrollment and college enrollment. The split ratios for total population and number of households were developed based on population and household information from the 2010 Census. The Census data are at the Census Block level and were aggregated into SCAG Tier 3 zones. For the cases where the Census Block boundaries did not align with the SCAG Tier 3 boundaries, manual adjustments were made. The adjustments were made based on the observation of land use patterns using Google Earth images in order to reflect more accurate and reasonable allocation of population and households into the specific SCAG Tier 3 zone. The split ratios were then calculated for each SCAG Tier 3 zones to disaggregate the SED from SCAG Tier 2 level into Tier 3 level, and to further correlate to the RivTAM zone structure. The same set of split ratios were applied to disaggregate both year 2012 and 2040 population and household data.

The split ratios for employment were developed based on the SCAG 2012 RTP employment data previously utilized in RivTAM. This assumed the 2016 RTP/SCS employment data generally follows a similar distribution as in the 2012 RTP employment data, with the 2012 RTP data representing the most recent employment data incorporated into the RivTAM model. Two sets of split ratios were developed for the employment data, including 2016 RTP/SCS base year employment disaggregated based on a split ratio calculated from 2012 RTP base year SED, and 2016 RTP/SCS horizon year employment disaggregated based on a split ratio calculated from 2012 RTP horizon year SED.

The K12 enrollment and college enrollment split ratios were developed based on the number of schools in each SCAG Tier 3 zone. The school location information was obtained from Google Earth data. For the zones with no school/college, the split ratio was calculated based on the area of the zone. The same set of split ratios was applied to both year 2012 and 2040 K12 enrollment and college enrollment data.

Table B.1 shows how the variables in the SCAG SED are factored and the description of each SED variable. The SED variables that are not factored by the split ratios are: DailyPark (daily parking cost), HourlyPark (hourly parking cost) and CBD (Central Business District Flag). The DailyPark and HourlyPark variables in the updated RivTAM SED are set equal to the parking cost from the SCAG Tier 2 zones or averaged for the cases where one RivTAM TAZ covers multiple SCAG TAZs. The CBD flag in the updated RivTAM SED is set equal to the value in the corresponding SCAG zone.

It should be noted that SCAG household field names were modified to be consistent with RivTAM as listed in **Table B.2**. Values in HHSIZE_4E were derived by applying a global factor to HHSIZE_4plus. The factor was calculated based on the average ratio of the control totals between HHSIZE_4plus and HHSIZE_4E in the previous version of RivTAM. In addition, the same changes were made to the field names for the income groups. The income grouping was changed from cost values expressed in 1999 dollars in previous versions of the SCAG model to cost values (and incomes) expressed in 2010 dollars in the more recent version. Since cost value in RivTAM is in 1999 dollars, it was assumed that \$25k in 1999 dollar roughly equated to \$35k in 2010 dollars.

Table B.1 – SCAG SED Variable Description and Associated Split Factor

SED Field	SED Description	Split Factor Applied
POP	Population	Pop_Ratio
RES	Resident Population	Pop_Ratio
HH	Households	HH_Ratio
GN	Group Quarters Population	Pop_Ratio
HHSIZE1	1 Person Households	HH_Ratio
HHSIZE2	2 Person Households	HH_Ratio
HHSIZE3	3 Person Households	HH_Ratio
HHSIZE4	4+ Person Households	HH_Ratio
age5_17	Population Ages 5-17	Pop_Ratio
age18_24	Population Ages 18-24	Pop_Ratio
age16_64	Population Ages 16-64	Pop_Ratio
age65_over	Population Ages 65 and over	Pop_Ratio
ho18_24	Head of Household Age 18-24	HH_Ratio
ho25_44	Head of Household Age 25-44	HH_Ratio
ho45_64	Head of Household Age 45-64	HH_Ratio
ho65_over	Head of Household Age 65 and over	HH_Ratio
HH_wrk0	Households with 0 workers	HH_Ratio
HH_wrk1	Households with 1 worker	HH_Ratio
HH_wrk2	Households with 2 workers	HH_Ratio
HH_wrk3	Households with 3+ workers	HH_Ratio
K12	Kindergarten – 12th grade enrollment	K12_Ratio
COLLEGE	College enrollment	College_Ratio
median	Median Income	HH * HH_Ratio
LINC_HH	Households with < \$35,000 annual income	HH_Ratio
median35k	Median Income in < \$35,000 income group	LINC_HH * HH_Ratio
MINC_HH	Households with income \$35,000 - \$75,000	HH_Ratio
median35_75	Median Income in \$35,000-\$75,000 income group	MINC_HH * HH_Ratio
HINC_HH	Households with income \$75,000 - \$150,000	HH_Ratio
median75_150	Median Income in \$75,000-\$150,000 income group	HINC_HH * HH_Ratio
VHINC_HH	Households with income > \$150,000	HH_Ratio
median_150	Median Income in > \$150,000 group	VHINC_HH HH_Ratio *
SFDU	Single Family Dwelling Units	HH_Ratio
MFDU	Multi-Family Dwelling Units	HH_Ratio
LINC_WRK	Low Income Workers	HH_Ratio
MINC_WRK	Medium Income Workers	HH_Ratio
HINC_WRK	High Income Workers	HH_Ratio
Tot_emp	Total employment	Emp_Ratio
TotLow_emp	Total low income employment	Emp_Ratio
TotMed_emp	Total medium income employment	Emp_Ratio
TotHig_emp	Total high income employment	Emp_Ratio
Ag_emp	Agricultural employment	Emp_Ratio
Const_emp	Construction employment	Emp_Ratio
Manu_emp	Manufacturing employment	Emp_Ratio

SED Field	SED Description	Split Factor Applied
Whole_emp	Wholesale employment	Emp_Ratio
Ret_emp	Retail employment	Emp_Ratio
Trans_emp	Transportation employment	Emp_Ratio
Infor_emp	Information services employment	Emp_Ratio
FIRE_emp	Financial-Real Estate employment	Emp_Ratio
Prof_emp	Professional employment	Emp_Ratio
Educ_emp	Educational employment	Emp_Ratio
ArtEnt_emp	Arts/Entertainment employment	Emp_Ratio
OthSer_emp	Other Services employment	Emp_Ratio
PubAdm_emp	Public Administration employment	Emp_Ratio

Note: Pop= Population; HH= Household; Emp = Employment

Table B.2 – SCAG and RivTAM SED Field Names

SCAG Field	RivTAM Field
HHSize1	HHSize_1
HHSize2	HHSize_2
HHSize3	HHSize_3
HHSize4	HHSize_4plus
Not Exist	HHSize_4E
median35k	median25k
median35_75	median25_50
median75_150	median50_100
median_150	median_100

B.2 – Primary SED Conversion Outside Riverside County

For the area outside of Riverside County, there are 3,631 RivTAM zones and 3,632 SCAG Tier 1 zones. Most of the RivTAM TAZs follow the SCAG Tier 1 zone boundaries, however there were 15 unique cases in Orange County and San Bernardino County where a SCAG Tier 1 zone intersected with multiple RivTAM TAZs or vice versa. A one-to-one match through spatial joining was established between the RivTAM TAZs and the SCAG Tier 1 TAZs for most of the RivTAM zones outside Riverside County where the boundaries in the two zone systems substantially matched. For the unique cases, a set of conversion ratios was developed to transform the SCAG Tier 1 SED into RivTAM zone structure based on the land use patterns observed using Google Earth imagery. **Table B.3** and **Table B.4** show the correspondence between the SCAG Tier 1 TAZ and the RivTAM TAZ for the unique cases. **Table B.3** includes the cases where one SCAG Tier 1 zone was split into multiple RivTAM zones and **Table B.4** includes the cases where multiple SCAG Tier 1 zones were aggregated into one RivTAM zone. In the two tables, there are cases where some of the RivTAM TAZs are repeated. This is because these RivTAM TAZs are part of a zone split from SCAG Tier 1 zone, and are then aggregated with other SCAG Tier 1 zones into the new RivTAM zone. The correspondence between the SED variable and the split ratios to convert the SED into RivTAM zone structure was the same as previously presented in **Table B.1**.

Table B.3 – SCAG Tier 1 Zone and RivTAM Zone Correspondence Table, One to Many

SCAG Tier 1 TAZ	RivTAM TAZ	Pop Ratio	HH Ratio	Emp Ratio	K12 Ratio	College Ratio
32756000	2753	50%	50%	50%	50%	50%
	2756	50%	50%	50%	50%	50%
32789000	2789	100%	100%	0%	0%	0%
	2790	0%	0%	100%	100%	100%
32908000	2908	100%	100%	100%	100%	100%
	2907	0%	0%	0%	0%	0%
33048000	3047	40%	40%	40%	40%	40%
	3048	60%	60%	60%	60%	60%
33049000	3049	60%	60%	100%	100%	100%
	3054	40%	40%	0%	0%	0%
33053000	3047	20%	20%	20%	20%	20%
	3053	80%	80%	80%	80%	80%
33054000	3048	40%	40%	40%	40%	40%
	3053	60%	60%	60%	60%	60%
33058000	3053	20%	20%	0%	0%	0%
	3054	30%	30%	0%	100%	100%
	3058	50%	50%	100%	0%	0%
33059000	3059	50%	50%	50%	50%	50%
	3060	50%	50%	50%	50%	50%
33063000	3063	50%	50%	100%	50%	50%
	3067	50%	50%	0%	50%	50%
33067000	3062	35%	35%	100%	100%	100%
	3067	30%	30%	0%	0%	0%
	3069	35%	35%	0%	0%	0%
33109000	3109	80%	80%	80%	80%	80%
	3113	20%	20%	20%	20%	20%
33116000	3113	50%	50%	50%	50%	50%
	3116	50%	50%	50%	50%	50%
33118000	3036	100%	100%	0%	0%	0%
	3118	0%	0%	100%	100%	100%
53978000	5401	0%	0%	0%	0%	0%
	5400	100%	100%	100%	100%	100%

Table B.4 – SCAG Tier 1 Zone and RivTAM Zone Correspondence Table, Many to One

SCAG Tier 1 TAZ	RivTAM TAZ	Pop Ratio	HH Ratio	Emp Ratio	K12 Ratio	College Ratio
32780000	2780	100%	100%	100%	100%	100%
32790000		100%	100%	100%	100%	100%
33025000	3025	100%	100%	100%	100%	100%
33060000		100%	100%	100%	100%	100%
33048000	3047	40%	40%	40%	40%	40%
33047000		100%	100%	100%	100%	100%
33053000		20%	20%	20%	20%	20%
33048000	3048	60%	60%	60%	60%	60%
33054000		40%	40%	40%	40%	40%
33053000	3053	80%	80%	80%	80%	80%
33054000		60%	60%	60%	60%	60%
33058000		20%	20%	0%	0%	0%
33049000	3054	40%	40%	0%	0%	0%
33058000		30%	30%	0%	100%	100%
33062000	3062	100%	100%	100%	100%	100%
33067000		35%	35%	100%	100%	100%
33063000	3067	50%	50%	0%	50%	50%
33067000		30%	30%	0%	0%	0%
33067000	3069	35%	35%	0%	0%	0%
33069000		100%	100%	100%	100%	100%
32903000	3070	100%	100%	100%	100%	100%
33070000		100%	100%	100%	100%	100%
33107000	3107	100%	100%	100%	100%	100%
33113000		100%	100%	100%	100%	100%
33109000	3113	20%	20%	20%	20%	20%
33116000		50%	50%	50%	50%	50%
32753000	3114	100%	100%	100%	100%	100%
33114000		100%	100%	100%	100%	100%
33118000	3118	0%	0%	100%	100%	100%
33036000		100%	100%	100%	100%	100%
53978000	5400	100%	100%	100%	100%	100%
53979000		100%	100%	100%	100%	100%

B.3 – Truck SED Conversion and Agricultural Employment Data Discrepancy

The RivTAM Truck SED conversion utilizes the household and employment split factors used in the regular SED conversion. Since the SCAG truck SED data is only available in SCAG Tier 1 level, a set of factors was developed based on the area of zones to associate the SCAG Tier 1 zones to Tier 3 zones for TAZs within Riverside County. For TAZs outside the Riverside County, the exact same split factors as in the regular SED conversion were applied. These factors were applied to both SCAG 2012 and 2040 Truck SED in order to convert into RivTAM zone structure.

After reviewing both the primary SED and truck SED results, a small discrepancy was found in the agriculture employment field. In the SCAG SED definition, the agriculture employment in the primary SED file (field name: Ag_Emp) includes both agriculture and mining employment. Therefore, the total of the agriculture and mining employment in the truck SED (field name Ag_F_F and Min, respectively) should be close to total of the Ag_Emp field in the primary SED. However, this was not found to be the case in the source SCAG SED applied in this study. **Table B.5** shows the regional total of the primary agriculture employment, truck agriculture and truck mining employment. Further investigation by TAZ shows that most of the discrepancies were in Imperial County, with primary agricultural employment appearing to be below the truck SED by approximately 6,000 jobs. The total for primary agricultural employment in Riverside County was found to be high by only 46 jobs when compared to the truck SED. Although the primary agriculture employment is not exactly matching the total of the agriculture and mining employment in the truck SED for some Riverside County TAZs, the control total for all of Riverside County was very close and the trip generation rate for agriculture employment is fairly low, meaning the impact on the modeling results in the Riverside County should be negligible. However, it is recommend that the discrepancy be further researched and reconciled during any subsequent updates of the SCAG SED and/or RivTAM.

Table B.5 – Discrepancy between Primary SED and Truck SED in Agriculture Field

SED Field	2012	2040
Primary Ag_Emp	63,943	50,349
Truck Ag_F_F	64,089	56,900
Truck Min	6,237	5,252

EXHIBIT B-1**Western Riverside County Population, Households and Employment (2012) - SCAG 2016 RTP/SCS Base Year**

SED Type/Zone	Central	Northwest	Pass	San Jacinto	Southwest	Total
Population						
Total Population	355,575	728,371	90,972	174,549	424,468	1,773,935
Households						
Single-Family	71,273	136,482	24,040	34,319	100,474	366,588
Multi-Family	26,159	70,690	7,278	25,782	28,652	158,561
Total Households	97,432	207,172	31,318	60,101	129,126	525,149
Employment						
Farming, Natural Resources and Mining	1,004	2,554	244	829	2,236	6,867
Construction	3,086	20,153	1,697	738	8,218	33,892
Manufacturing	3,781	19,223	1,861	2,059	10,024	36,948
Wholesale Trade	2,950	9,479	924	343	4,811	18,507
Retail Trade	9,574	31,971	4,598	4,248	15,497	65,888
Transportation, Warehousing and Utilities	4,688	14,718	905	774	3,437	24,522
Information	388	3,215	225	530	1,604	5,962
Financial Activities	1,729	6,546	577	1,683	4,471	15,006
Professional and Business Service	4,753	27,349	1,232	2,413	12,188	47,935
Education and Health Service	19,299	59,602	5,745	11,018	21,753	117,417
Leisure and Hospitality	5,802	21,121	3,557	3,156	13,491	47,127
Other Service	3,545	9,450	1,608	2,066	3,256	19,925
Government	1,755	13,155	2,707	944	2,230	20,791
TUMF Industrial	15,509	66,127	5,631	4,743	28,726	120,736
TUMF Retail	9,574	31,971	4,598	4,248	15,497	65,888
TUMF Service	35,516	127,283	12,944	20,866	56,763	253,372
TUMF Government/Public Sector	1,755	13,155	2,707	944	2,230	20,791
Total Employment	62,354	238,536	25,880	30,801	103,216	460,787

Source: SCAG 2016 RTP; WSP, April 2016

EXHIBIT B-2**Western Riverside County Population, Households & Employment (2040) - SCAG 2016 RTP/SCS Horizon Year**

SED Type/Zone	Central	Northwest	Pass	San Jacinto	Southwest	Total
Population						
Total Population	491,760	892,498	171,248	279,770	594,357	2,429,633
Households						
Single-Family	106,128	183,013	44,137	68,835	137,518	539,631
Multi-Family	43,499	83,017	18,153	36,693	54,238	235,600
Total Households	149,627	266,030	62,290	105,528	191,756	775,231
Employment						
Farming, Natural Resources and Mining	1,240	4,353	315	771	1,586	8,265
Construction	12,714	52,075	3,608	5,767	21,309	95,473
Manufacturing	4,636	20,131	1,831	1,973	9,496	38,067
Wholesale Trade	3,544	12,950	1,125	1,088	5,453	24,160
Retail Trade	13,715	51,862	5,562	6,874	23,716	101,729
Transportation, Warehousing and Utilities	5,286	20,388	1,496	1,829	6,364	35,363
Information	1,595	6,996	548	1,143	3,274	13,556
Financial Activities	3,834	13,776	1,217	2,458	6,880	28,165
Professional and Business Service	12,593	55,012	3,702	6,211	23,341	100,859
Education and Health Service	34,055	123,518	10,578	20,448	48,138	236,737
Leisure and Hospitality	14,002	50,282	6,119	7,704	25,901	104,008
Other Service	5,913	23,101	2,484	3,780	9,489	44,767
Government	3,542	16,825	3,026	1,923	4,990	30,306
TUMF Industrial	27,420	109,897	8,375	11,428	44,208	201,328
TUMF Retail	13,715	51,862	5,562	6,874	23,716	101,729
TUMF Service	71,992	272,685	24,648	41,744	117,023	528,092
TUMF Government/Public Sector	3,542	16,825	3,026	1,923	4,990	30,306
Total Employment	116,669	451,269	41,611	61,969	189,937	861,455

Source: SCAG 2016 RTP; WSP, April 2016

EXHIBIT B-3**Western Riverside County Population, Households and Employment (2012 to 2040 Change) - SCAG 2016 RTP/SCS**

SED Type/Zone	Central	Northwest	Pass	San Jacinto	Southwest	Total
Population						
Total Population	136,185	164,127	80,276	105,221	169,889	655,698
Households						
Single-Family	34,855	46,531	20,097	34,516	37,044	173,043
Multi-Family	17,340	12,327	10,875	10,911	25,586	77,039
Total Households	52,195	58,858	30,972	45,427	62,630	250,082
Employment						
Farming, Natural Resources and Mining	236	1,799	71	-58	-650	1,398
Construction	9,628	31,922	1,911	5,029	13,091	61,581
Manufacturing	855	908	-30	-86	-528	1,119
Wholesale Trade	594	3,471	201	745	642	5,653
Retail Trade	4,141	19,891	964	2,626	8,219	35,841
Transportation, Warehousing and Utilities	598	5,670	591	1,055	2,927	10,841
Information	1,207	3,781	323	613	1,670	7,594
Financial Activities	2,105	7,230	640	775	2,409	13,159
Professional and Business Service	7,840	27,663	2,470	3,798	11,153	52,924
Education and Health Service	14,756	63,916	4,833	9,430	26,385	119,320
Leisure and Hospitality	8,200	29,161	2,562	4,548	12,410	56,881
Other Service	2,368	13,651	876	1,714	6,233	24,842
Government	1,787	3,670	319	979	2,760	9,515
TUMF Industrial	11,911	43,770	2,744	6,685	15,482	80,592
TUMF Retail	4,141	19,891	964	2,626	8,219	35,841
TUMF Service	36,476	145,402	11,704	20,878	60,260	274,720
TUMF Government/Public Sector	1,787	3,670	319	979	2,760	9,515
Total Employment	54,315	212,733	15,731	31,168	86,721	400,668

Source: Riverside County Information Technology - GIS, June 2014; SCAG 2016 RTP

Exhibit B-4a - TUMF 2016 Nexus Update**Western Riverside County Population, Households and Employment (2012-2040)**

SED Type/Zone	2012	2040	Change	Percent
Total Population	1,773,935	2,429,633	655,698	37%
Total Households	525,149	775,231	250,082	48%
Single-Family	366,588	539,631	173,043	47%
Multi-Family	158,561	235,600	77,039	49%
Total Employment	460,787	861,455	400,668	87%
TUMF Industrial	120,736	201,328	80,592	67%
TUMF Retail	65,888	101,729	35,841	54%
TUMF Service	253,372	528,092	274,720	108%
TUMF Government/Public Sector	20,791	30,306	9,515	46%

Source: SCAG 2016 RTP; WSP, April 2016

Exhibit B-4b - TUMF 2009 Nexus Update**Western Riverside County Population, Households and Employment (2007-2035)**

SED Type/Zone	2007	2035	Change	Percent
Total Population	1,569,393	2,537,583	968,190	62%
Total Households	530,289	881,968	351,679	66%
Single-Family	395,409	552,154	156,745	40%
Multi-Family	134,880	329,814	194,934	145%
Total Employment	515,914	1,090,833	574,919	111%
TUMF Industrial	175,571	276,782	101,211	58%
TUMF Retail	39,576	87,170	47,594	120%
TUMF Service	256,813	595,039	338,226	132%
TUMF Government/Public Sector	43,954	131,842	87,888	200%

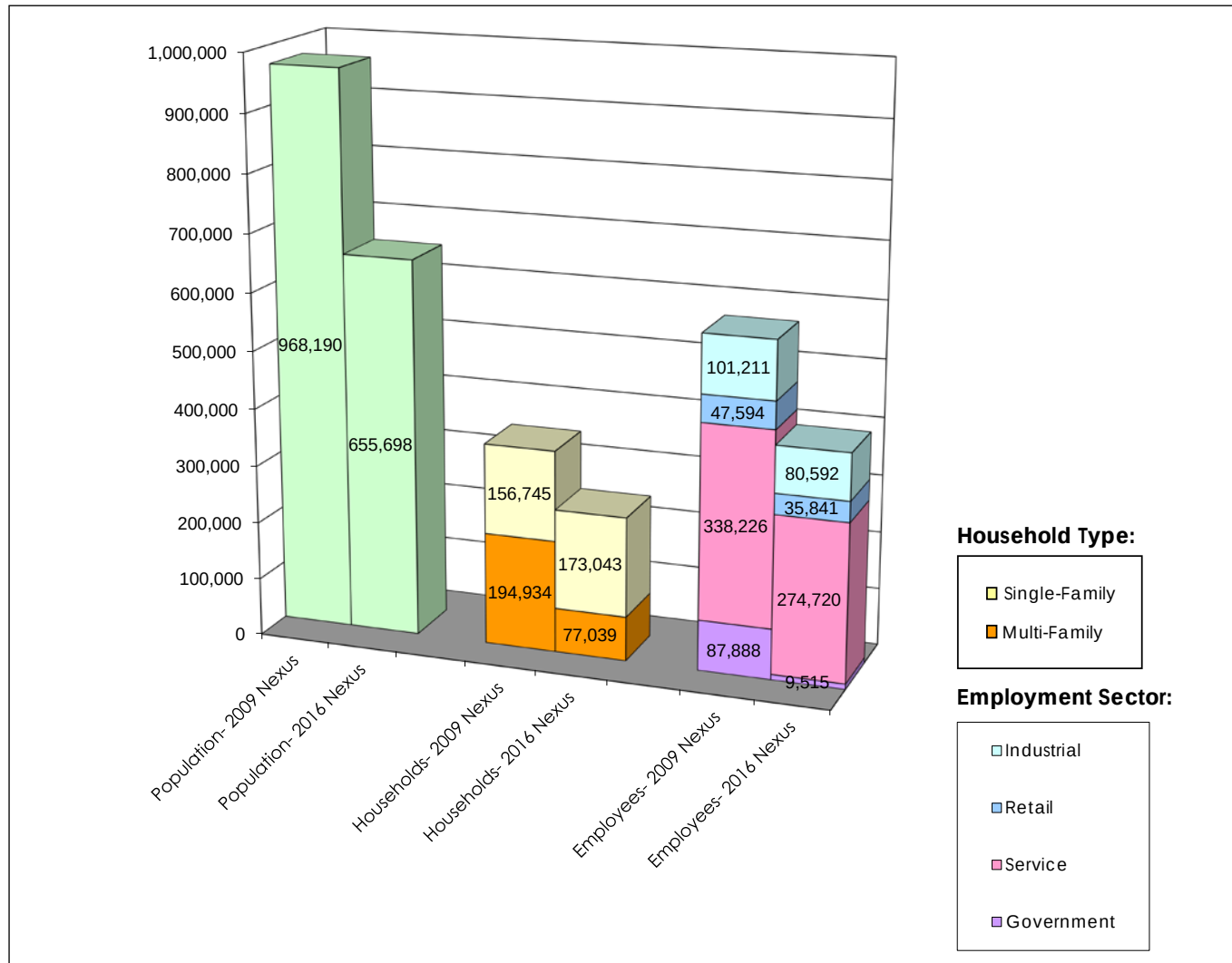
Source: Riverside County CDR, May 2008

Exhibit B-4c - TUMF 2009 Nexus Update to 2016 Nexus Update Comparison
Western Riverside County Population, Households and Employment (Existing to Future Change)

SED Type/Zone	2009 Update (2007-2035)	2015 Update (2012-2040)	Difference	Percent
Total Population	968,190	655,698	-312,492	-32%
Total Households	351,679	250,082	-101,597	-29%
Single-Family	156,745	173,043	16,298	10%
Multi-Family	194,934	77,039	-117,895	-60%
Total Employment	574,919	400,668	-174,251	-30%
TUMF Industrial	101,211	80,592	-20,619	-20%
TUMF Retail	47,594	35,841	-11,753	-25%
TUMF Service	338,226	274,720	-63,506	-19%
TUMF Government/Public Sector	87,888	9,515	-78,373	-89%

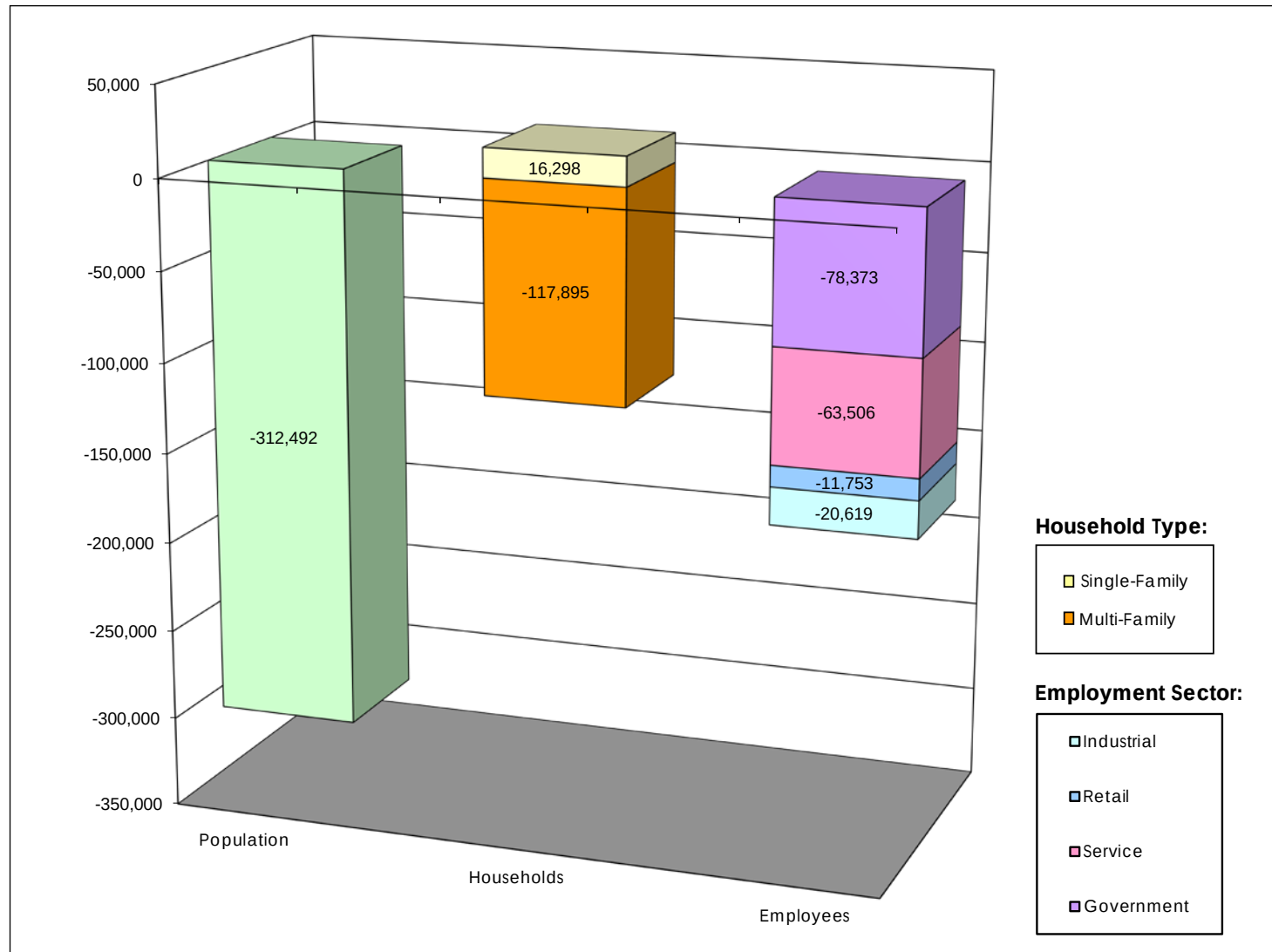
Source: Riverside County CDR, May 2008; SCAG 2016 RTP; WSP, April 2016

EXHIBIT B-4d
Western Riverside County Population, Households and Employment Change (2007 to 2035 and 2012 to 2040)
TUMF 2009 Nexus Update Comparison to TUMF 2016 Nexus Update



Sources:
 Year 2007 to Year 2035 Growth (2009 Nexus Update): RCCDR, May 2008
 Year 2012 to Year 2040 Growth (2016 Nexus Update): SCAG 2016 RTP/SCS; WSP, April 2016

EXHIBIT B-4e
Difference in Population, Households and Employment Growth in Western Riverside County
TUMF 2009 Nexus Update Comparison to TUMF 2016 Nexus Update



Source:
 Year 2007 to Year 2035 Growth (2009 Nexus Update): RCCDR, May 2008
 Year 2012 to Year 2040 Growth (2016 Nexus Update): SCAG 2016 RTP/SCS; WSP, April 2016

EXHIBIT B-5a

TUMF Non-Residential Category Detailed NAICS Correspondence Summary

TUMF Category	California Employment Development Department (EDD)		North American Industry Classification System (NAICS) (2007)	
	Major Groups		Category Codes & Descriptions*	
Industrial	11-000000 Total Farm		11-111 Crop Production	11-111 Crop Production
			11-112 Animal Production	11-112 Animal Production
			11-113 Forestry and Logging	11-113 Forestry and Logging
			11-114 Fishing, Hunting, and Trapping	11-114 Fishing, Hunting, and Trapping
			11-115 Support Activities for Agriculture and Forestry	11-115 Support Activities for Agriculture and Forestry
	10-000000 Natural Resources & Mining		10-211 Oil and Gas Extraction	10-211 Oil and Gas Extraction
			10-212 Mining (except Oil and Gas)	10-212 Mining (except Oil and Gas)
			10-213 Support Activities for Mining	10-213 Support Activities for Mining
	20-000000 Construction		20-236 Construction of Buildings	20-236 Construction of Buildings
			20-237 Heavy and Civil Engineering Construction	20-237 Heavy and Civil Engineering Construction
	30-000000 Manufacturing		20-238 Specialty Trade Contractors	20-238 Specialty Trade Contractors
			32-311 Food Manufacturing	32-311 Food Manufacturing
			32-312 Beverage and Tobacco Product Manufacturing	32-312 Beverage and Tobacco Product Manufacturing
			32-313 Textile Mills	32-313 Textile Mills
			32-314 Textile Product Mills	32-314 Textile Product Mills
			32-315 Apparel Manufacturing	32-315 Apparel Manufacturing
			32-316 Leather and Allied Product Manufacturing	32-316 Leather and Allied Product Manufacturing
			31-321 Wood Product Manufacturing	31-321 Wood Product Manufacturing
			32-322 Paper Manufacturing	32-322 Paper Manufacturing
			32-323 Printing and Related Support Activities	32-323 Printing and Related Support Activities
			32-324 Petroleum and Coal Products Manufacturing	32-324 Petroleum and Coal Products Manufacturing
			32-325 Chemical Manufacturing	32-325 Chemical Manufacturing
			32-326 Plastics and Rubber Products Manufacturing	32-326 Plastics and Rubber Products Manufacturing
			31-327 Nonmetallic Mineral Product Manufacturing	31-327 Nonmetallic Mineral Product Manufacturing
			31-331 Primary Metal Manufacturing	31-331 Primary Metal Manufacturing
			31-332 Fabricated Metal Product Manufacturing	31-332 Fabricated Metal Product Manufacturing
			31-333 Machinery Manufacturing	31-333 Machinery Manufacturing
			31-334 Computer and Electronic Product Manufacturing	31-334 Computer and Electronic Product Manufacturing
			31-335 Electrical Equipment, Appliance, and Component Manufacturing	31-335 Electrical Equipment, Appliance, and Component Manufacturing
			31-336 Transportation Equipment Manufacturing	31-336 Transportation Equipment Manufacturing
	41-000000 Wholesale Trade		31-337 Furniture and Related Product Manufacturing	31-337 Furniture and Related Product Manufacturing
			31-339 Miscellaneous Manufacturing	31-339 Miscellaneous Manufacturing
			41-423 Merchant Wholesalers, Durable Goods	41-423 Merchant Wholesalers, Durable Goods
			41-424 Merchant Wholesalers, Nondurable Goods	41-424 Merchant Wholesalers, Nondurable Goods
			41-425 Wholesale Electronic Markets and Agents and Brokers	41-425 Wholesale Electronic Markets and Agents and Brokers
	43-000000 Transportation, Warehousing & Utilities		43-221 Utilities	43-221 Utilities
			43-481 Air Transportation	43-481 Air Transportation
			43-482 Rail Transportation	43-482 Rail Transportation
			43-483 Water Transportation	43-483 Water Transportation
			43-484 Truck Transportation	43-484 Truck Transportation
			43-485 Transit and Ground Passenger Transportation	43-485 Transit and Ground Passenger Transportation
			43-486 Pipeline Transportation	43-486 Pipeline Transportation
			43-487 Scenic and Sightseeing Transportation	43-487 Scenic and Sightseeing Transportation
			43-488 Support Activities for Transportation	43-488 Support Activities for Transportation
			43-491 Postal Service	43-491 Postal Service
			43-492 Couriers and Messengers	43-492 Couriers and Messengers
			43-493 Warehousing and Storage	43-493 Warehousing and Storage
			42-441 Motor Vehicle and Parts Dealers	42-441 Motor Vehicle and Parts Dealers
			42-442 Furniture and Home Furnishings Stores	42-442 Furniture and Home Furnishings Stores
			42-443 Electronics and Appliance Stores	42-443 Electronics and Appliance Stores
			42-444 Building Material and Garden Equipment and Supplies Dealers	42-444 Building Material and Garden Equipment and Supplies Dealers
			42-445 Food and Beverage Stores	42-445 Food and Beverage Stores
			42-446 Health and Personal Care Stores	42-446 Health and Personal Care Stores
			42-447 Gasoline Stations	42-447 Gasoline Stations
			42-448 Clothing and Clothing Accessories Stores	42-448 Clothing and Clothing Accessories Stores
			42-451 Sporting Goods, Hobby, Book, and Music Stores	42-451 Sporting Goods, Hobby, Book, and Music Stores
			42-452 General Merchandise Stores	42-452 General Merchandise Stores
			42-453 Miscellaneous Store Retailers	42-453 Miscellaneous Store Retailers
			42-454 Nonstore Retailers	42-454 Nonstore Retailers
			50-511 Publishing Industries (except Internet)	50-511 Publishing Industries (except Internet)
			50-512 Motion Picture and Sound Recording Industries	50-512 Motion Picture and Sound Recording Industries
			50-515 Broadcasting (except Internet)	50-515 Broadcasting (except Internet)
			50-517 Telecommunications	50-517 Telecommunications
			50-518 Data Processing, Hosting and Related Services	50-518 Data Processing, Hosting and Related Services
			50-519 other Information Services	50-519 other Information Services
	55-000000 Finance Activities		55-521 Monetary Authorities-Central Bank	55-521 Monetary Authorities-Central Bank
			55-522 Credit Intermediation and Related Activities	55-522 Credit Intermediation and Related Activities
			55-523 Securities, Commodity Contracts, and Other Financial Investments and Related Activities	55-523 Securities, Commodity Contracts, and Other Financial Investments and Related Activities
			55-524 Insurance Carriers and Related Activities	55-524 Insurance Carriers and Related Activities
			55-525 Funds, Trusts, and Other Financial Vehicles	55-525 Funds, Trusts, and Other Financial Vehicles
			55-531 Real Estate	55-531 Real Estate
			55-532 Rental and Leasing Services	55-532 Rental and Leasing Services
			55-533 Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	55-533 Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
			60-540 Professional, Scientific, and Technical Services	60-540 Professional, Scientific, and Technical Services
			60-550 Management of Companies and Enterprises	60-550 Management of Companies and Enterprises
	65-000000 Educational & Health Services		60-561 Administrative and Support Services	60-561 Administrative and Support Services
			60-562 Waste Management and Remediation Services	60-562 Waste Management and Remediation Services
			65-610 Educational Services	65-610 Educational Services
			65-621 Ambulatory Health Care Services	65-621 Ambulatory Health Care Services
			65-622 Hospitals	65-622 Hospitals
			65-623 Nursing and Residential Care Facilities	65-623 Nursing and Residential Care Facilities
			65-624 Social Assistance	65-624 Social Assistance
			70-711 Performing Arts, Spectator Sports, and Related Industries	70-711 Performing Arts, Spectator Sports, and Related Industries
			70-712 Museums, Historical Sites, and Similar Institutions	70-712 Museums, Historical Sites, and Similar Institutions
			70-713 Amusement, Gambling, and Recreation Industries	70-713 Amusement, Gambling, and Recreation Industries
	80 Other Services		70-721 Accommodation	70-721 Accommodation
			70-722 Food Services and Drinking Places	70-722 Food Services and Drinking Places
			80-811 Repair and Maintenance	80-811 Repair and Maintenance
			80-812 Personal and Laundry Services	80-812 Personal and Laundry Services
			80-813 Religious, Grantmaking, Civic, Professional, and Similar Organizations	80-813 Religious, Grantmaking, Civic, Professional, and Similar Organizations
			80-814 Private Households	80-814 Private Households
			90-910 Federal Government	90-910 Federal Government
			90-920 State Government	90-920 State Government
			90-930 Local Government	90-930 Local Government
			90-000000 Government	90-000000 Government
Government/ Public Sector				

Note: * The NAICS Minor Groups and Categories are cross-referenced to the EDD Major Industrial Codes which are used as the basis for the CDR forecasts.

Sources: Riverside County Center for Demographic Research (CDR)
California Employment Development Department (EDD)
US Census Bureau, North American Industry Classification System (NAICS), 2007

EXHIBIT B-5b

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)						
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*				
Industrial	11-000000 Total Farm							
	11-111000 Crop Production							
				111110	Soybean Farming			
				111120	Oilseed (except Soybean) Farming			
				111130	Dry Pea and Bean Farming			
				111140	Wheat Farming			
				111150	Corn Farming			
				111160	Rice Farming			
				111191	Oilseed and Grain Combination Farming			
				111199	All Other Grain Farming			
				111211	Potato Farming			
				111219	Other Vegetable (except Potato) and Melon Farming			
				111310	Orange Groves			
				111320	Citrus (except Orange) Groves			
				111331	Apple Orchards			
				111332	Grape Vineyards			
				111333	Strawberry Farming			
				111334	Berry (except Strawberry) Farming			
				111335	Tree Nut Farming			
				111336	Fruit and Tree Nut Combination Farming			
				111339	Other Noncitrus Fruit Farming			
				111411	Mushroom Production			
				111419	Other Food Crops Grown Under Cover			
				111421	Nursery and Tree Production			
				111422	Floriculture Production			
				111910	Tobacco Farming			
				111920	Cotton Farming			
				111930	Sugarcane Farming			
				111940	Hay Farming			
				111991	Sugar Beet Farming			
				111992	Peanut Farming			
				111998	All Other Miscellaneous Crop Farming			
				11-112000 Animal Production				
							112111	Beef Cattle Ranching and Farming
							112112	Cattle Feedlots
							112120	Dairy Cattle and Milk Production
							112130	Dual-Purpose Cattle Ranching and Farming
							112210	Hog and Pig Farming
							112310	Chicken Egg Production
							112320	Broilers and Other Meat Type Chicken Production
							112330	Turkey Production
							112340	Poultry Hatcheries
							112390	Other Poultry Production
							112410	Sheep Farming
							112420	Goat Farming
							112511	Finfish Farming and Fish Hatcheries
							112512	Shellfish Farming
							112519	Other Aquaculture
							112910	Apiculture
	112920	Horses and Other Equine Production						
	112930	Fur-Bearing Animal and Rabbit Production						
	112990	All Other Animal Production						
	11-113000 Forestry and Logging							
							113110	Timber Tract Operations
							113210	Forest Nurseries and Gathering of Forest Products
							113310	Logging
	11-114000 Fishing, Hunting and Trapping							
							114111	Finfish Fishing
							114112	Shellfish Fishing
							114119	Other Marine Fishing
							114210	Hunting and Trapping
	11-115000 Support Activities for Agriculture and Forestry							
							115111	Cotton Ginning
				115112	Soil Preparation, Planting, and Cultivating			
				115113	Crop Harvesting, Primarily by Machine			
				115114	Postharvest Crop Activities (except Cotton Ginning)			
				115115	Farm Labor Contractors and Crew Leaders			
				115116	Farm Management Services			
				115210	Support Activities for Animal Production			
				115310	Support Activities for Forestry			
				10-000000 Natural Resources & Mining				
				10-211000 Oil and Gas Extraction				
				211111	Crude Petroleum and Natural Gas Extraction			
				211112	Natural Gas Liquid Extraction			
		10-212000 Mining (except Oil and Gas)						
					212111	Bituminous Coal and Lignite Surface Mining		
					212112	Bituminous Coal Underground Mining		
					212113	Anthracite Mining		
					212210	Iron Ore Mining		
					212221	Gold Ore Mining		
					212222	Silver Ore Mining		
					212231	Lead Ore and Zinc Ore Mining		
					212234	Copper Ore and Nickel Ore Mining		
					212291	Uranium-Radium-Vanadium Ore Mining		
					212299	All Other Metal Ore Mining		
					212311	Dimension Stone Mining and Quarrying		
					212312	Crushed and Broken Limestone Mining and Quarrying		
					212313	Crushed and Broken Granite Mining and Quarrying		
					212319	Other Crushed and Broken Stone Mining and Quarrying		
					212321	Construction Sand and Gravel Mining		
					212322	Industrial Sand Mining		
					212324	Kaolin and Ball Clay Mining		
					212325	Clay and Ceramic and Refractory Minerals Mining		
					212391	Potash, Soda, and Borate Mineral Mining		
					212392	Phosphate Rock Mining		
					212393	Other Chemical and Fertilizer Mineral Mining		
					212399	All Other Nonmetallic Mineral Mining		
		10-213000 Support Activities for Mining						
					213111	Drilling Oil and Gas Wells		
					213112	Support Activities for Oil and Gas Operations		

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)		
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*
			213113	Support Activities for Coal Mining
			213114	Support Activities for Metal Mining
			213115	Support Activities for Nonmetallic Minerals (except Fuels)
			20-000000 Construction	
			20-236000 Construction of Buildings	
			236115	New Single-Family Housing Construction (except Operative Builders)
			236116	New Multifamily Housing Construction (except Operative Builders)
			236117	New Housing Operative Builders
			236118	Residential Remodelers
			236210	Industrial Building Construction
			236220	Commercial and Institutional Building Construction
			20-237000 Heavy and Civil Engineering Construction	
			237110	Water and Sewer Line and Related Structures Construction
			237120	Oil and Gas Pipeline and Related Structures Construction
			237130	Power and Communication Line and Related Structures Construction
			237210	Land Subdivision
			237310	Highway, Street, and Bridge Construction
			237990	Other Heavy and Civil Engineering Construction
			20-238000 Specialty Trade Contractors	
			238110	Poured Concrete Foundation and Structure Contractors
			238120	Structural Steel and Precast Concrete Contractors
			238130	Framing Contractors
			238140	Masonry Contractors
			238150	Glass and Glazing Contractors
			238160	Roofing Contractors
			238170	Siding Contractors
			238190	Other Foundation, Structure, and Building Exterior Contractors
			238210	Electrical Contractors and Other Wiring Installation Contractors
			238220	Plumbing, Heating, and Air-Conditioning Contractors
			238290	Other Building Equipment Contractors
			238310	Drywall and Insulation Contractors
			238320	Painting and Wall Covering Contractors
			238330	Flooring Contractors
			238340	Tile and Terrazzo Contractors
			238350	Finish Carpentry Contractors
			238390	Other Building Finishing Contractors
			238910	Site Preparation Contractors
			238990	All Other Specialty Trade Contractors
			30-000000 Manufacturing	
			32-31 1000 Food Manufacturing	
			311111	Dog and Cat Food Manufacturing
			311119	Other Animal Food Manufacturing
			311211	Flour Milling
			311212	Rice Milling
			311213	Malt Manufacturing
			311221	Wet Corn Milling
			311222	Soybean Processing
			311223	Other Oilseed Processing
			311225	Fats and Oils Refining and Blending
			311230	Breakfast Cereal Manufacturing
			311311	Sugarcane Mills
			311312	Cane Sugar Refining
			311313	Beet Sugar Manufacturing
			311320	Chocolate and Confectionery Manufacturing from Cacao Beans
			311330	Confectionery Manufacturing from Purchased Chocolate
			311340	Nonchocolate Confectionery Manufacturing
			311411	Frozen Fruit, Juice, and Vegetable Manufacturing
			311412	Frozen Specialty Food Manufacturing
			311421	Fruit and Vegetable Canning
			311422	Specialty Canning
			311423	Dried and Dehydrated Food Manufacturing
			311511	Fluid Milk Manufacturing
			311512	Creamery Butter Manufacturing
			311513	Cheese Manufacturing
			311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
			311520	Ice Cream and Frozen Dessert Manufacturing
			311611	Animal (except Poultry) Slaughtering
			311612	Meat Processed from Carcasses
			311613	Rendering and Meat Byproduct Processing
			311615	Poultry Processing
			311711	Seafood Canning
			311712	Fresh and Frozen Seafood Processing
			311811	Retail Bakeries
			311812	Commercial Bakeries
			311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
			311821	Cookie and Cracker Manufacturing
			311822	Flour Mixes and Dough Manufacturing from Purchased Flour
			311823	Dry Pasta Manufacturing
			311830	Tortilla Manufacturing
			311911	Roasted Nuts and Peanut Butter Manufacturing
			311919	Other Snack Food Manufacturing
			311920	Coffee and Tea Manufacturing
			311930	Flavoring Syrup and Concentrate Manufacturing
			311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
			311942	Spice and Extract Manufacturing
			311991	Perishable Prepared Food Manufacturing
			311999	All Other Miscellaneous Food Manufacturing
			32-312000 Beverage and Tobacco Product Manufacturing	
			312111	Soft Drink Manufacturing
			312112	Bottled Water Manufacturing
			312113	Ice Manufacturing
			312120	Breweries
			312130	Wineries
			312140	Distilleries
			312210	Tobacco Stemming and Redrying
			312221	Cigarette Manufacturing
			312229	Other Tobacco Product Manufacturing
			32-313000 Textile Mills	
			313111	Yarn Spinning Mills
			313112	Yarn Texturizing, Throwing, and Twisting Mills
			313113	Thread Mills
			313210	Broadwoven Fabric Mills

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)		
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*
			313221	Narrow Fabric Mills
			313222	Schiffli Machine Embroidery
			313230	Nonwoven Fabric Mills
			313241	Weft Knit Fabric Mills
			313249	Other Knit Fabric and Lace Mills
			313311	Broadwoven Fabric Finishing Mills
			313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills
			313320	Fabric Coating Mills
		32-314000 Textile Product Mills		
			314110	Carpet and Rug Mills
			314121	Curtain and Drapery Mills
			314129	Other Household Textile Product Mills
			314911	Textile Bag Mills
			314912	Canvas and Related Product Mills
			314991	Rope, Cordage, and Twine Mills
			314992	Tire Cord and Tire Fabric Mills
			314999	All Other Miscellaneous Textile Product Mills
		32-315000 Apparel Manufacturing		
			315111	Sheer Hosiery Mills
			315119	Other Hosiery and Sock Mills
			315191	Outerwear Knitting Mills
			315192	Underwear and Nightwear Knitting Mills
			315211	Men's and Boys' Cut and Sew Apparel Contractors
			315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors
			315221	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing
			315222	Men's and Boys' Coat and Sew Suit, Coat, and Overcoat Manufacturing
			315223	Men's and Boys' Cut and Sew Shirt (except Work Shirt) Manufacturing
			315224	Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing
			315225	Men's and Boys' Cut and Sew Work Clothing Manufacturing
			315228	Men's and Boys' Cut and Sew Other Outerwear Manufacturing
			315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing
			315232	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing
			315233	Women's and Girls' Cut and Sew Dress Manufacturing
			315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing
			315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing
			315291	Infants' Cut and Sew Apparel Manufacturing
			315292	Fur and Leather Apparel Manufacturing
			315299	All Other Cut and Sew Apparel Manufacturing
			315991	Hat, Cap, and Millinery Manufacturing
			315992	Glove and Mitten Manufacturing
			315993	Men's and Boys' Neckwear Manufacturing
			315999	Other Apparel Accessories and Other Apparel Manufacturing
		32-316000 Leather and Allied Product Manufacturing		
			316110	Leather and Hide Tanning and Finishing
			316211	Rubber and Plastics Footwear Manufacturing
			316212	House Slipper Manufacturing
			316213	Men's Footwear (except Athletic) Manufacturing
			316214	Women's Footwear (except Athletic) Manufacturing
			316219	Other Footwear Manufacturing
			316991	Luggage Manufacturing
			316992	Women's Handbag and Purse Manufacturing
			316993	Personal Leather Good (except Women's Handbag and Purse) Manufacturing
			316999	All Other Leather Good and Allied Product Manufacturing
		31-321000 Wood Product Manufacturing		
			321113	Sawmills
			321114	Wood Preservation
			321211	Hardwood Veneer and Plywood Manufacturing
			321212	Softwood Veneer and Plywood Manufacturing
			321213	Engineered Wood Member (except Truss) Manufacturing
			321214	Truss Manufacturing
			321219	Reconstituted Wood Product Manufacturing
			321911	Wood Window and Door Manufacturing
			321912	Cut Stock, Resawing Lumber, and Planing
			321918	Other Millwork (including Flooring)
			321920	Wood Container and Pallet Manufacturing
			321991	Manufactured Home (Mobile Home) Manufacturing
			321992	Prefabricated Wood Building Manufacturing
			321999	All Other Miscellaneous Wood Product Manufacturing
		32-322000 Paper Manufacturing		
			322110	Pulp Mills
			322121	Paper (except Newsprint) Mills
			322122	Newsprint Mills
			322130	Paperboard Mills
			322211	Corrugated and Solid Fiber Box Manufacturing
			322212	Folding Paperboard Box Manufacturing
			322213	Setup Paperboard Box Manufacturing
			322214	Fiber Can, Tube, Drum, and Similar Products Manufacturing
			322215	Nonfolding Sanitary Food Container Manufacturing
			322221	Coated and Laminated Packaging Paper Manufacturing
			322222	Coated and Laminated Paper Manufacturing
			322223	Coated Paper Bag and Pouch Manufacturing
			322224	Uncoated Paper and Multiwall Bag Manufacturing
			322225	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses
			322226	Surface-Coated Paperboard Manufacturing
			322231	Die-Cut Paper and Paperboard Office Supplies Manufacturing
			322232	Envelope Manufacturing
			322233	Stationery, Tablet, and Related Product Manufacturing
			322291	Sanitary Paper Product Manufacturing
			322299	All Other Converted Paper Product Manufacturing
		32-323000 Printing and Related Support Activities		
			323110	Commercial Lithographic Printing
			323111	Commercial Gravure Printing
			323112	Commercial Flexographic Printing
			323113	Commercial Screen Printing
			323114	Quick Printing
			323115	Digital Printing
			323116	Manifold Business Forms Printing
			323117	Books Printing
			323118	Blankbook, Looseleaf Binders, and Devices Manufacturing
			323119	Other Commercial Printing
			323121	Tradebinding and Related Work

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TUMF	California EDD	North American Industry Classification System (NAICS) (2007)			
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*	
			323122	Prepress Services	
		32-324000 Petroleum and Coal Products Manufacturing	324110	Petrochemical Manufacturing	
			324120	Industrial Gas Manufacturing	
			324131	Inorganic Dye and Pigment Manufacturing	
			324132	Synthetic Organic Dye and Pigment Manufacturing	
			324181	Alkalies and Chlorine Manufacturing	
		324182	Carbon Black Manufacturing		
		324188	All Other Basic Inorganic Chemical Manufacturing		
		324191	Gum and Wood Chemical Manufacturing		
		324192	Cyclic Crude and Intermediate Manufacturing		
		324193	Ethyl Alcohol Manufacturing		
		324199	All Other Basic Organic Chemical Manufacturing		
		325211	Plastics Material and Resin Manufacturing		
		325212	Synthetic Rubber Manufacturing		
		325221	Cellulosic Organic Fiber Manufacturing		
		325222	Noncellulosic Organic Fiber Manufacturing		
		325311	Nitrogenous Fertilizer Manufacturing		
		325312	Phosphatic Fertilizer Manufacturing		
		325314	Fertilizer (Mixing Only) Manufacturing		
		325320	Pesticide and Other Agricultural Chemical Manufacturing		
		325411	Medicinal and Botanical Manufacturing		
		325412	Pharmaceutical Preparation Manufacturing		
		325413	In-Vitro Diagnostic Substance Manufacturing		
		325414	Biological Product (except Diagnostic) Manufacturing		
		325510	Paint and Coating Manufacturing		
		325520	Adhesive Manufacturing		
		325611	Soap and Other Detergent Manufacturing		
		325612	Polish and Other Sanitation Good Manufacturing		
		325613	Surface Active Agent Manufacturing		
		325620	Toilet Preparation Manufacturing		
		325910	Printing Ink Manufacturing		
		325920	Explosives Manufacturing		
		325991	Custom Compounding of Purchased Resins		
		325992	Photographic Film, Paper, Plate, and Chemical Manufacturing		
		325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing		
		32-326000 Plastics and Rubber Products Manufacturing	32-326000 Plastics and Rubber Products Manufacturing		
			326111	Plastics Bag and Pouch Manufacturing	
			326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	
			326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	
			326121	Unlaminated Plastics Profile Shape Manufacturing	
			326122	Plastics Pipe and Pipe Fitting Manufacturing	
			326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing	
			326140	Polystyrene Foam Product Manufacturing	
			326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	
			326160	Plastics Bottle Manufacturing	
			326191	Plastics Plumbing Fixture Manufacturing	
			326192	Resilient Floor Covering Manufacturing	
			326199	All Other Plastics Product Manufacturing	
			326211	Tire Manufacturing (except Retreading)	
			326212	Tire Retreading	
	326220		Rubber and Plastics Hoses and Belting Manufacturing		
	326291		Rubber Product Manufacturing for Mechanical Use		
	326299		All Other Rubber Product Manufacturing		
	31-327000 Nonmetallic Mineral Product Manufacturing		31-327000 Nonmetallic Mineral Product Manufacturing		
			327111	Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing	
			327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	
			327113	Porcelain Electrical Supply Manufacturing	
			327121	Brick and Structural Clay Tile Manufacturing	
			327122	Ceramic Wall and Floor Tile Manufacturing	
			327123	Other Structural Clay Product Manufacturing	
		327124	Clay Refractory Manufacturing		
		327125	Nonclay Refractory Manufacturing		
		327211	Flat Glass Manufacturing		
		327212	Other Pressed and Blown Glass and Glassware Manufacturing		
		327213	Glass Container Manufacturing		
		327215	Glass Product Manufacturing Made of Purchased Glass		
		327310	Cement Manufacturing		
		327320	Ready-Mix Concrete Manufacturing		
	327331	Concrete Block and Brick Manufacturing			
	327332	Concrete Pipe Manufacturing			
	327390	Other Concrete Product Manufacturing			
	327410	Lime Manufacturing			
	327420	Gypsum Product Manufacturing			
	327910	Abrasive Product Manufacturing			
	327991	Cut Stone and Stone Product Manufacturing			
	327992	Ground or Treated Mineral and Earth Manufacturing			
	327993	Mineral Wool Manufacturing			
	327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing			
	31-331000 Primary Metal Manufacturing	31-331000 Primary Metal Manufacturing			
		331111	Iron and Steel Mills		
		331112	Electrometallurgical Ferroalloy Product Manufacturing		
		331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel		
		331221	Rolled Steel Shape Manufacturing		
		331222	Steel Wire Drawing		
		331311	Alumina Refining		
		331312	Primary Aluminum Production		
		331314	Secondary Smelting and Alloying of Aluminum		
		331315	Aluminum Sheet, Plate, and Foil Manufacturing		
		331316	Aluminum Extruded Product Manufacturing		
		331319	Other Aluminum Rolling and Drawing		
		331411	Primary Smelting and Refining of Copper		
		331419	Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)		
		331421	Copper Rolling, Drawing, and Extruding		
	331422	Copper Wire (except Mechanical) Drawing			
	331423	Secondary Smelting, Refining, and Alloying of Copper			
	331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding			

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TUMF	California EDD	North American Industry Classification System (NAICS) (2007)		
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*
			331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
			331511	Iron Foundries
			331512	Steel Investment Foundries
			331513	Steel Foundries (except Investment)
			331521	Aluminum Die-Casting Foundries
			331522	Nonferrous (except Aluminum) Die-Casting Foundries
			331524	Aluminum Foundries (except Die-Casting)
			331525	Copper Foundries (except Die-Casting)
			331528	Other Nonferrous Foundries (except Die-Casting)
			31-332000 Fabricated Metal Product Manufacturing	
			332111	Iron and Steel Forging
			332112	Nonferrous Forging
			332114	Custom Roll Forming
			332115	Crown and Closure Manufacturing
			332116	Metal Stamping
			332117	Powder Metallurgy Part Manufacturing
			332211	Cutlery and Flatware (except Precious) Manufacturing
			332212	Hand and Edge Tool Manufacturing
			332213	Saw Blade and Handsaw Manufacturing
			332214	Kitchen Utensil, Pot, and Pan Manufacturing
			332311	Prefabricated Metal Building and Component Manufacturing
			332312	Fabricated Structural Metal Manufacturing
			332313	Plate Work Manufacturing
			332321	Metal Window and Door Manufacturing
			332322	Sheet Metal Work Manufacturing
			332323	Ornamental and Architectural Metal Work Manufacturing
			332410	Power Boiler and Heat Exchanger Manufacturing
			332420	Metal Tank (Heavy Gauge) Manufacturing
			332431	Metal Can Manufacturing
			332439	Other Metal Container Manufacturing
			332510	Hardware Manufacturing
			332611	Spring (Heavy Gauge) Manufacturing
			332612	Spring (Light Gauge) Manufacturing
			332618	Other Fabricated Wire Product Manufacturing
			332710	Machine Shops
			332721	Precision Turned Product Manufacturing
			332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing
			332811	Metal Heat Treating
			332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers
			332813	Electroplating, Plating, Polishing, Anodizing, and Coloring
			332911	Industrial Valve Manufacturing
			332912	Fluid Power Valve and Hose Fitting Manufacturing
			332913	Plumbing Fixture Fitting and Trim Manufacturing
			332919	Other Metal Valve and Pipe Fitting Manufacturing
			332991	Ball and Roller Bearing Manufacturing
			332992	Small Arms Ammunition Manufacturing
			332993	Ammunition (except Small Arms) Manufacturing
			332994	Small Arms Manufacturing
			332995	Other Ordnance and Accessories Manufacturing
			332996	Fabricated Pipe and Pipe Fitting Manufacturing
			332997	Industrial Pattern Manufacturing
			332998	Enameled Iron and Metal Sanitary Ware Manufacturing
			332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
			31-333000 Machinery Manufacturing	
			333111	Farm Machinery and Equipment Manufacturing
			333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
			333120	Construction Machinery Manufacturing
			333131	Mining Machinery and Equipment Manufacturing
			333132	Oil and Gas Field Machinery and Equipment Manufacturing
			333210	Sawmill and Woodworking Machinery Manufacturing
			333220	Plastics and Rubber Industry Machinery Manufacturing
			333291	Paper Industry Machinery Manufacturing
			333292	Textile Machinery Manufacturing
			333293	Printing Machinery and Equipment Manufacturing
			333294	Food Product Machinery Manufacturing
			333295	Semiconductor Machinery Manufacturing
			333298	All Other Industrial Machinery Manufacturing
			333311	Automatic Vending Machine Manufacturing
			333312	Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing
			333313	Office Machinery Manufacturing
			333314	Optical Instrument and Lens Manufacturing
			333315	Photographic and Photocopying Equipment Manufacturing
			333319	Other Commercial and Service Industry Machinery Manufacturing
			333411	Air Purification Equipment Manufacturing
			333412	Industrial and Commercial Fan and Blower Manufacturing
			333414	Heating Equipment (except Warm Air Furnaces) Manufacturing
			333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufactur
			333511	Industrial Mold Manufacturing
			333512	Machine Tool (Metal Cutting Types) Manufacturing
			333513	Machine Tool (Metal Forming Types) Manufacturing
			333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing
			333515	Cutting Tool and Machine Tool Accessory Manufacturing
			333516	Rolling Mill Machinery and Equipment Manufacturing
			333518	Other Metalworking Machinery Manufacturing
			333611	Turbine and Turbine Generator Set Units Manufacturing
			333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing
			333613	Mechanical Power Transmission Equipment Manufacturing
			333618	Other Engine Equipment Manufacturing
			333911	Pump and Pumping Equipment Manufacturing
			333912	Air and Gas Compressor Manufacturing
			333913	Measuring and Dispensing Pump Manufacturing
			333921	Elevator and Moving Stairway Manufacturing
			333922	Conveyor and Conveying Equipment Manufacturing
			333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing
			333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing
			333991	Power-Driven Handtool Manufacturing
			333992	Welding and Soldering Equipment Manufacturing
			333993	Packaging Machinery Manufacturing
			333994	Industrial Process Furnace and Oven Manufacturing
			333995	Fluid Power Cylinder and Actuator Manufacturing
			333996	Fluid Power Pump and Motor Manufacturing
			333997	Scale and Balance Manufacturing
			333999	All Other Miscellaneous General Purpose Machinery Manufacturing
			31-334000 Computer and Electronic Product Manufacturing	
			334111	Electronic Computer Manufacturing
			334112	Computer Storage Device Manufacturing
			334113	Computer Terminal Manufacturing

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TUMF	California EDD	North American Industry Classification System (NAICS) (2007)		
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*
			334119	Other Computer Peripheral Equipment Manufacturing
			334210	Telephone Apparatus Manufacturing
			334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
			334290	Other Communications Equipment Manufacturing
			334310	Audio and Video Equipment Manufacturing
			334411	Electron Tube Manufacturing
			334412	Bare Printed Circuit Board Manufacturing
			334413	Semiconductor and Related Device Manufacturing
			334414	Electronic Capacitor Manufacturing
			334415	Electronic Resistor Manufacturing
			334416	Electronic Coil, Transformer, and Other Inductor Manufacturing
			334417	Electronic Connector Manufacturing
			334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
			334419	Other Electronic Component Manufacturing
			334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
			334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
			334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
			334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
			334514	Totalizing Fluid Meter and Counting Device Manufacturing
			334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
			334516	Analytical Laboratory Instrument Manufacturing
			334517	Irradiation Apparatus Manufacturing
			334518	Watch, Clock, and Part Manufacturing
			334519	Other Measuring and Controlling Device Manufacturing
			334611	Software Reproducing
			334612	Prerecorded Compact Disc (except Software), Tape, and Record Reproducing
			334613	Magnetic and Optical Recording Media Manufacturing
			31-335000 Electrical Equipment, Appliance, and Component Manufacturing	
			335110	Electric Lamp Bulb and Part Manufacturing
			335121	Residential Electric Lighting Fixture Manufacturing
			335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing
			335129	Other Lighting Equipment Manufacturing
			335211	Electric Housewares and Household Fan Manufacturing
			335212	Household Vacuum Cleaner Manufacturing
			335221	Household Cooking Appliance Manufacturing
			335222	Household Refrigerator and Home Freezer Manufacturing
			335224	Household Laundry Equipment Manufacturing
			335228	Other Major Household Appliance Manufacturing
			335311	Power, Distribution, and Specialty Transformer Manufacturing
			335312	Motor and Generator Manufacturing
			335313	Switchgear and Switchboard Apparatus Manufacturing
			335314	Relay and Industrial Control Manufacturing
			335911	Storage Battery Manufacturing
			335912	Primary Battery Manufacturing
			335921	Fiber Optic Cable Manufacturing
			335929	Other Communication and Energy Wire Manufacturing
			335931	Current-Carrying Wiring Device Manufacturing
			335932	Noncurrent-Carrying Wiring Device Manufacturing
			335991	Carbon and Graphite Product Manufacturing
			335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing
			31-336000 Transportation Equipment Manufacturing	
			336111	Automobile Manufacturing
			336112	Light Truck and Utility Vehicle Manufacturing
			336120	Heavy Duty Truck Manufacturing
			336211	Motor Vehicle Body Manufacturing
			336212	Truck Trailer Manufacturing
			336213	Motor Home Manufacturing
			336214	Travel Trailer and Camper Manufacturing
			336311	Carburetor, Piston, Ring, and Valve Manufacturing
			336312	Gasoline Engine and Engine Parts Manufacturing
			336321	Vehicular Lighting Equipment Manufacturing
			336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing
			336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
			336340	Motor Vehicle Brake System Manufacturing
			336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
			336360	Motor Vehicle Seating and Interior Trim Manufacturing
			336370	Motor Vehicle Metal Stamping
			336391	Motor Vehicle Air-Conditioning Manufacturing
			336399	All Other Motor Vehicle Parts Manufacturing
			336411	Aircraft Manufacturing
			336412	Aircraft Engine and Engine Parts Manufacturing
			336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
			336414	Guided Missile and Space Vehicle Manufacturing
			336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
			336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
			336510	Railroad Rolling Stock Manufacturing
			336611	Ship Building and Repairing
			336612	Boat Building
			336991	Motorcycle, Bicycle, and Parts Manufacturing
			336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing
			336999	All Other Transportation Equipment Manufacturing
			31-337000 Furniture and Related Product Manufacturing	
			337110	Wood Kitchen Cabinet and Countertop Manufacturing
			337121	Upholstered Household Furniture Manufacturing
			337122	Nonupholstered Wood Household Furniture Manufacturing
			337124	Metal Household Furniture Manufacturing
			337125	Household Furniture (except Wood and Metal) Manufacturing
			337127	Institutional Furniture Manufacturing
			337129	Wood Television, Radio, and Sewing Machine Cabinet Manufacturing
			337211	Wood Office Furniture Manufacturing
			337212	Custom Architectural Woodwork and Millwork Manufacturing
			337214	Office Furniture (except Wood) Manufacturing
			337215	Showcase, Partition, Shelving, and Locker Manufacturing
			337910	Mattress Manufacturing
			337920	Blind and Shade Manufacturing
			31-339000 Miscellaneous Manufacturing	
			339112	Surgical and Medical Instrument Manufacturing
			339113	Surgical Appliance and Supplies Manufacturing
			339114	Dental Equipment and Supplies Manufacturing
			339115	Ophthalmic Goods Manufacturing
			339116	Dental Laboratories
			339911	Jewelry (except Costume) Manufacturing
			339912	Silverware and Hollowware Manufacturing

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TUMF	California EDD	North American Industry Classification System (NAICS) (2007)		
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*
			339913	Jewelers' Material and Lapidary Work Manufacturing
			339914	Costume Jewelry and Novelty Manufacturing
			339920	Sporting and Athletic Goods Manufacturing
			339931	Doll and Stuffed Toy Manufacturing
			339932	Game, Toy, and Children's Vehicle Manufacturing
			339941	Pen and Mechanical Pencil Manufacturing
			339942	Lead Pencil and Art Good Manufacturing
			339943	Marking Device Manufacturing
			339944	Carbon Paper and Inked Ribbon Manufacturing
			339950	Sign Manufacturing
			339991	Gasket, Packing, and Sealing Device Manufacturing
			339992	Musical Instrument Manufacturing
			339993	Fastener, Button, Needle, and Pin Manufacturing
			339994	Broom, Brush, and Mop Manufacturing
			339995	Burial Casket Manufacturing
			339999	All Other Miscellaneous Manufacturing
			41-000000 Wholesale Trade	
			41-423000 Merchant Wholesalers, Durable Goods	
			423110	Automobile and Other Motor Vehicle Merchant Wholesalers
			423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers
			423130	Tire and Tube Merchant Wholesalers
			423140	Motor Vehicle Parts (Used) Merchant Wholesalers
			423210	Furniture Merchant Wholesalers
			423220	Home Furnishing Merchant Wholesalers
			423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers
			423320	Brick, Stone, and Related Construction Material Merchant Wholesalers
			423330	Roofing, Siding, and Insulation Material Merchant Wholesalers
			423390	Other Construction Material Merchant Wholesalers
			423410	Photographic Equipment and Supplies Merchant Wholesalers
			423420	Office Equipment Merchant Wholesalers
			423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers
			423440	Other Commercial Equipment Merchant Wholesalers
			423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers
			423460	Ophthalmic Goods Merchant Wholesalers
			423490	Other Professional Equipment and Supplies Merchant Wholesalers
			423510	Metal Service Centers and Other Metal Merchant Wholesalers
			423520	Coal and Other Mineral and Ore Merchant Wholesalers
			423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers
			423620	Electrical and Electronic Appliance, Television, and Radio Set Merchant Wholesalers
			423690	Other Electronic Parts and Equipment Merchant Wholesalers
			423710	Hardware Merchant Wholesalers
			423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers
			423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers
			423740	Refrigeration Equipment and Supplies Merchant Wholesalers
			423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers
			423820	Farm and Garden Machinery and Equipment Merchant Wholesalers
			423830	Industrial Machinery and Equipment Merchant Wholesalers
			423840	Industrial Supplies Merchant Wholesalers
			423850	Service Establishment Equipment and Supplies Merchant Wholesalers
			423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers
			423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers
			423920	Toy and Hobby Goods and Supplies Merchant Wholesalers
			423930	Recyclable Material Merchant Wholesalers
			423940	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers
			423990	Other Miscellaneous Durable Goods Merchant Wholesalers
			41-424000 Merchant Wholesalers, Nondurable Goods	
			424110	Printing and Writing Paper Merchant Wholesalers
			424120	Stationery and Office Supplies Merchant Wholesalers
			424130	Industrial and Personal Service Paper Merchant Wholesalers
			424210	Drugs and Druggists' Sundries Merchant Wholesalers
			424310	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers
			424320	Men's and Boys' Clothing and Furnishings Merchant Wholesalers
			424330	Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers
			424340	Footwear Merchant Wholesalers
			424410	General Line Grocery Merchant Wholesalers
			424420	Packaged Frozen Food Merchant Wholesalers
			424430	Dairy Product (except Dried or Canned) Merchant Wholesalers
			424440	Poultry and Poultry Product Merchant Wholesalers
			424450	Confectionery Merchant Wholesalers
			424460	Fish and Seafood Merchant Wholesalers
			424470	Meat and Meat Product Merchant Wholesalers
			424480	Fresh Fruit and Vegetable Merchant Wholesalers
			424490	Other Grocery and Related Products Merchant Wholesalers
			424510	Grain and Field Bean Merchant Wholesalers
			424520	Livestock Merchant Wholesalers
			424590	Other Farm Product Raw Material Merchant Wholesalers
			424610	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers
			424690	Other Chemical and Allied Products Merchant Wholesalers
			424710	Petroleum Bulk Stations and Terminals
			424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)
			424810	Beer and Ale Merchant Wholesalers
			424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
			424910	Farm Supplies Merchant Wholesalers
			424920	Book, Periodical, and Newspaper Merchant Wholesalers
			424930	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers
			424940	Tobacco and Tobacco Product Merchant Wholesalers
			424950	Paint, Varnish, and Supplies Merchant Wholesalers
			424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers
			41-425000 Wholesale Electronic Markets and Agents and Brokers	
			425110	Business to Business Electronic Markets
			425120	Wholesale Trade Agents and Brokers
			43-000000 Transportation, Warehousing & Utilities	
			43-221000 Utilities	
			221111	Hydroelectric Power Generation
			221112	Fossil Fuel Electric Power Generation
			221113	Nuclear Electric Power Generation
			221119	Other Electric Power Generation
			221121	Electric Bulk Power Transmission and Control
			221122	Electric Power Distribution
			221210	Natural Gas Distribution
			221310	Water Supply and Irrigation Systems
			221320	Sewage Treatment Facilities

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TUMF	California EDD	North American Industry Classification System (NAICS) (2007)		
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*
			43-481000 Air Transportation	
			221330	Steam and Air-Conditioning Supply
			481111	Scheduled Passenger Air Transportation
			481112	Scheduled Freight Air Transportation
			481211	Nonscheduled Chartered Passenger Air Transportation
			481212	Nonscheduled Chartered Freight Air Transportation
			481219	Other Nonscheduled Air Transportation
			43-482000 Rail Transportation	
			482111	Line-Haul Railroads
			482112	Short Line Railroads
			43-483000 Water Transportation	
			483111	Deep Sea Freight Transportation
			483112	Deep Sea Passenger Transportation
			483113	Coastal and Great Lakes Freight Transportation
			483114	Coastal and Great Lakes Passenger Transportation
			483211	Inland Water Freight Transportation
			483212	Inland Water Passenger Transportation
			43-484000 Truck Transportation	
			484110	General Freight Trucking, Local
			484121	General Freight Trucking, Long-Distance, Truckload
			484122	General Freight Trucking, Long-Distance, Less Than Truckload
			484210	Used Household and Office Goods Moving
			484220	Specialized Freight (except Used Goods) Trucking, Local
			484230	Specialized Freight (except Used Goods) Trucking, Long-Distance
			43-485000 Transit and Ground Passenger Transportation	
			485111	Mixed Mode Transit Systems
			485112	Commuter Rail Systems
			485113	Bus and Other Motor Vehicle Transit Systems
			485119	Other Urban Transit Systems
			485210	Interurban and Rural Bus Transportation
			485310	Taxi Service
			485320	Limousine Service
			485410	School and Employee Bus Transportation
			485510	Charter Bus Industry
			485991	Special Needs Transportation
			485999	All Other Transit and Ground Passenger Transportation
			43-486000 Pipeline Transportation	
			486110	Pipeline Transportation of Crude Oil
			486210	Pipeline Transportation of Natural Gas
			486910	Pipeline Transportation of Refined Petroleum Products
			486990	All Other Pipeline Transportation
			43-487000 Scenic and Sightseeing Transportation	
			487110	Scenic and Sightseeing Transportation, Land
			487210	Scenic and Sightseeing Transportation, Water
			487990	Scenic and Sightseeing Transportation, Other
			43-488000 Support Activities for Transportation	
			488111	Air Traffic Control
			488119	Other Airport Operations
			488190	Other Support Activities for Air Transportation
			488210	Support Activities for Rail Transportation
			488310	Port and Harbor Operations
			488320	Marine Cargo Handling
			488330	Navigation Services to Shipping
			488390	Other Support Activities for Water Transportation
			488410	Motor Vehicle Towing
			488490	Other Support Activities for Road Transportation
			488510	Freight Transportation Arrangement
			488991	Packing and Crating
			488999	All Other Support Activities for Transportation
			43-491000 Postal Service	
			491110	Postal Service
			43-492000 Couriers and Messengers	
			492110	Couriers and Express Delivery Services
			492210	Local Messengers and Local Delivery
			43-493000 Warehousing and Storage	
			493110	General Warehousing and Storage
			493120	Refrigerated Warehousing and Storage
			493130	Farm Product Warehousing and Storage
			493190	Other Warehousing and Storage
Retail			42-000000 Retail Trade	
			42-441000 Motor Vehicle and Parts Dealers	
			441110	New Car Dealers
			441120	Used Car Dealers
			441210	Recreational Vehicle Dealers
			441221	Motorcycle, ATV, and Personal Watercraft Dealers
			441222	Boat Dealers
			441229	All Other Motor Vehicle Dealers
			441310	Automotive Parts and Accessories Stores
			441320	Tire Dealers
			42-442000 Furniture and Home Furnishings Stores	
			442110	Furniture Stores
			442210	Floor Covering Stores
			442291	Window Treatment Stores
			442299	All Other Home Furnishings Stores
			42-443000 Electronics and Appliance Stores	
			443111	Household Appliance Stores
			443112	Radio, Television, and Other Electronics Stores
			443120	Computer and Software Stores
			443130	Camera and Photographic Supplies Stores
			42-444000 Building Material and Garden Equipment and Supplies Dealers	
			444110	Home Centers
			444120	Paint and Wallpaper Stores
			444130	Hardware Stores
			444190	Other Building Material Dealers
			444210	Outdoor Power Equipment Stores
			444220	Nursery, Garden Center, and Farm Supply Stores
			42-445000 Food and Beverage Stores	
			445110	Supermarkets and Other Grocery (except Convenience) Stores
			445120	Convenience Stores
			445210	Meat Markets
			445220	Fish and Seafood Markets

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)					
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*			
Service			445230	Fruit and Vegetable Markets			
			445291	Baked Goods Stores			
			445292	Confectionery and Nut Stores			
			445299	All Other Specialty Food Stores			
			445310	Beer, Wine, and Liquor Stores			
		42-446000 Health and Personal Care Stores		446110	Pharmacies and Drug Stores		
				446120	Cosmetics, Beauty Supplies, and Perfume Stores		
				446130	Optical Goods Stores		
				446191	Food (Health) Supplement Stores		
				446199	All Other Health and Personal Care Stores		
		42-447000 Gasoline Stations		447110	Gasoline Stations with Convenience Stores		
				447190	Other Gasoline Stations		
		42-448000 Clothing and Clothing Accessories Stores		448110	Men's Clothing Stores		
				448120	Women's Clothing Stores		
				448130	Children's and Infants' Clothing Stores		
				448140	Family Clothing Stores		
				448150	Clothing Accessories Stores		
				448190	Other Clothing Stores		
				448210	Shoe Stores		
				448310	Jewelry Stores		
				448320	Luggage and Leather Goods Stores		
				42-451000 Sporting Goods, Hobby, Book, and Music Stores		451110	Sporting Goods Stores
						451120	Hobby, Toy, and Game Stores
						451130	Sewing, Needlework, and Piece Goods Stores
		451140	Musical Instrument and Supplies Stores				
		451211	Book Stores				
		451212	News Dealers and Newsstands				
		451220	Prerecorded Tape, Compact Disc, and Record Stores				
		42-452000 General Merchandise Stores		452111	Department Stores (except Discount Department Stores)		
				452112	Discount Department Stores		
				452910	Warehouse Clubs and Supercenters		
				452990	All Other General Merchandise Stores		
		42-453000 Miscellaneous Store Retailers		453110	Florists		
				453210	Office Supplies and Stationery Stores		
				453220	Gift, Novelty, and Souvenir Stores		
				453310	Used Merchandise Stores		
				453910	Pet and Pet Supplies Stores		
				453920	Art Dealers		
				453930	Manufactured (Mobile) Home Dealers		
				453991	Tobacco Stores		
				453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)		
				42-454000 Nonstore Retailers		454111	Electronic Shopping
		454112	Electronic Auctions				
		454113	Mail-Order Houses				
		454210	Vending Machine Operators				
		454311	Heating Oil Dealers				
		454312	Liquefied Petroleum Gas (Bottled Gas) Dealers				
		454319	Other Fuel Dealers				
		454390	Other Direct Selling Establishments				
		50-000000 Information					
					50-511000 Publishing Industries (except Internet)		
					511110	Newspaper Publishers	
					511120	Periodical Publishers	
511130	Book Publishers						
511140	Directory and Mailing List Publishers						
511191	Greeting Card Publishers						
511199	All Other Publishers						
511210	Software Publishers						
50-512000 Motion Picture and Sound Recording Industries				512110	Motion Picture and Video Production		
				512120	Motion Picture and Video Distribution		
				512131	Motion Picture Theaters (except Drive-Ins)		
				512132	Drive-In Motion Picture Theaters		
				512191	Teleproduction and Other Postproduction Services		
				512199	Other Motion Picture and Video Industries		
				512210	Record Production		
				512220	Integrated Record Production/Distribution		
				512230	Music Publishers		
				512240	Sound Recording Studios		
512290	Other Sound Recording Industries						
50-515000 Broadcasting (except Internet)				515111	Radio Networks		
				515112	Radio Stations		
				515120	Television Broadcasting		
				515210	Cable and Other Subscription Programming		
50-517000 Telecommunications				517110	Wired Telecommunications Carriers		
				517210	Wireless Telecommunications Carriers (except Satellite)		
				517410	Satellite Telecommunications		
				517911	Telecommunications Resellers		
				517919	All Other Telecommunications		
50-518000 Data Processing, Hosting and Related Services				518210	Data Processing, Hosting, and Related Services		
50-519000 other Information Services			50-519000 other Information Services				
			519110	News Syndicates			
			519120	Libraries and Archives			
			519130	Internet Publishing and Broadcasting and Web Search Portals			
			519190	All Other Information Services			
55-000000 Finance Activities							
			55-521000 Monetary Authorities-Central Bank				
		521110	Monetary Authorities - Central Bank				
		55-522000 Credit Intermediation and Related Activities					
		522110	Commercial Banking				
		522120	Savings Institutions				

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)			
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*	
			522130	Credit Unions	
			522190	Other Depository Credit Intermediation	
			522210	Credit Card Issuing	
			522220	Sales Financing	
			522291	Consumer Lending	
			522292	Real Estate Credit	
			522293	International Trade Financing	
			522294	Secondary Market Financing	
			522298	All Other Nondepository Credit Intermediation	
			522310	Mortgage and Nonmortgage Loan Brokers	
			522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities	
			522390	Other Activities Related to Credit Intermediation	
			55-523000 Securities, Commodity Contracts, and Other Financial Investments and Related Activities		
			523110	Investment Banking and Securities Dealing	
			523120	Securities Brokerage	
			523130	Commodity Contracts Dealing	
			523140	Commodity Contracts Brokerage	
			523210	Securities and Commodity Exchanges	
			523910	Miscellaneous Intermediation	
			523920	Portfolio Management	
			523930	Investment Advice	
			523991	Trust, Fiduciary, and Custody Activities	
			523999	Miscellaneous Financial Investment Activities	
			55-524000 Insurance Carriers and Related Activities		
			524113	Direct Life Insurance Carriers	
			524114	Direct Health and Medical Insurance Carriers	
			524126	Direct Property and Casualty Insurance Carriers	
			524127	Direct Title Insurance Carriers	
			524128	Other Direct Insurance (except Life, Health, and Medical) Carriers	
			524130	Reinsurance Carriers	
			524210	Insurance Agencies and Brokerages	
			524291	Claims Adjusting	
			524292	Third Party Administration of Insurance and Pension Funds	
			524298	All Other Insurance Related Activities	
			55-525000 Funds, Trusts, and Other Financial Vehicles		
			525110	Pension Funds	
			525120	Health and Welfare Funds	
			525190	Other Insurance Funds	
			525910	Open-End Investment Funds	
			525920	Trusts, Estates, and Agency Accounts	
			525990	Other Financial Vehicles	
			55-531000 Real Estate		
			531110	Lessors of Residential Buildings and Dwellings	
			531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	
			531130	Lessors of Miniwarehouses and Self-Storage Units	
			531190	Lessors of Other Real Estate Property	
			531210	Offices of Real Estate Agents and Brokers	
			531311	Residential Property Managers	
			531312	Nonresidential Property Managers	
			531320	Offices of Real Estate Appraisers	
			531390	Other Activities Related to Real Estate	
			55-532000 Rental and Leasing Services		
			532111	Passenger Car Rental	
			532112	Passenger Car Leasing	
			532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	
			532210	Consumer Electronics and Appliances Rental	
			532220	Formal Wear and Costume Rental	
			532230	Video Tape and Disc Rental	
			532291	Home Health Equipment Rental	
			532292	Recreational Goods Rental	
			532299	All Other Consumer Goods Rental	
			532310	General Rental Centers	
			532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	
			532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	
			532420	Office Machinery and Equipment Rental and Leasing	
			532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	
			55-533000 Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)		
			533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	
			60-000000 Professional & Business Services		
			60-540000 Professional, Scientific, and Technical Services		
			541110	Offices of Lawyers	
			541120	Offices of Notaries	
			541191	Title Abstract and Settlement Offices	
			541199	All Other Legal Services	
			541211	Offices of Certified Public Accountants	
			541213	Tax Preparation Services	
			541214	Payroll Services	
			541219	Other Accounting Services	
			541310	Architectural Services	
			541320	Landscape Architectural Services	
			541330	Engineering Services	
			541340	Drafting Services	
			541350	Building Inspection Services	
			541360	Geophysical Surveying and Mapping Services	
			541370	Surveying and Mapping (except Geophysical) Services	
			541380	Testing Laboratories	
			541410	Interior Design Services	
			541420	Industrial Design Services	
			541430	Graphic Design Services	
			541490	Other Specialized Design Services	
			541511	Custom Computer Programming Services	
			541512	Computer Systems Design Services	
			541513	Computer Facilities Management Services	
			541519	Other Computer Related Services	
			541611	Administrative Management and General Management Consulting Services	
			541612	Human Resources Consulting Services	
			541613	Marketing Consulting Services	
			541614	Process, Physical Distribution, and Logistics Consulting Services	

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)	
Category	Major Groups	Minor Groups*	Category Description*
			541618 Other Management Consulting Services
			541620 Environmental Consulting Services
			541690 Other Scientific and Technical Consulting Services
			541711 Research and Development in Biotechnology
			541712 Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)
			541720 Research and Development in the Social Sciences and Humanities
			541810 Advertising Agencies
			541820 Public Relations Agencies
			541830 Media Buying Agencies
			541840 Media Representatives
			541850 Display Advertising
			541860 Direct Mail Advertising
			541870 Advertising Material Distribution Services
			541890 Other Services Related to Advertising
			541910 Marketing Research and Public Opinion Polling
			541921 Photography Studios, Portrait
			541922 Commercial Photography
			541930 Translation and Interpretation Services
			541940 Veterinary Services
			541990 All Other Professional, Scientific, and Technical Services
		60-550000 Management of Companies and Enterprises	
			551111 Offices of Bank Holding Companies
			551112 Offices of Other Holding Companies
			551114 Corporate, Subsidiary, and Regional Managing Offices
			60-561000 Administrative and Support Services
			561110 Office Administrative Services
			561210 Facilities Support Services
			561311 Employment Placement Agencies
			561312 Executive Search Services
			561320 Temporary Help Services
			561330 Professional Employer Organizations
			561410 Document Preparation Services
			561421 Telephone Answering Services
			561422 Telemarketing Bureaus and Other Contact Centers
			561431 Private Mail Centers
			561439 Other Business Service Centers (including Copy Shops)
			561440 Collection Agencies
			561450 Credit Bureaus
			561491 Repossession Services
			561492 Court Reporting and Stenotype Services
			561499 All Other Business Support Services
			561510 Travel Agencies
			561520 Tour Operators
			561591 Convention and Visitors Bureaus
			561599 All Other Travel Arrangement and Reservation Services
			561611 Investigation Services
			561612 Security Guards and Patrol Services
			561613 Armored Car Services
			561621 Security Systems Services (except Locksmiths)
			561622 Locksmiths
			561710 Exterminating and Pest Control Services
			561720 Janitorial Services
			561730 Landscaping Services
			561740 Carpet and Upholstery Cleaning Services
			561790 Other Services to Buildings and Dwellings
			561910 Packaging and Labeling Services
			561920 Convention and Trade Show Organizers
			561990 All Other Support Services
		60-562000 Waste Management and Remediation Services	
			562111 Solid Waste Collection
			562112 Hazardous Waste Collection
			562119 Other Waste Collection
			562211 Hazardous Waste Treatment and Disposal
			562212 Solid Waste Landfill
			562213 Solid Waste Combustors and Incinerators
			562219 Other Nonhazardous Waste Treatment and Disposal
			562910 Remediation Services
			562920 Materials Recovery Facilities
			562991 Septic Tank and Related Services
			562998 All Other Miscellaneous Waste Management Services
		65-000000 Educational & Health Services	
		65-610000 Educational Services	
			611110 Elementary and Secondary Schools
			611210 Junior Colleges
			611310 Colleges, Universities, and Professional Schools
			611410 Business and Secretarial Schools
			611420 Computer Training
			611430 Professional and Management Development Training
			611511 Cosmetology and Barber Schools
			611512 Flight Training
			611513 Apprenticeship Training
			611519 Other Technical and Trade Schools
			611610 Fine Arts Schools
			611620 Sports and Recreation Instruction
			611630 Language Schools
			611691 Exam Preparation and Tutoring
			611692 Automobile Driving Schools
			611699 All Other Miscellaneous Schools and Instruction
			611710 Educational Support Services
		65-621000 Ambulatory Health Care Services	
			621111 Offices of Physicians (except Mental Health Specialists)
			621112 Offices of Physicians, Mental Health Specialists
			621210 Offices of Dentists
			621310 Offices of Chiropractors
			621320 Offices of Optometrists
			621330 Offices of Mental Health Practitioners (except Physicians)
			621340 Offices of Physical, Occupational and Speech Therapists, and Audiologists
			621391 Offices of Podiatrists
			621399 Offices of All Other Miscellaneous Health Practitioners

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)		
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*
			621410	Family Planning Centers
			621420	Outpatient Mental Health and Substance Abuse Centers
			621491	HMO Medical Centers
			621492	Kidney Dialysis Centers
			621493	Freestanding Ambulatory Surgical and Emergency Centers
			621498	All Other Outpatient Care Centers
			621511	Medical Laboratories
			621512	Diagnostic Imaging Centers
			621610	Home Health Care Services
			621910	Ambulance Services
			621991	Blood and Organ Banks
			621999	All Other Miscellaneous Ambulatory Health Care Services
			65-622000 Hospitals	
			622110	General Medical and Surgical Hospitals
			622210	Psychiatric and Substance Abuse Hospitals
			622310	Specialty (except Psychiatric and Substance Abuse) Hospitals
			65-623000 Nursing and Residential Care Facilities	
			623110	Nursing Care Facilities
			623210	Residential Mental Retardation Facilities
			623220	Residential Mental Health and Substance Abuse Facilities
			623311	Continuing Care Retirement Communities
			623312	Homes for the Elderly
			623990	Other Residential Care Facilities
			65-624000 Social Assistance	
			624110	Child and Youth Services
			624120	Services for the Elderly and Persons with Disabilities
			624190	Other Individual and Family Services
			624210	Community Food Services
			624221	Temporary Shelters
			624229	Other Community Housing Services
			624230	Emergency and Other Relief Services
			624310	Vocational Rehabilitation Services
			624410	Child Day Care Services
			70-000000 Leisure & Hospitality	
			70-711000 Performing Arts, Spectator Sports, and Related Industries	
			711110	Theater Companies and Dinner Theaters
			711120	Dance Companies
			711130	Musical Groups and Artists
			711190	Other Performing Arts Companies
			711211	Sports Teams and Clubs
			711212	Racetracks
			711219	Other Spectator Sports
			711310	Promoters of Performing Arts, Sports, and Similar Events with Facilities
			711320	Promoters of Performing Arts, Sports, and Similar Events without Facilities
			711410	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
			711510	Independent Artists, Writers, and Performers
			70-712000 Museums, Historical Sites, and Similar Institutions	
			712110	Museums
			712120	Historical Sites
			712130	Zoos and Botanical Gardens
			712190	Nature Parks and Other Similar Institutions
			70-713000 Amusement, Gambling, and Recreation Industries	
			713110	Amusement and Theme Parks
			713120	Amusement Arcades
			713210	Casinos (except Casino Hotels)
			713290	Other Gambling Industries
			713910	Golf Courses and Country Clubs
			713920	Skiing Facilities
			713930	Marinas
			713940	Fitness and Recreational Sports Centers
			713950	Bowling Centers
			713990	All Other Amusement and Recreation Industries
			70-721000 Accommodation	
			721110	Hotels (except Casino Hotels) and Motels
			721120	Casino Hotels
			721191	Bed-and-Breakfast Inns
			721199	All Other Traveler Accommodation
			721211	RV (Recreational Vehicle) Parks and Campgrounds
			721214	Recreational and Vacation Camps (except Campgrounds)
			721310	Rooming and Boarding Houses
			70-722000 Food Services and Drinking Places	
			722110	Full-Service Restaurants
			722211	Limited-Service Restaurants
			722212	Cafeterias, Grill Buffets, and Buffets
			722213	Snack and Nonalcoholic Beverage Bars
			722310	Food Service Contractors
			722320	Caterers
			722330	Mobile Food Services
			722410	Drinking Places (Alcoholic Beverages)
			80 Other Services	
			80-811000 Repair and Maintenance	
			811111	General Automotive Repair
			811112	Automotive Exhaust System Repair
			811113	Automotive Transmission Repair
			811118	Other Automotive Mechanical and Electrical Repair and Maintenance
			811121	Automotive Body, Paint, and Interior Repair and Maintenance
			811122	Automotive Glass Replacement Shops
			811191	Automotive Oil Change and Lubrication Shops
			811192	Car Washes
			811198	All Other Automotive Repair and Maintenance
			811211	Consumer Electronics Repair and Maintenance
			811212	Computer and Office Machine Repair and Maintenance
			811213	Communication Equipment Repair and Maintenance
			811219	Other Electronic and Precision Equipment Repair and Maintenance
			811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance
			811411	Home and Garden Equipment Repair and Maintenance
			811412	Appliance Repair and Maintenance
			811420	Reupholstery and Furniture Repair
			811430	Footwear and Leather Goods Repair
			811490	Other Personal and Household Goods Repair and Maintenance
			80-812000 Personal and Laundry Services	
			812111	Barber Shops

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF	California EDD	North American Industry Classification System (NAICS) (2007)			
Category	Major Groups	Minor Groups*	Category Codes*	Category Description*	
			812112	Beauty Salons	
			812113	Nail Salons	
			812191	Diet and Weight Reducing Centers	
			812199	Other Personal Care Services	
			812210	Funeral Homes and Funeral Services	
			812220	Cemeteries and Crematories	
			812310	Coin-Operated Laundries and Drycleaners	
			812320	Drycleaning and Laundry Services (except Coin-Operated)	
			812331	Linen Supply	
			812332	Industrial Launderers	
			812910	Pet Care (except Veterinary) Services	
			812921	Photofinishing Laboratories (except One-Hour)	
			812922	One-Hour Photofinishing	
			812930	Parking Lots and Garages	
			812990	All Other Personal Services	
			80-813000 Religious, Grantmaking, Civic, Professional, and Similar Organizations		
				813110	Religious Organizations
				813211	Grantmaking Foundations
				813212	Voluntary Health Organizations
				813219	Other Grantmaking and Giving Services
		813311		Human Rights Organizations	
		813312		Environment, Conservation and Wildlife Organizations	
		813319		Other Social Advocacy Organizations	
		813410		Civic and Social Organizations	
		813910		Business Associations	
		813920		Professional Organizations	
		813930		Labor Unions and Similar Labor Organizations	
		813940		Political Organizations	
		813990		Other Similar Organizations (except Business, Professional, Labor, and Political Organizations)	
		80-814000 Private Households			
		814110		Private Households	
Government/Public Sector					
90-000000 Government					
	90-910000 Federal Government				
		919110	Department of Defense		
		912999	Other Federal Government		
	90-920000 State Government				
		921611	State Government Education		
		922999	Other State Government		
	90-930000 Local Government				
		931611	Local Government Education		
		939012	County		
		939022	City		
		939032	Special Districts		
		931150	Indian Tribes		

Note: * The NAICS Minor Groups and Categories are cross-referenced to the EDD Major Industrial Codes which are used as the basis for the CDR forecasts

Sources: Riverside County Center for Demographic Research (CDR)
 California Employment Development Department (EDD)
 US Census Bureau, North American Industry Classification System (NAICS), 2007

Appendix C - Western Riverside County Traffic Growth 2012 – 2040

Existing (2012) and future (2040) traffic data were derived from RivTAM. The model area of coverage, level of roadway network and TAZ detail, and application on other regional transportation study efforts represented RivTAM as the appropriate tool for evaluating traffic growth as part of the Nexus Study.

The forecasts of existing and future congestion levels were derived from the Year 2012 Existing and Year 2040 No-Build scenarios, respectively. The 2012 Existing and 2040 No-Build scenarios were developed using RivTAM to model 2012 and 2040 SED, respectively, as derived from the SCAG 2016 RTP/SCS adopted SED forecasts, on the transportation network as it existed in 2012. The 2012 existing transportation network represents the most recent baseline network developed for RivTAM, and only reflects the inclusion of those projects that were funded, committed and under construction at that time, and therefore imminently to be part of the baseline transportation system in 2012. For the purposes of the TUMF network analysis, additional improvements on the TUMF arterial highway network that were either completed or under construction in the period between 2012 and December 2015 were added to the network to create a 2015 base network. The 2015 base network was subsequently modeled in RivTAM using both 2012 and 2040 SED to provide the 2012 Existing and 2040 No-Build scenarios as the basis for comparison and analysis. The 2040 Baseline scenario did not include transportation improvements that are planned as part of the recently adopted SCAG 2016 RTP/SCS on the basis they are uncommitted (meaning that their implementation is dependent on securing future funding and approval). Inclusion of the uncommitted improvements masks the congestion effects of increasing travel. Inclusion of these improvements and the resultant masking is not appropriate for this particular discussion that is aimed at identifying the effects of increasing travel that would result if improvements are not funded and built.

The WRCOG TUMF study area was extracted from RivTAM for the purpose of calculating the following measures for Western Riverside County only. They quantify traffic growth impacts for each of the two scenarios. They were calculated using the TransCAD platform.

- Total daily vehicle miles of travel (VMT),
- Total daily VMT on facilities experiencing LOS E or worse.
- Total daily vehicle hours of travel (VHT), and
- Total combined daily vehicle hours of delay (VHD)

The following formulas were used to calculate the respective values.

- $VMT = \text{Link Distance} * \text{Total Daily Volume}$
- $VHT = \text{Average Loaded (Congested) Link Travel Time} * \text{Total Daily Volume}$
- $VHD = VHT - (\text{Free-flow (Uncongested) Link Travel Time} * \text{Total Daily Volume})$
- $VMT \text{ LOS E or F} = VMT \text{ (on links where Daily V/C exceeded 0.90)}$

LOS Thresholds for LOS E are based on the 2010 Edition of the Highway Capacity Manual (Transportation Research Board, National Research Council, Washington, D.C.,

2010) LOS Maximum V/C Criteria for Multilane Highways with 45 mph Free Flow Speed (Exhibit 14-5, Chapter 14, Page 14-5).

RivTAM breaks down its roadway network into functional categories called assignment groups. The measures were calculated selectively for all facilities, freeways only, arterials only, and TUMF arterials only by including and excluding different assignment groups and facilities. For the calculation of measures on “all facilities”, only the centroid connectors were excluded. Arterial values excluded all mixed-flow to carpool lane connector ramps, freeways, carpool lanes, centroid connectors, and freeway-to-freeway connector ramps, respectively. Freeways were defined as including mixed-flow to carpool lane connector ramps, freeways, carpool lanes, and freeway-to-freeway connector ramps, respectively.

The 2015 Existing Network by Facility Type is included in this Appendix as **Exhibit C-1**. The 2015 baseline network was used as the basis for the 2012 Existing and 2040 No-Build scenarios by modeling 2012 and 2040 SED, respectively, on the 2015 baseline network using RivTAM to determine the comparative effects of population, household and employment growth in the region. The results of the analysis of existing and future congestion levels are presented for peak periods in **Exhibit C-2** and for daily in **Exhibit C-3** in this Appendix, and extracted for the combined peak periods in **Table 3.1** of the study report.

EXHIBIT C-1

The following page contains:

***Western Riverside County 2015 Existing Network
Facility Type***

Source: Riverside County Travel Demand Model (RivTAM); WSP, September 2016

EXHIBIT C-1 Western Riverside County 2015 Existing Network Facility Type



LEGEND

TUMF ZONE

NORTH WEST

CENTRAL

PASS

SOUTHWEST

HEMET/SAN JACINTO

Existing Facility Type

TUMF Arterials

NonTUMF Arterials

Freeways

0369

Miles

Source: Riverside County Travel Demand Model (RivTAM); WSP, September 2016

EXHIBIT C-2

Western Riverside County Regional Highway System Measures of Performance (2012 - 2040) – Peak Periods

Measures of Performance	AM Peak				PM Peak			
	2012	2040	% Change	% Annual	2012	2040	% Change	% Annual
VMT - Total ALL FACILITIES	7,306,742	11,024,243	51%	1.5%	12,225,695	18,253,343	49%	1.4%
VMT - FREEWAYS	4,180,726	5,635,113	35%	1.1%	6,838,429	8,852,457	29%	0.9%
VMT - ALL ARTERIALS	3,126,016	5,389,131	72%	2.0%	5,387,266	9,400,886	75%	2.0%
TOTAL - TUMF ARTERIAL VMT	2,065,074	3,368,075	63%	1.8%	3,520,128	5,721,420	63%	1.7%
VHT - TOTAL ALL FACILITIES	202,230	481,173	138%	3.1%	372,923	880,734	136%	3.1%
VHT - FREEWAYS	103,759	275,588	166%	3.6%	192,783	460,844	139%	3.2%
VHT - ALL ARTERIALS	98,471	205,585	109%	2.7%	180,140	419,890	133%	3.1%
TOTAL TUMF ARTERIAL VHT	63,867	130,423	104%	2.6%	117,283	266,558	127%	3.0%
VHD - TOTAL ALL FACILITIES	53,453	248,942	366%	5.6%	122,312	490,133	301%	5.1%
VHD - FREEWAYS	35,667	184,464	417%	6.0%	81,763	318,085	289%	5.0%
VHD - ALL ARTERIALS	17,785	64,478	263%	4.7%	40,549	172,049	324%	5.3%
TOTAL TUMF ARTERIAL VHD	13,614	47,533	249%	4.6%	31,465	125,411	299%	5.1%
VMT LOS E & F - TOTAL ALL FACILITIES	1,900,172	5,417,106	185%	3.8%	4,288,472	11,549,886	169%	3.6%
VMT LOS E & F - FREEWAYS	1,482,175	3,355,002	126%	3.0%	3,050,528	6,801,361	123%	2.9%
VMT LOS E & F - ALL ARTERIALS	417,997	2,062,104	393%	5.9%	1,237,944	4,748,525	284%	4.9%
TOTAL TUMF ARTERIAL VMT w/ LOS E & F	417,997	1,629,995	290%	5.0%	1,044,065	3,530,916	238%	4.4%
% of TUMF ARTERIAL VMT w/ LOS E & F	20%	48%			30%	62%		

* Based on RivTAM 2012 network provided by Riverside County Transportation Department and SCAG 2016 RTP/SCS SED with updated 2015 arterial network completed by WSP, September 2016.

NOTES:

Volume is adjusted by PCE factor

VMT = vehicle miles of travel (the total combined distance that all vehicles travel on the system)

VHT = vehicle hours of travel (the total combined time that all vehicles are traveling on the system)

VHD = vehicle hours of delay (the total combined time that all vehicles have been delayed on the system based on the difference between forecast travel time and free-flow (ideal) travel time)

LOS = level of service (based on forecast volume to capacity ratios).

LOS E or Worse was determined by V/C ratio that exceeds 0.9 thresholds as indicated in the Riverside County General Plan.

EXHIBIT C-3

Western Riverside County Regional Highway System Measures of Performance (2012 - 2040) – Daily

Measures of Performance	Peak Periods (Total)				Daily			
	2012	2040	% Change	% Annual	2012	2040	% Change	% Annual
VMT - Total ALL FACILITIES	19,532,437	29,277,587	50%	1.5%	36,844,082	56,574,656	54%	1.5%
VMT - FREEWAYS	11,019,155	14,487,570	31%	1.0%	21,798,155	30,678,958	41%	1.2%
VMT - ALL ARTERIALS	8,513,282	14,790,016	74%	2.0%	15,045,927	25,895,698	72%	2.0%
TOTAL - TUMF ARTERIAL VMT	5,585,202	9,089,495	63%	1.8%	10,059,547	16,515,642	64%	1.8%
VHT - TOTAL ALL FACILITIES	575,154	1,361,907	137%	3.1%	960,796	2,041,274	112%	2.7%
VHT - FREEWAYS	296,542	736,433	148%	3.3%	499,878	1,080,885	116%	2.8%
VHT - ALL ARTERIALS	278,611	625,474	124%	2.9%	460,918	960,389	108%	2.7%
TOTAL TUMF ARTERIAL VHT	181,151	396,981	119%	2.8%	300,687	615,063	105%	2.6%
VHD - TOTAL ALL FACILITIES	175,765	739,075	320%	5.3%	220,220	874,416	297%	5.0%
VHD - FREEWAYS	117,430	502,549	328%	5.3%	145,355	586,280	303%	5.1%
VHD - ALL ARTERIALS	58,334	236,527	305%	5.1%	74,865	288,136	285%	4.9%
TOTAL TUMF ARTERIAL VHD	45,080	172,944	284%	4.9%	58,011	213,444	268%	4.8%
VMT LOS E - TOTAL ALL FACILITIES	6,188,644	16,966,992	174%	3.7%	6,603,680	20,091,019	204%	4.1%
VMT LOS E - FREEWAYS	4,532,703	10,156,363	124%	2.9%	4,851,655	12,125,801	150%	3.3%
VMT LOS E & F - ALL ARTERIALS	1,655,941	6,810,629	311%	5.2%	1,752,025	7,965,218	355%	5.6%
TOTAL TUMF ARTERIAL VMT w/ LOS E or worse	1,462,061	5,160,911	253%	4.6%	1,531,839	6,174,115	303%	5.1%
% of TUMF ARTERIAL VMT w/ LOS E or worse	26%	57%			15%	37%		

* Based on RivTAM 2012 network provided by Riverside County Transportation Department and SCAG 2016 RTP/SCS SED with updated 2015 arterial network completed by WSP, September 2016.

NOTES:

Volume is adjusted by PCE factor

VMT = vehicle miles of travel (the total combined distance that all vehicles travel on the system)

VHT = vehicle hours of travel (the total combined time that all vehicles are traveling on the system)

VHD = vehicle hours of delay (the total combined time that all vehicles have been delayed on the system based on the difference between forecast travel time and free-flow (ideal) travel time)

LOS = level of service (based on forecast volume to capacity ratios).

LOS E or Worse was determined by V/C ratio that exceeds 0.9 thresholds as indicated in the Riverside County General Plan.

Appendix D - Western Riverside County Transit System Ridership 2008 – 2035

Daily transit trip forecasts were derived from the RTA Comprehensive Operational Analysis (RTA, January 2015). Weekday projected system ridership for 2015 and 2025, as presented in Table 7 of the RTA Comprehensive Operational Analysis Executive Summary, were interpolated to 2012 and 2040 to represent existing and future regional bus transit trips consistent with the analysis of highway trips described in **Section 3.1** and **Appendix C**. **Table D-1** summarizes the weekday projected system ridership for RTA for 2012 and 2040 based on the interpolation of the 2015 and 2025 forecasts. The RTA Comprehensive Operational Analysis Executive Summary (January 2015), including Table 7 which provided the basis for **Table D-1** follows in this section.

TABLE D-1 - Regional Transit Weekday Projected System Ridership

Year	Western Riverside Weekday Projected System Ridership
2012	26,773
2015	31,016
2025	46,572
2040	67,785

Notes: 2012 and 2040 weekday system ridership interpolated based on RTA 2015 and 2025 Weekday Projected System Ridership

* Source: RTA, Comprehensive Operational Analysis Executive Summary (January 2015), Table 7

EXHIBIT D-1

The following pages contain:

***RTA Comprehensive Operational Analysis Executive Summary, Riverside Transit Agency,
January 2015***



Comprehensive Operational Analysis

EXECUTIVE SUMMARY
JANUARY 2015

PREPARED BY:



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Introduction

Over the past two years, a Comprehensive Operational Analysis (COA) study was conducted for the Riverside Transit Agency (RTA) transit network. The study, conducted by Transportation Management and Design Inc., was warranted by changes in ridership, development, population and job patterns, and service performance. The COA reviewed the broader network structure and route-specific performance to provide RTA with a comprehensive understanding of their market conditions and service performance. The findings led to the development of a phased set of recommendations designed to build upon the network's market opportunities and performance strengths, to maximize ridership, and to improve the overall passenger experience and the system's financial sustainability. The recommendations are based on analytical findings of existing and future market conditions, service performance, and feedback from RTA passengers and key stakeholders. The Ten-Year Transit Network Plan, approved by the Board of Directors, is intended for use by RTA staff to help guide service planning decision-making over the next decade.

Goals and Focus

The primary goal of the Ten-Year Transit Network Plan is to develop a plan that will enhance the efficiency and effectiveness of RTA's existing transit services while responding to the changing demands for transit throughout the service area. As the population grows and demographics shift, it is important to reshape transit service to respond to new and changing transit demands. It is also critical that RTA implement improvements in a financially sustainable manner. The plan maximizes the performance of existing services while responding to additional community mobility needs. The focus of the recommendations is to enhance service on strong routes to increase system ridership and generate more fare revenue, in addition to maintaining appropriate transit service in lower potential ridership areas. Most importantly, the recommendations respond to key issues identified by passengers and the community to create a system that is more attractive to riders.

Study Process

The COA study began in January 2013 with an extensive data collection effort. A comprehensive ridecheck was conducted to gather passenger activity, travel time, and on-time performance information on all fixed-route trips operated by RTA. In addition, over 12,000 passenger surveys were collected during the ridecheck, providing valuable information on the demographics and preferences of RTA's riders. A survey was also distributed to over 3,000 community members to gain insight into community travel patterns and opportunities for attracting new riders to RTA. Public outreach events

COMPREHENSIVE OPERATIONAL ANALYSIS OF THE RIVERSIDE TRANSIT AGENCY

were held at community centers, college campuses, and major transfer hubs to gain feedback from the public on the improvements they would like to see in RTA's transit services.

The findings from the data collection and public outreach efforts provided the key inputs for an analysis of market and performance trends. This analysis was the basis of the Market Assessment and Service Evaluation reports which each identified key findings and strategies to improve RTA's transit network. These findings and strategies were used to develop the service recommendations in the Draft Ten-Year Transit Network Plan. With approval from the RTA Board of Directors, the Draft Ten-Year Transit Network Plan was presented to the public and key stakeholders in a second round of public outreach, in order to gather feedback on the proposed changes. Comments received were incorporated into the recommendations presented in the Final Ten-Year Transit Network Plan.

FIGURE 1: STUDY TIMELINE



Existing Conditions

The Market Assessment and Service Evaluation reports detail the existing conditions in RTA's service area. The findings from these documents helped the development of the guiding principles and the framework for the final recommendations. Other factors influencing the service recommendations are the community and rider survey data and the Service Standards report. Community and rider input provide insight into their priorities and concerns while the Service Standards define performance targets for transit services.

Market Assessment Key Findings

The Market Assessment utilizes key demographic data to evaluate the market demand for transit and to help identify opportunities for increasing transit ridership and meeting unmet mobility needs.

Findings from the Market Assessment include the following:

- The geography of RTA's 2,500 square mile service area is characterized by a mix of urban and suburban communities, separated by large gaps of mostly undeveloped, rural land.
- The core market for transit is located in communities with favorable market conditions that include higher population and employment densities and a more pedestrian and transit-friendly grid-like street network.
- Most developed areas are suburban in configuration with street networks that limit the potential success of transit.
- Future population and employment projects foresee higher densities throughout the service area, but most development is expected to still be suburban in nature. Transit success will depend on whether communities shift towards more sustainable transit-oriented development.
- The top three regional private vehicle demand pairs will remain the same from 2007 to 2035: Riverside/Corona, Temecula-Murrieta/Lake Elsinore, and Corona/West San Bernardino County.

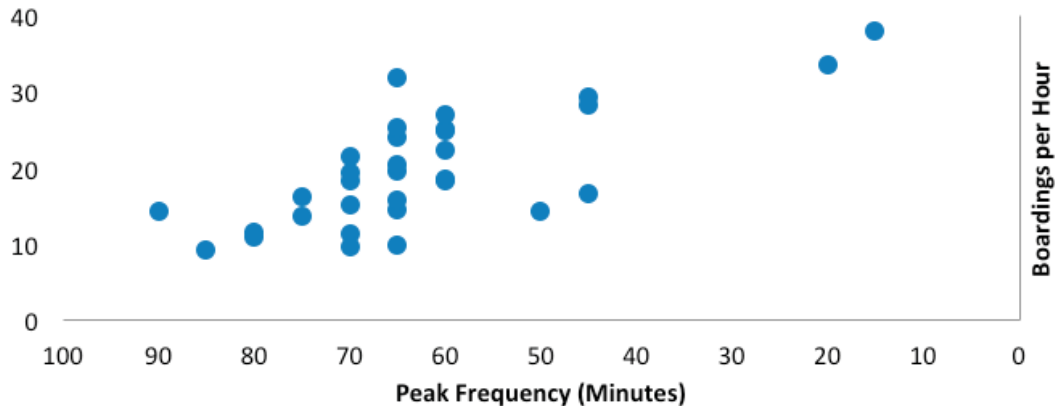
Service Evaluation Key Findings

The Service Evaluation provides an analysis of the system's fixed-route performance, highlighting strengths in the system and opportunities for improvement. It examines route-by-route ridership, service efficiency, cost effectiveness, on-time performance, and service levels.

Findings from the Service Evaluation include:

- Each sub-area is composed of various market conditions resulting in different mobility needs and wide ranges in service performance.
- RTA service performs stronger in urban areas with stronger markets for transit, particularly linear corridors with a mix of higher density land uses. Service in areas with higher densities yields more passengers per hour invested.
- The concentration of ridership on just a few routes presents significant opportunities for improvement. One route (Route 1) carries one-quarter of system boardings. This route and the next four highest ridership routes together account for half of total system ridership.
- More direct routes are more productive than routes with circuitous alignments or multiple deviations – customers are less attracted to ride indirect or complex routes, and such routes require additional resources to operate.
- Customer feedback indicates a strong demand for higher service frequencies, suggesting that this, more than any other factor, limits the success of the overall network. Figure 2 shows that in general, routes with higher frequencies are more productive than routes with lower frequencies.

FIGURE 2: SERVICE EVALUATION KEY FINDINGS



Community Input Key Findings

At the beginning of the project, a considerable public outreach effort was conducted to gain an understanding of what service improvements RTA riders and the community would like to see. Public outreach events included public open houses, rider drop-in sessions at college campuses and major transfer hubs, and driver drop-in sessions at RTA facilities. At these events, participants shared their priorities for service investment. In addition to these outreach events, the project team also collected and analyzed surveys from over 12,000 riders.

Findings from public outreach found that:

- Reducing out-of-vehicle wait time, both by increasing frequency and improving transfer connections, is the most important service improvement for riders.
- RTA's ridership is largely dependent on transit for their mobility needs.
- College and high school students comprise nearly 50 percent of the system ridership base.
- The primary reasons people do not use RTA services is because the bus takes too long to get them where they need to go and service is not frequent enough.

FIGURE 3: STAKEHOLDER DROP-IN SESSION



Service Standards Key Findings

Service standards were updated to guide RTA in ensuring that its service meets the expectations of passengers while being cost-effective and equitable (non-discriminatory) in the provision of service. The document established benchmarks to inform decision-making on both existing and future services.

Key components of the Service Standards include the following:

- A population and employment density of over 15 people/jobs per acre (9,600 per square mile) is necessary for transit service to play a meaningful role in all-day public mobility (live-work-play) and to support service that will perform at system average. Areas with densities below this minimum threshold are not as supportive of fixed-route service.
- Routes that do not meet two or more performance standards are considered low-performing and are candidates for internal review.
- The implementation of additional service hours or frequency improvements should adhere to the updated RTA service standards. Before increasing frequency, services should be evaluated to make sure they will be able to generate enough ridership to meet or exceed “average” service performance.
- A “Sunset Clause” is proposed whereby if a new route fails to meet minimum service standards after a two year trial period, including any remedial action to improve performance, it should be discontinued.

Framework and Guiding Principles

The findings from the Market Assessment, Service Evaluation, and community input informed the development of Guiding Principles, which served as the framework for service recommendations.

Guiding Principles

Increase Transit Use as a Travel Mode

- Enhance the customer experience to attract new choice riders and encourage existing riders to use transit for more trip purposes.
- Create an all-day, all-week transit network with streamlined route alignments and higher service frequency to attract riders to the system.

Build a Market-Based Network

- Varying market conditions indicate that each sub-area will warrant different types and levels of service investment.
- Service should be tailored to meet specific mobility needs and market opportunities of each sub-area to ensure the efficient and effective use of available resources.
- Service investment should be focused in areas where transit is most competitive to ensure the success of the network – transit-oriented, high-density areas with a mix of land uses and walkable street network.

Deliver an Efficient and Effective Service

- Efficient service maximizes the amount of time a vehicle is in service and generating revenue, limiting the amount of layover and recovery time.
- Effectiveness is related to productivity and seeks to maximize the ridership generated per resource.
- Create linear and direct route alignments that minimize out-of-direction service.
- Aim to operate routes with as few resources as possible while maintaining the desired route frequency.

Promote Financial Sustainability

- Focus on network service improvements that will yield a high return on investment.
- Improve routes that are already successful to generate more ridership and fare revenue for RTA.
- Adhere to performance standards to ensure financial sustainability is maintained into the future.

Service Design Strategies Informed by Guiding Principles

Improve Service Frequencies

- Improve frequencies of strongest routes to operate every 15 or 30 minutes.
- Reduce the number of routes that operate every 65 to 90 minutes.
- Create clock-face frequencies to make schedules that are consistent and easy to remember.

Streamline Route Alignments

- Reduce out-of-direction deviations to reduce travel time and operating costs.

Create a Network

- Improve transfer opportunities to facilitate travel throughout the network.
- Provide more travel options for customers by extending service spans and adding weekend service.
- Give each route a unique role in the network by reducing route duplication.
- Enhance regional connections.

Service Recommendations

Recommendations Approach

The development of the initial draft service recommendations took into consideration the findings from the Market Assessment and Service Evaluation, as well as feedback from the on-board survey, community survey, and initial public and driver outreach process, and the design guidelines laid out by the Guiding Principles. Recommendations balanced data-driven findings with community and stakeholder input to maintain required network coverage while improving service on high performance routes, maximizing system ridership.

After the development of draft recommendations, the project team conducted a round of public and driver outreach between August and October 2014 that sought feedback on the proposed draft Ten-Year Transit Network Plan. During the public comment period, over 600 people attended 40 public outreach events. At the close of the public comment period, the project team reviewed over 400 comments received on the proposed changes and updated the final plan to reflect rider concerns.

Service Tiers

Frequent Key Corridor

Frequent key corridor routes form the core spine of the network and provide “lifestyle” transit options for riders. They have the highest ridership and performance in the system and will operate every 15 minutes or better in high-density areas.

Supporting Local

Supporting local routes constitute the majority of the route network, providing connections to key employment centers, activity centers, and transfer hubs.

Regional Connectors

Regional connectors are longer distance routes that connect multiple urban centers separated by geographic gaps in density. As their name suggests, these routes provide network connectivity between dispersed activity centers and between high and low-density areas across the RTA service area.

Community Feeders

Community feeders are shorter distance routes that connect key destinations within a community. Their short distance often allows them to operate at high frequency with few resources.

CommuterLink

CommuterLink routes are long-distance, peak-hour express services that provide both inter and intra-county connections. They connect commuters directly with major employment centers or indirectly through connections at major multi-modal bus and rail hubs.

FIGURE 4: MAP OF PROPOSED RTA NETWORK

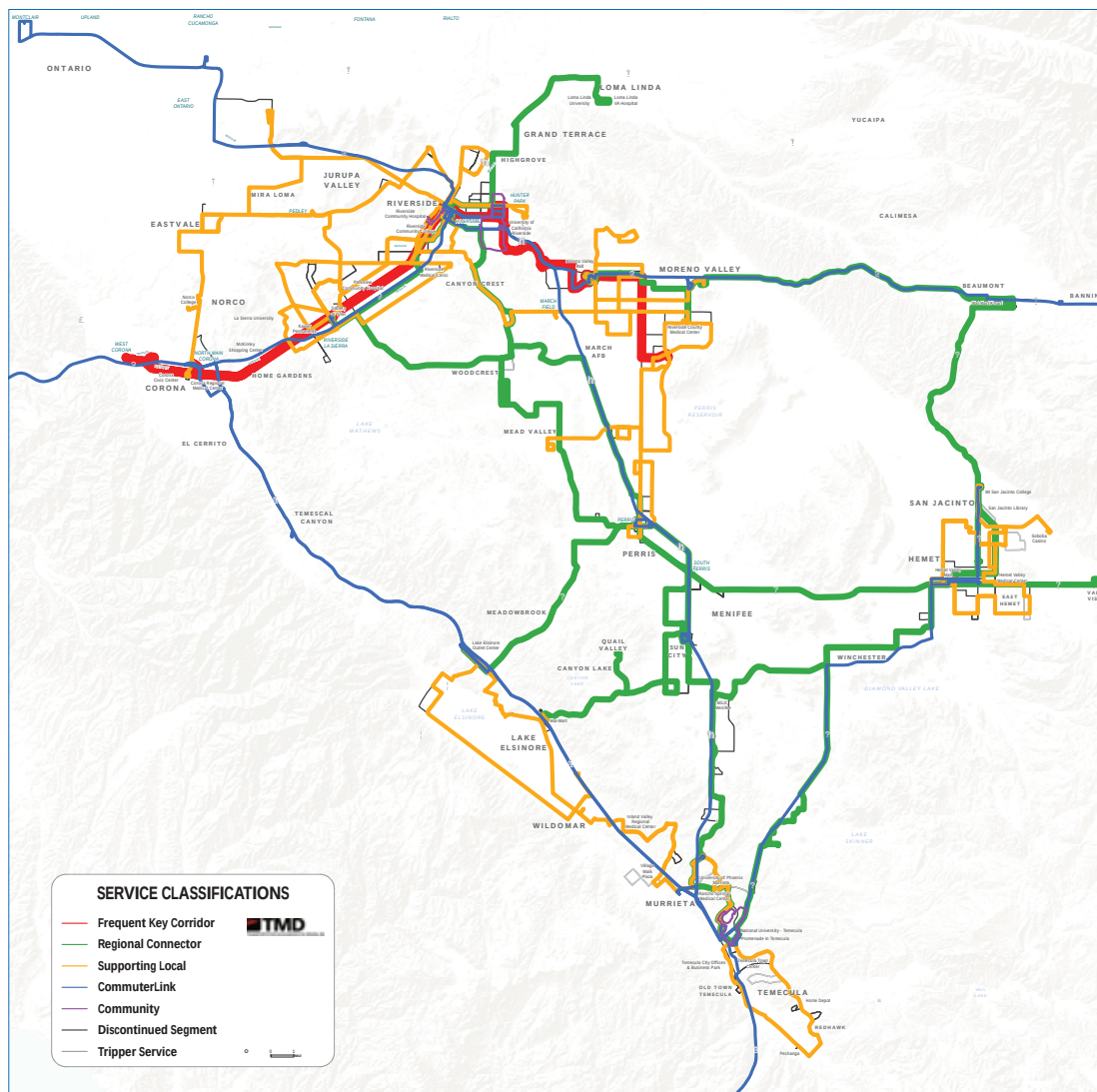


TABLE 1: SERVICE TIERS AND ROUTES

Service Tier	Routes
FREQUENT KEY CORRIDOR	RapidLink, 1, 16
SUPPORTING LOCAL	3, 8, 10, 11, 12, 13, 15, 18, 20, 21, 23, 24, 29, 30, 32, 41, 42, 49
REGIONAL CONNECTOR	14, 22, 27, new 28, 31, 35, 61, 74, 79
COMMUNITY FEEDER	50, 51, 55
COMMUTERLINK	202, 204, 206, 208, 210, 212, 216, 217, new 200, new 205

Recommendation Details by Plan Phase

The service recommendations are divided into four implementation phases spread over the next ten years. Phasing of improvements is necessary given vehicle, facility, financial, and administrative constraints. The phases were determined using a variety of factors including vehicle and facility availability, geographic coverage, complexity of implementation, and the number of riders who would benefit from improvements. Each phase includes a two to three year implementation period, allowing some flexibility in the exact timing of each service improvement. Improvements that must occur together to maintain service coverage of a particular area are grouped together.

Top priorities are identified as those improvements that are likely to benefit the most riders and generate the most additional ridership and fare revenue. Keeping in line with the Guiding Principles, RTA should invest in service that is most likely to succeed. Top priorities focus on improving frequency or spans on key routes or making alignment changes that are likely to greatly increase the productivity of a route. The revenue generated from these top priority service improvements can be used to help offset the cost of lower priority improvements. Lower priority improvements are those that help complete an all-day all-week network and provide service access to under-served areas but are not expected to meet service performance standards.

TABLE 2: IMMEDIATE-TERM SERVICE IMPROVEMENTS

Immediate-Term (FY 2015 – FY 2016)					
PRIORITY	ROUTE	DESCRIPTION OF CHANGE	PEAK FREQUENCY		
			WEEKDAY	SATURDAY	SUNDAY
FULLY-FUNDED SERVICE IMPROVEMENTS					
--	1	Increased all-week frequencies and evening spans	15	30	30
--	3	Streamlined alignment, increased frequencies, new Sunday service, later evening spans	30	60	60
--	15	Increased all-week frequencies and evening spans	30	45	45
--	16	Increased weekend frequencies and evening spans	30	30	30
--	19	Increased all-week frequencies and evening spans	30	30	30
--	20	Increased weekday frequencies and evening span	45	60	60
--	22	Increased weekend frequencies and weeknight span	60	60	60
--	27	Increased weekend frequencies and weeknight span	60	60	60
--	29	Improved weekday frequencies	60	70	70
--	49	Improved weekday frequencies	50	70	70
--	74	Improved all-week frequencies, weekday spans, and new alignment between Sun City and Perris	60	60	60
--	206	New stop at Tom’s Farms in Temescal Valley and Dos Lagos in Corona	19 trips	--	--
COST-NEUTRAL SERVICE IMPROVEMENTS					
--	11	Small alignment change, bus stop rationalization	60	60	60
PRIORITIZED SERVICE IMPROVEMENTS BASED ON ADDITIONAL FUNDING					
1	216	Alignment extension to UC Riverside	18 trips	8 trips	8 trips
2	206	Split all trips to Lake Elsinore and Temecula	19 trips	--	--

Immediate-Term (FY 2015 – FY 2016)

Changes in the immediate-term focus on RTA implementing frequency enhancements on high ridership routes. Evening spans are also extended on key routes to accommodate late-night work shifts and college classes. Some proposed alignment changes that can be completed without requiring additional new buses are included in this phase.

COMPREHENSIVE OPERATIONAL ANALYSIS OF THE RIVERSIDE TRANSIT AGENCY

TABLE 3: SHORT-TERM SERVICE IMPROVEMENTS

Short-Term (FY 2017 – FY 2019)					
PRIORITY	ROUTE	DESCRIPTION OF CHANGE	PEAK FREQUENCY		
			WEEKDAY	SATURDAY	SUNDAY
FULLY-FUNDED SERVICE IMPROVEMENTS					
--	Rapid Link	New peak-only service serving key destinations on Route 1 corridor	15	--	--
--	200	New service on SR-91 express lanes connecting Riverside and Anaheim	6 trips	--	--
--	205	New service on SR-91 express lanes connecting Temecula and Anaheim	4 trips	--	--
COST-NEUTRAL SERVICE IMPROVEMENTS					
--	24	New Temecula community circulator, improved all-week frequencies	60	60	60
--	30	Streamlined alignment in Perris	60	60	--
--	31	Streamlined alignment at Beaumont/Banning and Hemet	60	60	60
--	32	Restructured and combined with Route 33 for improved service in Hemet/San Jacinto	60	60	--
--	35	Streamlined alignment at Beaumont/Banning	65	--	--
--	204	Revise route to omit Country Village Park and Ride	18 trips	--	--
PRIORITIZED SERVICE IMPROVEMENTS BASED ON ADDITIONAL FUNDING					
1	16	New frequent service combining Routes 16 and 19, UC Riverside to MVC to Perris, extended weeknight spans	15/30	30	30
	18	Restructured alignment for new service on Cottonwood Ave	60	60	60
2	8	New community circulator with resources from Routes 7 and 8	45	45	45
	23	Restructured alignment extended to Wildomar, improved all-week frequencies	60	60	60
3	27	Split into two routes (see Route 28), Route 27 continues to operate from Perris to Riverside on original Route 27 alignment	60	60	60
	28	New service operating on eastern half of original Route 27, Perris – Hemet	30	60	60
4	15	Improved weekend frequencies, shortened alignments	30	30	30
	12	Restructured alignment, improved weekday frequencies	60	60	60
	13	Restructured alignment, improved weekday frequencies	60	60	60
	21	Extended alignment to La Sierra Metrolink Station; resources come from use of fewer buses on Routes 12 and 15	60	60	60
5	79	Extended alignment to MSJC for improved frequencies in Hemet/San Jacinto; Route 24 covers Old Town Temecula	60	60	--
6	61	Extended alignment to connect Temecula to Perris	60	60	--
7	10	Shortened alignment from Galleria at Tyler to downtown Riverside, improved week-day 6requencies	60	60	60
8	14	Modified alignment, improved weekday frequencies	60	60	60
9	217	Two additional trips (1 AM, 1 PM)	19 trips	--	--
10	206	Two additional trips (1 AM, 1 PM)	21 trips	--	--
11	208	Two additional trips (1 AM, 1 PM)	21 trips	--	--
12	New	Alessandro Perris Valley Line Metrolink Shuttle	Peak	--	--
13	51	Improve frequency to 15 minutes and add Metrolink connection	15	--	--

Short-Term (FY 2017 – FY 2019)

The short-term route improvements will have the most significant impact on the structure of the RTA network. In this phase, alignments are restructured on over 15 routes, five new services are introduced, and three routes are consolidated with other services. Significant alignment changes on multiple interacting routes occur together to minimize the loss of service coverage on any one route segment. Frequency improvements mostly come from new streamlined route alignments with shorter travel times. Some of these changes must wait on the delivery of new buses.

TABLE 4: MID-TERM SERVICE IMPROVEMENTS

Mid-Term (FY 2020 – FY 2022)					
PRIORITY	ROUTE	DESCRIPTION OF CHANGE	PEAK FREQUENCY		
			WEEKDAY	SATURDAY	SUNDAY
PRIORITIZED SERVICE IMPROVEMENTS					
1	1	Improved all-week frequencies	30	60	60
2	20	Improved weekday frequencies	21 trips	--	--
3	217	Two additional trips (1 AM, 1 PM)	23 trips	--	--
4	206	Two additional trips (1 AM, 1 PM)	23 trips	--	--
5	208	Two additional trips (1 AM, 1 PM)	60	60	60
6	42	Add Sunday service, improved all-week frequencies	60	60	60
7	30	Add Sunday service	60	60	60
8	61	Add Sunday service	60	60	60
9	74	Add Sunday service	60	60	60
10	79	Add Sunday service	60	60	60
11	35	Add weekend service	30	45	45
12	49	Improved all-week frequencies	60	60	60
13	29	Improved weekend frequencies	60	--	--
14	40	Improved weekday frequencies	17 trips	--	--
15	212	Two additional trips (1 AM, 1 PM)	60	--	--
16	New	Bundy Canyon Rd to MSJC	30	60	60

Mid-Term (FY 2020 – FY 2022)

Route changes in the mid-term focus on increasing trip options for riders and creating a more robust all-week network. Sunday or weekend service is added on six routes to give riders the option of using transit every day of the week. Frequencies are improved on key routes to provide additional trip options for riders.

TABLE 5: LONG-TERM SERVICE IMPROVEMENTS

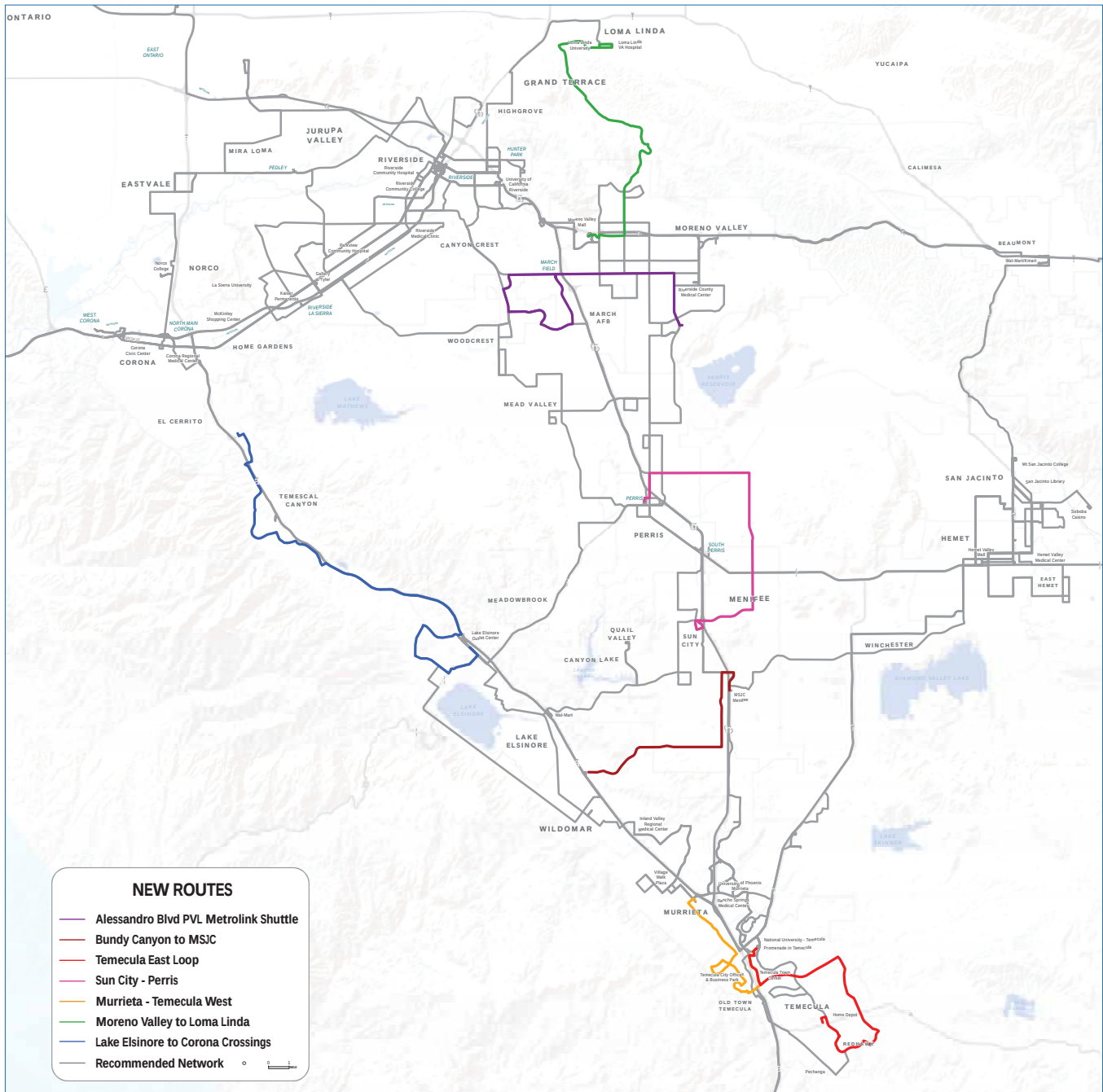
Long-Term (FY 2023 – FY 2025)					
PRIORITY	ROUTE	DESCRIPTION OF CHANGE	PEAK FREQUENCY		
			WEEKDAY	SATURDAY	SUNDAY
PRIORITIZED SERVICE IMPROVEMENTS					
1	15	Improved weekday frequencies	15	30	30
2	16	Improved weekday frequencies from MVC to Perris	15	30	30
3	RapidLink	Add midday service	15	--	--
4	16	Improved weekend frequencies	15	15	15
5	217	Improved weekday frequency and all-day service	60	--	--
6	216	Improved weekday frequency and all-day service	60	--	--
7	206	Improved weekday frequency and all-day service	60	--	--
8	208	Improved weekday frequency and all-day service	60	--	--
9	204	Improved weekday frequency and all-day service	60	--	--
10	40	Add weekend service	60	60	60
11	217	Add all-day weekend service	60	60	60
12	216	Add all-day weekend service	60	60	60
13	206	Add all-day weekend service	60	60	60
14	208	Add all-day weekend service	60	60	60
15	204	Add all-day weekend service	60	60	60
16	New	Menifee to Perris via Nuevo Rd	60	--	--
17	New	Moreno Valley to Loma Linda	60	--	--
18	New	Murrieta-Temecula West	60	--	--
19	New	Temecula East	60	--	--
20	New	Lake Elsinore to Corona Crossings	60	--	--
21	61	Improved weekday frequencies	30	60	60

Long-Term (FY 2023 – FY 2025)

Long-term improvements further increase the number of trip options available to riders by increasing service frequencies on key routes, adding midday service to six peak-only routes, adding weekend service to six routes, and introducing five new routes to increase RTA's geographic coverage.

COMPREHENSIVE OPERATIONAL ANALYSIS OF THE RIVERSIDE TRANSIT AGENCY

FIGURE 5: MAP OF NEW RTA ROUTES



Customer Impacts and Benefits

A majority of RTA customers will experience a positive impact from the recommendations, including reduced wait times, shorter travel times, and more frequent service options. These improvements will also generate additional use by existing customers and attract new customers to begin using the system. A small number of customers currently using low-ridership routes or low-ridership deviations recommended for realignment will experience a loss of service or longer walks.

Frequency

Service frequencies are improved on almost every local route, improving the experience for 35 percent of current weekday riders. One in three weekday riders will use service that has a frequency of 15 minutes or better and one in two riders on weekdays will use a service that has a frequency of 30 minutes or better.

Service Span

Evening service spans were expanded on key routes to accommodate late-night work shifts and college classes. Extended service will provide riders with more travel options and increase ridership by attracting those riders requiring later evening service.

Regional Mobility

Route transfers will be enhanced both by increased service frequencies and the creation of regular clockface headways. Modifying schedules to have consistent frequencies (15, 30, 60 minutes) makes them easier to remember and makes it easier to coordinate transfers between routes. The proposed changes also enhance connections with Metrolink stations, including those on the new Perris Valley Line, to facilitate movement throughout Southern California. CommuterLink service will also be increased on certain routes to provide more regional connections to San Diego and across the RTA service area. There will also be a direct all-day local route connection linking Temecula, Murrieta, Menifee, and Perris and more direct all-day service between Hemet and Perris.

Travel Times

Travel times will be reduced by streamlining routes to provide more direct links between key destinations. Streamlining alignments decreases both route mileage and travel time, speeding up service for customers and resulting in a more cost-effective service for RTA.

Enhanced Regional Equity

The recommendations aim to improve service for passengers in all sub-areas. Two 30-minute corridors are introduced in the Hemet/San Jacinto Area where previously no service operated more frequently than every 60 minutes. These two corridors, Florida Avenue (east/west) and San Jacinto Avenue (north/south), create a strong core spine network that will facilitate travel throughout the sub-area.

Service in the Southwest sub-area is improved with the introduction of two community circulators; one in Lake Elsinore/Wildomar, and one in Temecula. Local regional connections are also enhanced between Temecula and Perris, and Temecula/Murrieta/Wildomar/ Lake Elsinore.

Passengers in Moreno Valley will benefit from one new 15-minute service (Route 16 UC Riverside – Moreno Valley College) and two new 30-minute services (Route 16 south of Moreno Valley College to Perris and Route 20 on Alessandro Boulevard). As in Hemet/San Jacinto, these services create strong east/west and north/south corridors (Alessandro Boulevard and Perris Boulevard, respectively) which will serve as the focal point for transit in this area.

Finally, the introduction of spontaneous use frequencies and express service along the Route 1 University/Magnolia Avenue corridor will provide significant travel improvements for passengers in the Northwest sub-area.

Customer Impacts

One of the primary goals when developing recommendations is maintaining access to service for as many existing riders as possible. Some routes are streamlined by discontinuing service to low-ridership deviations, but special attention is given to make sure as many riders as possible still remain within a reasonable walk from a proposed route. A customer impact is considered to occur when an existing service was restructured or discontinued causing an existing customer to be further than half a mile from their nearest bus stop. Overall, the proposed plan impacts 39 bus stops and 87 customers on weekdays, which accounts for only 0.26 (<1%) percent of average weekday system boardings. Table 12 shows the number of average daily boardings on weekdays and weekends that are impacted in each sub-area for all day types.

TABLE 6: BOARDINGS IMPACTED BY SERVICE CHANGES

Boardings Impacted by Service Changes			
SUB-AREA	WEEKDAY	SATURDAY	SUNDAY
NORTHWEST	69	23	24
MORENO VALLEY/PERRIS	8	5	1
HEMET/SAN JACINTO/PASS AREA	0	0	0
SOUTHWEST	10	0	0
TOTAL	87	28	25
PERCENT OF TOTAL DAILY RIDERSHIP	0.26%	0.19%	0.22%

Changes in ADA Coverage Area

A buffer of three-quarters of a mile was applied to the fixed-route network to derive the updated ADA paratransit service area per Federal regulations. Overall, just 14 existing customers will be outside the proposed ADA paratransit service area, which accounts for 0.36 (<1%) percent of RTA's existing ADA paratransit service customers.

Implementation Plan

Implementing the Plan

Recommendations vary in terms of their impact on resource requirements and the network structure and therefore also vary on the timeframe and cost of implementation. The phased plan for service changes outlined above gives the Agency the ability to develop the network incrementally in line with available funding. The timeframe for each phase is fluid; the phasing helps establish a hierarchy of service investment priorities. RTA updates its Short Range Transit Plan (SRTP) on an annual basis, and as part of this process, identifies available funding sources for upcoming years. Each year, RTA will use the available funding to determine what components of the Ten-Year Transit Network plan to implement over the next couple of years. By working within identified funding sources, RTA will ensure the plan is implemented in a manner that is financially sustainable.

On-Going Monitoring and Corrective Action

In order to ensure continued progress towards the objectives and guiding principles of the COA, the implementation phase will require ongoing monitoring of service performance and delivery to help prioritize subsequent service changes.

New and existing services should be monitored quarterly to ensure they are meeting productivity, farebox recovery, and subsidy per passenger targets. Existing routes that fail to meet standards for two of the three performance metrics for three or more consecutive quarters require reevaluation. RTA should prepare a Corrective Action Plan for these underperforming routes which will examine all aspects of route performance and develop recommendations to improve service performance. If a route continues to underperform after three consecutive quarters, it should be discontinued or significantly restructured to improve performance. Productivity targets vary by service type, and routes should strive to meet 75 percent of their productivity target. For example, the service tier target for supporting local routes is 20 passengers per hour; routes with fewer than 15 passengers per hour are considered low-performing. Financial metrics are consistent across all service tiers in order to maintain the financial stability of the system. Routes should meet a minimum 20 percent farebox recovery and have a maximum of a \$5.00 subsidy per passenger.

When evaluating the performance of existing and future services, RTA faces the need to find the right balance between providing productive service and providing adequate service coverage across the service area.

Ridership Projections

RTA ridership is expected to grow in the ten-year period, particularly as the improved services and customer experience attract new riders and encourage existing riders to use transit more often.

Ridership projections were based on a number of factors. Gains in ridership from frequency or span increases were calculated by applying a 50 percent elasticity of the percentage change in each route's revenue hours to the existing ridership. For example, if a route's revenue hours were increased by 100 percent, existing ridership was expected to increase by 50 percent. These calculations assume that initially operating additional service hours will not achieve the existing level of productivity; rather, ridership will build over time. The following table shows the ridership projections for each phase of the plan. Overall, annual ridership is expected to increase by 49 percent over the ten-year plan horizon. Estimated increases by day type are 50 percent on weekdays, 36 percent on Saturdays, and 47 percent on Sundays.

TABLE 7: PROJECTED SYSTEM RIDERSHIP BY PHASE

Projected System Ridership						
	BASELINE (FY 15)	IMMEDIATE-TERM (FY 16)	SHORT-TERM (FY 17)	MID-TERM (FY 20)	LONG-TERM (FY 23)	END OF PLAN (FY 25)
WEEKDAY	31,016	33,428	37,451	41,002	46,292	46,572
SATURDAY	15,970	16,490	17,447	19,315	21,570	21,662
SUNDAY	11,865	12,340	13,006	15,344	17,289	17,405
ANNUAL TOTAL	9,392,126	10,060,360	11,197,347	12,303,798	13,876,955	13,959,559
PERCENT CHANGE	--	7%	11%	10%	13%	0.60%

Fare Increases

The plan incorporates fare increases in FY 2018, 2021, 2024, one year after each major service increase. The fare increases are modeled as a ten percent increase in average passenger fare, which translates to approximately a \$0.25 increase in the base fare (currently \$1.50). Fare increases are a necessary component of maintaining financial stability. Service improvements come at considerable cost to the Agency, and revenue sources need to be in line with increasing costs to maintain targeted farebox recovery ratios. Fare increases are planned in the years following service increases so that riders can see the benefits of the service improvements and understand the need for some increase in fares following such increases in service.

Capital Plan

The capital plan outlines major capital projects to enhance both the experience of customers and service operations as well as replacement and expansion vehicles needed to implement the Ten-Year Transit Network Plan.

Bus and Transfer Stops

Because RTA service is designed as a hub-and-spoke network, transfer stops play a crucial role in regional mobility. Routes from various locations converge at designated transfer stops. These key transfer stops provide locations where transfers can be timed between multiple routes. Since they are often at the ends of routes, they should also provide access to rest facilities for drivers between trips.

Desired features of the new and upgraded bus stops include shelters, seating, trash receptacles, bike racks (if needed), lighting (solar-powered where feasible), landscaping, and reinforced concrete bus pads for ADA compliance.

Priorities for enhanced bus stops include:

- Promenade Mall Temecula – The mall will become the layover location for nine transit routes.
- Riverside Downtown and Vine Street – The decentralized transit hub concept developed for downtown involves upgrading existing stops and creating new ones in the downtown core.
- Vine Street Property – The decentralized transit hub concept also includes the development of new layover space on Vine Street across from the Riverside Downtown Metrolink Station.
- RapidLink – RapidLink stops will have additional amenities and separate branding than local stops to differentiate the enhanced transit service from local service.
- UC Riverside Transit Hub – The implementation of new Route 1 and Route 16 service requires increasing layover capacity at UC Riverside.
- Hemet/San Jacinto Bus Stops – New passenger amenities and layover space will be needed at Hemet Valley Mall as bus service increases in Hemet and San Jacinto.
- General Bus Stop Improvements – Upgrading passenger amenities at bus stops greatly improves the experience of passengers and the public image of RTA.

Operating Facilities

The implementation of the COA requires increasing the size of RTA's vehicle fleet to provide the levels of service included in the recommendations. RTA's existing operating facilities, without modifications, cannot comfortably accommodate this significant fleet growth. A site for a new facility has not yet been determined. RTA will be developing a Facilities Master Plan in the coming year to identify its future operating and support infrastructure needs to meet the future transit needs of this region.

Vehicle Requirements

Service additions and enhancements create a need for fleet expansion. Table 15 below summarizes the total number of vehicles by vehicle type required to implement the Ten-Year Transit Network Plan. Total fleet requirements include spares.

TABLE 8: VEHICLE REQUIREMENTS BY TYPE

Vehicle Requirements by Type						
VEHICLE CATEGORY	BASELINE (FY 15)	IMMEDIATE-TERM (FY 16)	SHORT-TERM (FY 17)	MID-TERM (FY 20)	LONG-TERM (FY 23)	END OF PLAN (FY 25)
LOCAL DO	94	94	113	125	131	131
LOCAL CO	51	51	51	54	72	72
COMMUTER DO	18	18	24	30	33	33
COMMUTER CO	17	23	23	23	23	23
TROLLEY	10	10	10	10	10	10
TOTAL FLEET	190	196	221	242	269	269

Information Technology

By the summer of 2016, RTA will have fully implemented system-wide fixed-route real-time passenger information technology. Riders will be able to use their mobile devices to get real-time estimates of when their next bus will arrive. This will greatly enhance the customer experience, allowing passengers to better time their arrival at the bus stop.

FIGURE 6: RTA REAL TIME PASSENGER INFORMATION



Next Steps

Upon completion of the COA study, RTA should work with stakeholders and community members to ensure the successful implementation of the Ten-Year Transit Network Plan. Each phase of the plan will require a public hearing process to sufficiently notify the public of upcoming service changes. RTA should work to develop partnerships with communities requesting service to develop cost-effective ways to provide service to those who want access but live in areas that are not supportive of fixed-route transit. RTA should also discuss the plan in detail with RCTC to ensure approval of the plan moving forward.

Appendix E - Western Riverside County Regional System of Highways and Arterials Performance Measures

An integral element of the Nexus Study is the designation of the Western Riverside County Regional System of Highways and Arterials (also referred to as the “TUMF Network”). This network of regionally significant highways represents those arterial and collector highway and roadway facilities that primarily support inter-community trips in Western Riverside County and supplement the regional freeway system, and represents the extents of the network of highways and roadways that would be eligible for TUMF funded improvements. The Regional System of Highways and Arterials does NOT include the freeways of Western Riverside County which primarily serve inter-regional trips.

The designation of the Regional System of Highways and Arterials in the original TUMF Nexus Study adopted by the WRCOG Executive Committee in October 2002 was initiated with the identification of highways and roadways that met certain specified guidelines as defined by the WRCOG Public Works Committee. The guidelines are defined in **Section 4.1** of the Nexus Report, and include:

1. Arterial highway facilities proposed to have a minimum of four lanes at future buildout (not including freeways).
2. Facilities that serve multiple jurisdictions and/or provide connectivity between communities both within and adjoining Western Riverside County.
3. Facilities with forecast traffic volumes in excess of 20,000 vehicles per day in the future horizon year.
4. Facilities with forecast volume to capacity ratio of 0.90 (LOS E) or greater in the future horizon year.
5. Facilities that accommodate regional fixed route transit services.
6. Facilities that provide direct access to major commercial, industrial, institutional, recreational or tourist activity centers, and multi-modal transportation facilities (such as airports, railway terminals and transit centers).

Candidate facilities were identified by overlaying various transportation system and land use plots depicting parameters consistent with those defined by the specified guidelines. These plots included existing and proposed numbers of lanes, network volumes and volume to capacity ratio (LOS) derived from SCAG CTP Model networks developed by Transcore to support the ongoing Western Riverside County CETAP study, and existing land use information provided by SCAG. These plots were included in the Appendices that accompanied the original 2002 TUMF Nexus Study. Fixed route transit service information was provided by the Riverside County Regional Transportation Authority (RTA).

These various data inputs were overlaid and reviewed leading the definition of a segmented skeletal network of highways and roadways for further consideration. The skeletal network was further enhanced to reflect regional connectivity and access to activity center considerations. An initial draft Regional System of Highways and Arterials was developed and subsequently distributed to the County of Riverside and each City in Western Riverside County for review in the context of their respective City General

Plan Circulation Elements, primarily to confirm existing and future number of lanes and appropriateness of the facilities identified. The initial draft network was subsequently revised to consolidate appropriate General Plan Circulation Elements, including the identification of proposed new facilities as alternatives to existing facilities. It should be pointed out that the Regional System of Highways and Arterials does not represent a simple compilation of regional General Plan Circulation Elements, but rather incorporates the elements of regional General Plan Circulation Elements that are necessary for mitigating the cumulative regional traffic impacts of new development within the horizon year of the TUMF program.

The consolidated list of proposed network improvements (along with associated initial cost estimates) was subsequently distributed to each of the WRCOG jurisdictions, individual landowners, and other stakeholders including representatives of the development community through the Building Industry Association (BIA) for review. The review of the consolidated list of improvements (and associated costs) prompted a series of five peer review workshop meetings to specifically review each segment of roadway identified and the associated improvements to mitigate the traffic impacts of new development. One peer review workshop meeting was held for each of the five zones in the WRCOG region with meetings held at the Riverside County Assessor's Office between June 27, 2002 and July 18, 2002. The peer review workshop meetings involved representatives from WRCOG, the respective zone jurisdictions and the BIA. The peer review workshops culminated in the development (by consensus of the groups) of a revised list of proposed network improvements (and associated costs) more accurately reflecting the improvements necessary to mitigate the cumulative regional traffic impacts of new development.

Following the peer review, the initial Regional System of Highways and Arterials was reviewed and endorsed by the TUMF Technical Advisory Committee, the TUMF Policy Committee and the WRCOG Executive Committee and utilized as the basis for developing the original TUMF Nexus Study in October 2002.

As part of the earlier 2015 Update of the TUMF Nexus Study, the Regional System of Highways and Arterials was validated using more current data derived from the comparison of the 2008 and 2035 Baseline scenarios as derived from RivTAM. The TUMF Network was compared to outputs from RivTAM to ensure candidate facilities remained consistent with the original guidelines and could satisfactorily contribute to meeting the intents of the TUMF program. Although the TUMF Network was reviewed as part of the 2015 Nexus Update, there were no significant changes to the composition of the network that was originally adopted by the WRCOG Executive Committee. Revisions to the TUMF Network associated with the 2015 Nexus Update primarily reflected some changes in the scope and magnitude of network improvement projects necessary to mitigate the cumulative regional impacts of new development.

Following the action of the WRCOG Executive Committee instructing WRCOG staff to revise the draft 2015 TUMF Nexus Study to, in part, incorporate the most recent SCAG socio-economic forecasts, the TUMF Network was reassessed as part of the 2016 Nexus Update. Consistent with the declining rate of new development forecast for Western Riverside County as part of the SCAG 2016 RTP/SCS and reflecting the lasting influence

of the Great Recession the economy of the region, the review of the TUMF Network as part of the 2016 Nexus Update ensured facilities generally still met the previously described performance guidelines, and/or that the scope and magnitude of specific improvements to the TUMF Network were roughly proportional to the impacts needing to be mitigated. This review process involved the comparison of model outputs for the 2012 Baseline and 2040 No-Build Scenarios on the 2015 Existing arterial network to identify those facilities no longer expected to be impacted substantially by the cumulative effects of traffic growth from new development. This review resulted in the removal of various facilities from the TUMF Network, most notably including the previously proposed SR-79 Eastern Bypass of Temecula in the Southwest APD, as well as various changes in the scope and magnitude of specific improvements previously identified on the TUMF Network. The updated model output plots utilized as the basis for the latest network review are included in this appendix as **Exhibit E-1** through **E-8**. The Regional System of Highways and Arterials is included as **Figure 4.1** in the Nexus Study report.

EXHIBIT E-1

The following page contains:

***Western Riverside County 2015 Existing Network
Number of Lanes***

***Source: Riverside County Travel Demand Model (RivTAM) 2012 network provided by
Riverside County Transportation Department (RCTD) with updated 2015 arterial network
completed by WSP, September 2016.***

EXHIBIT E-1

Western Riverside County 2015 Existing Network

Number of Lanes



LEGEND

TUMF ZONE

- NORTH WEST
- CENTRAL
- PASS
- SOUTHWEST
- HEMET/SAN JACINTO

Existing Number of Lanes

- 2 lanes
- 4 lanes
- 6 lanes
- 8 lanes



Source: Riverside County Travel Demand Model (RivTAM) 2012 network provided by Riverside County Transportation Department (RCTD)
with updated 2015 arterial network completed by WSP, September 2016

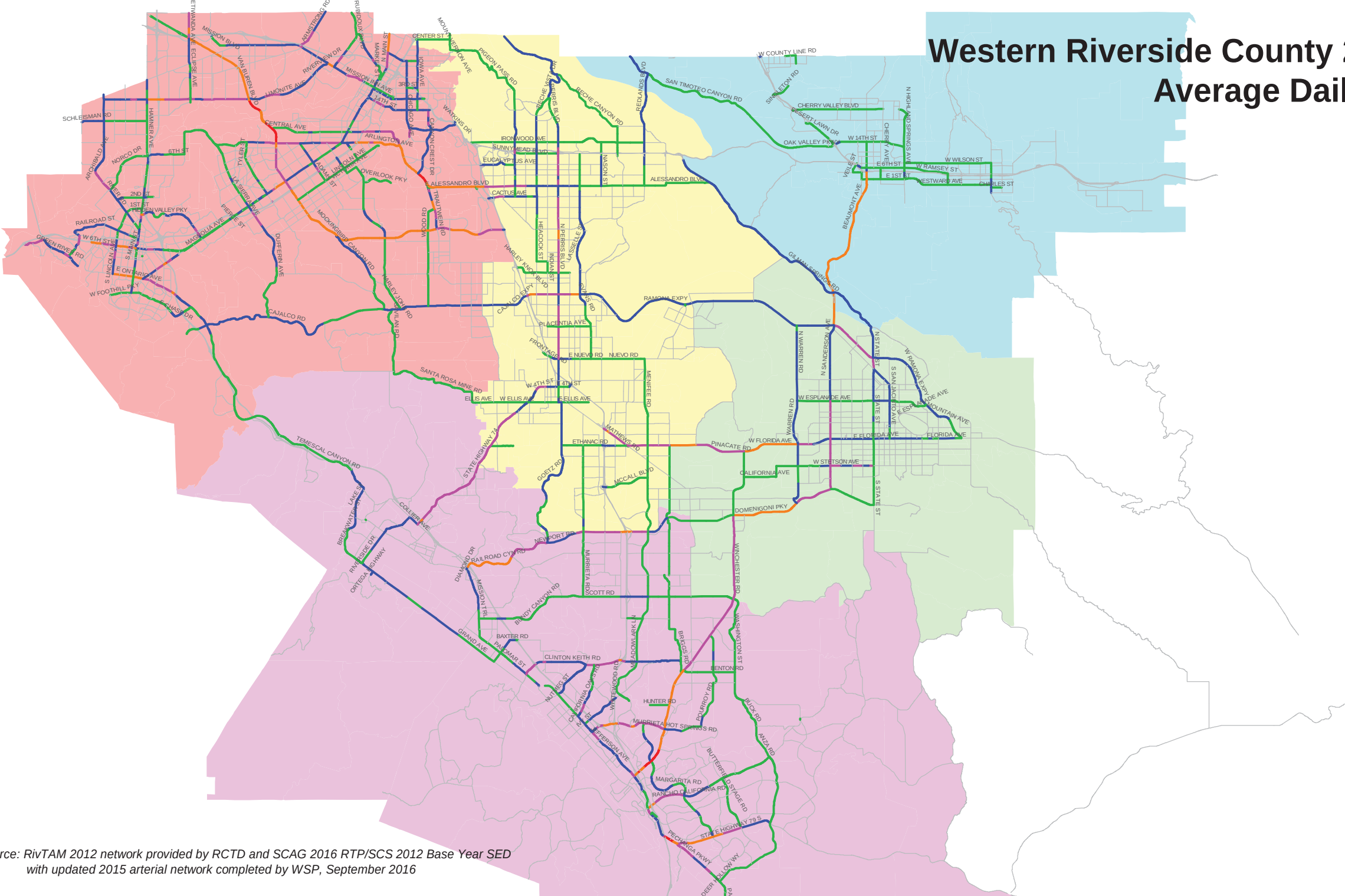
EXHIBIT E-2

The following page contains:

***Western Riverside County 2012 Baseline Scenario
Average Daily Traffic Volume (ADT)***

***Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2012 Base
Year SED with updated 2015 arterial network completed by WSP, September 2016.***

EXHIBIT E-2
Western Riverside County 2012 Baseline Scenario
Average Daily Traffic Volume (ADT)



LEGEND

TUMF ZONE

- NORTH WEST
- CENTRAL
- PASS
- SOUTHWEST
- HEMET/SAN JACINTO

Average Daily Traffic (ADT)

- <10000
- 10000-20000
- 20000-30000
- 30000-50000
- 50000-80000

0 3 6 9
Miles

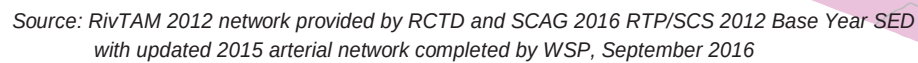
Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2012 Base Year SED
with updated 2015 arterial network completed by WSP, September 2016

EXHIBIT E-3

The following page contains:

***Western Riverside County 2012 Baseline Scenario
Level of Service (LOS)***

***Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2012 Base
Year SED with updated 2015 arterial network completed by WSP, September 2016.***



Miles

EXHIBIT E-4

The following page contains:

***Western Riverside County 2040 No-Build Scenario
Average Daily Traffic Volume (ADT)***

***Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon
Year SED with updated 2015 arterial network completed by WSP, September 2016.***

EXHIBIT E-4
Western Riverside County 2040 No-Build Scenario
Average Daily Traffic Volume (ADT)



LEGEND

TUMF ZONE

- NORTH WEST
- CENTRAL
- PASS
- SOUTHWEST
- HEMET/SAN JACINTO

Average Daily Traffic (ADT)

- <10000
- 10000-20000
- 20000-30000
- 30000-50000
- 50000-80000
- >80000

0 3.3 6.7 10
Miles

Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon Year SED
with updated 2015 arterial network completed by WSP, September 2016

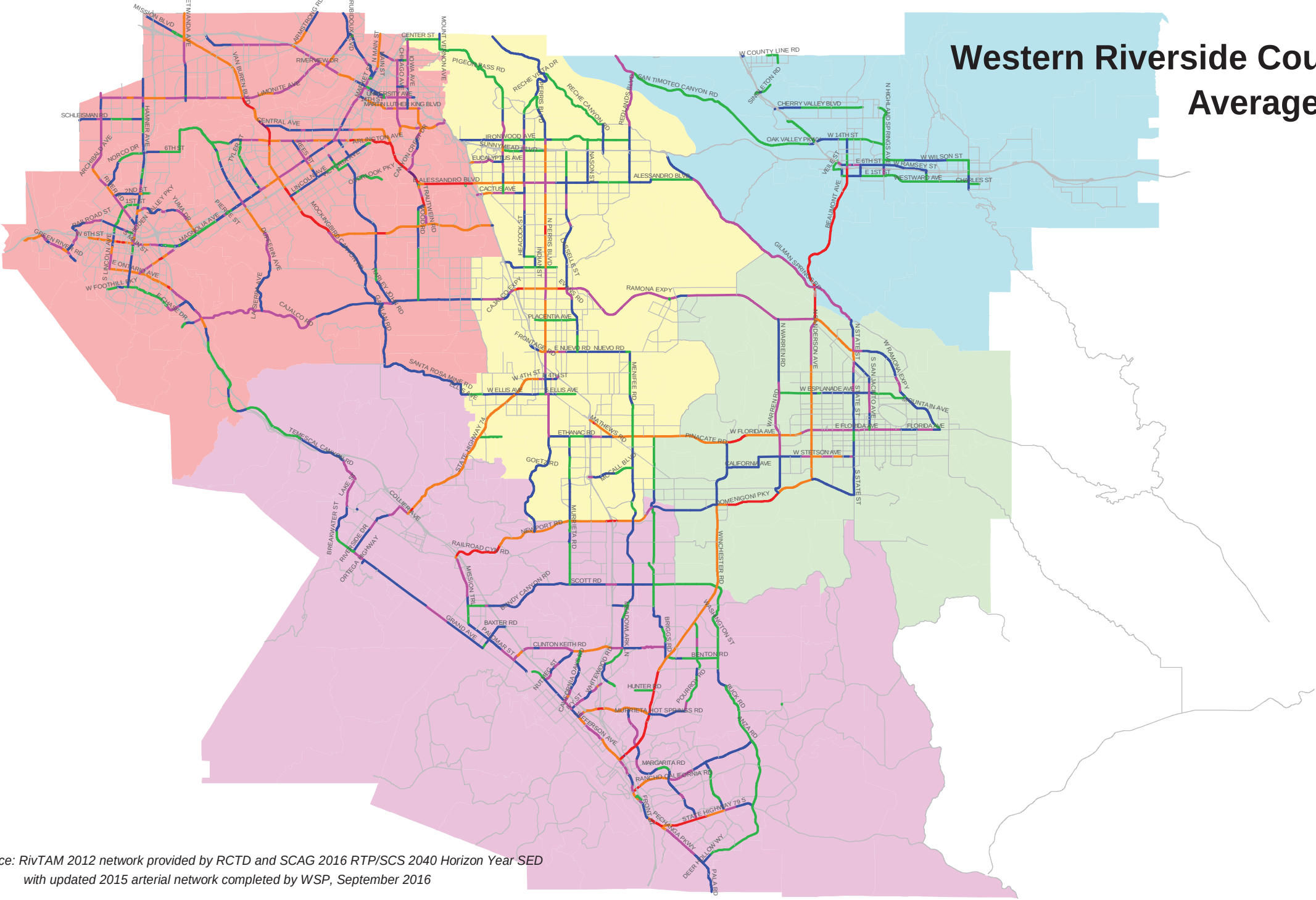


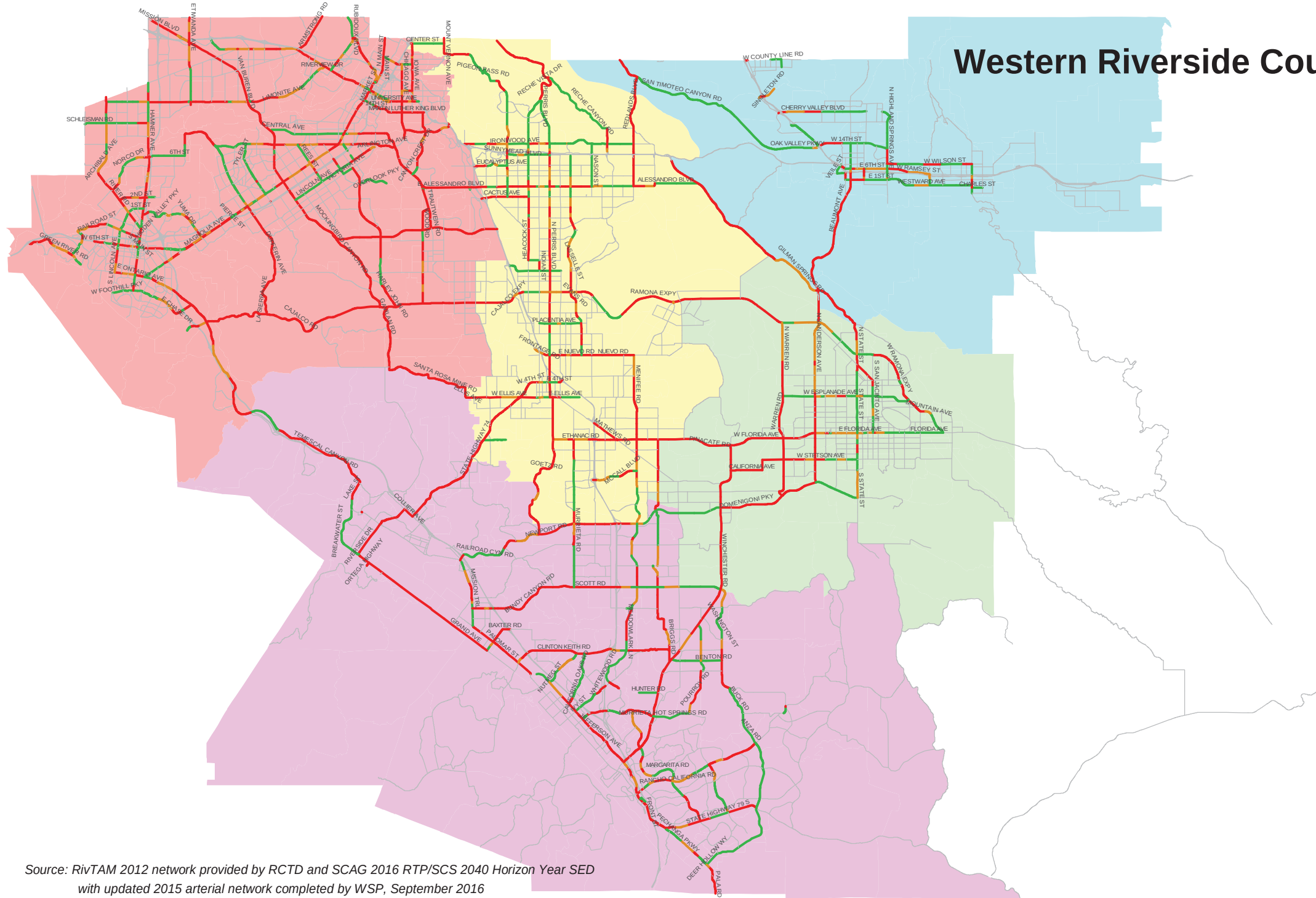
EXHIBIT E-5

The following page contains:

***Western Riverside County 2040 No-Build Scenario
Level of Service (LOS)***

***Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon
Year SED with updated 2015 arterial network completed by WSP, September 2016.***

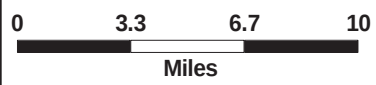
EXHIBIT E-5
Western Riverside County 2040 No-Build Scenario
Level of Service (LOS)



LEGEND

- TUMF ZONE**
- NORTH WEST
 - CENTRAL
 - PASS
 - SOUTHWEST
 - HEMET/SAN JACINTO

- Peak Period LOS**
- LOS A or B
 - LOS C or D
 - LOS E or F



Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon Year SED
with updated 2015 arterial network completed by WSP, September 2016

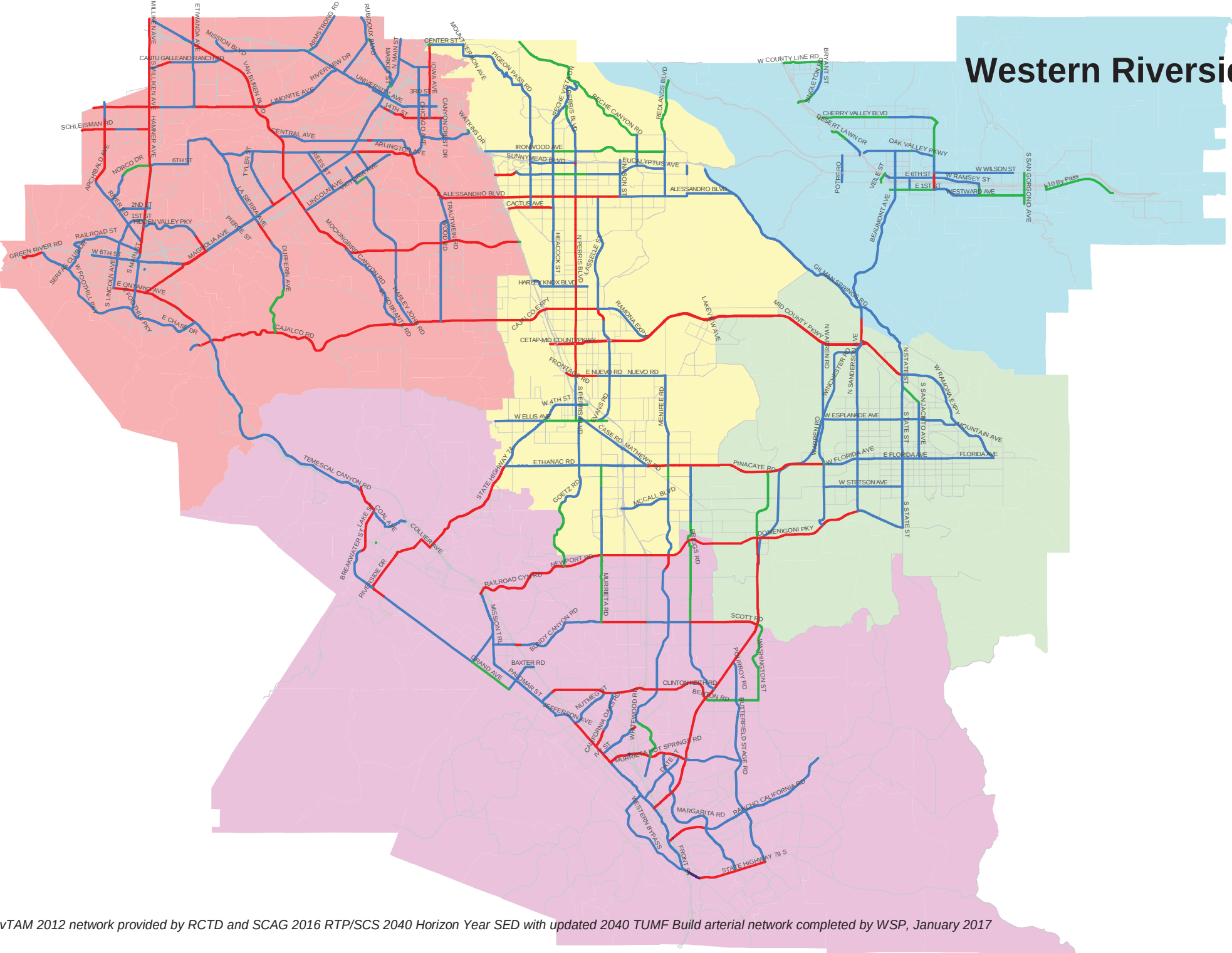
EXHIBIT E-6

The following page contains:

***Western Riverside County 2040 Build Scenario
Number of Lanes***

***Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon
Year SED with updated 2040 TUMF Build arterial network completed by WSP, January
2017.***

EXHIBIT E-6 Western Riverside County 2040 Build Scenario Number of Lanes



LEGEND

TUMF ZONE

- NORTH WEST
- CENTRAL
- PASS
- SOUTHWEST
- HEMET/SAN JACINTO

Number of Lanes

- 2 lanes
- 4 lanes
- 6 lanes
- 8 lanes

0 3 6 9
Miles

Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon Year SED with updated 2040 TUMF Build arterial network completed by WSP, January 2017

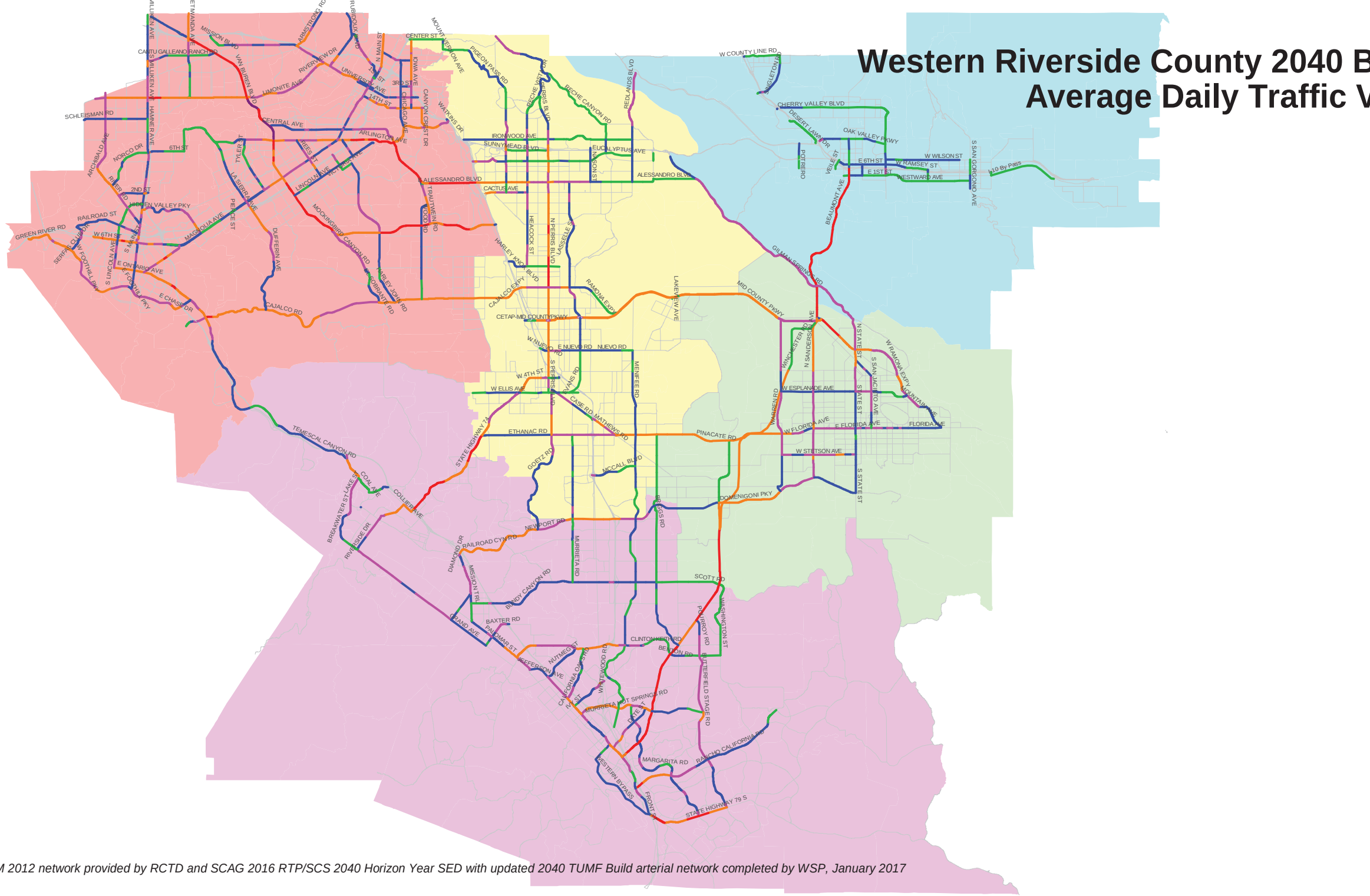
EXHIBIT E-7

The following page contains:

***Western Riverside County 2040 Build Scenario
Average Daily Traffic Volume (ADT)***

***Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon
Year SED with updated 2040 TUMF Build arterial network completed by WSP, January
2017.***

EXHIBIT E-7 Western Riverside County 2040 Build Scenario Average Daily Traffic Volume (ADT)



LEGEND

TUMF ZONE

- NORTH WEST
- CENTRAL
- PASS
- SOUTHWEST
- HEMET/SAN JACINTO

Average Daily Traffic (ADT)

- <10000
- 10000-20000
- 20000-30000
- 30000-50000
- 50000-80000
- >80000

0 3 6 9
Miles

Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon Year SED with updated 2040 TUMF Build arterial network completed by WSP, January 2017

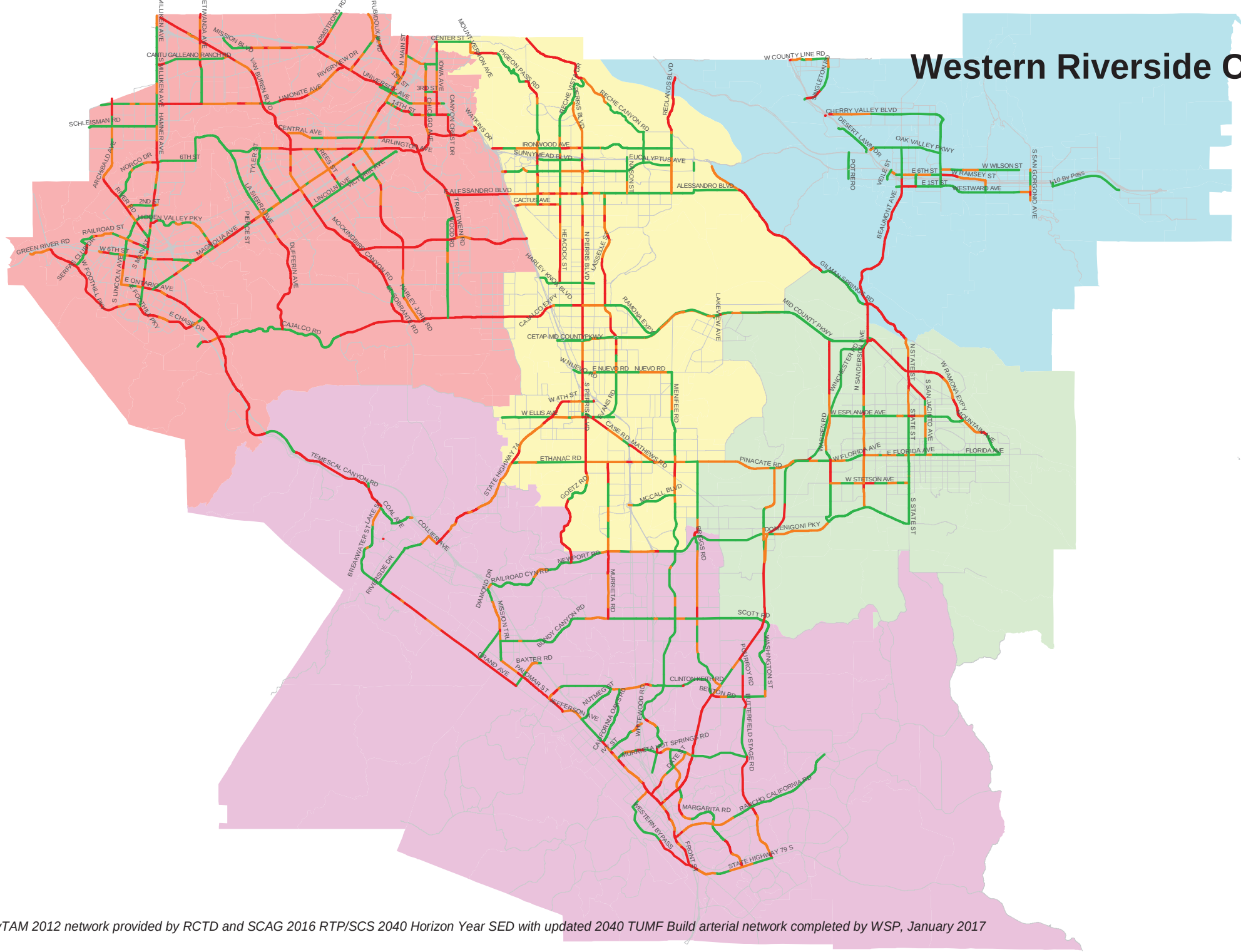
EXHIBIT E-8

The following page contains:

***Western Riverside County 2040 Build Scenario
Level of Service (LOS)***

***Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon
Year SED with updated 2040 TUMF Build arterial network completed by WSP, January
2017.***

EXHIBIT E-8 Western Riverside County 2040 Build Scenario Level of Service



LEGEND

TUMF ZONE

- NORTH WEST
- CENTRAL
- PASS
- SOUTHWEST
- HEMET/SAN JACINTO

Peak Period LOS

- LOS A or B
- LOS C or D
- LOS E or F

0 3 6 9
Miles

Source: RivTAM 2012 network provided by RCTD and SCAG 2016 RTP/SCS 2040 Horizon Year SED with updated 2040 TUMF Build arterial network completed by WSP, January 2017

Appendix F - TUMF Network Cost Assumptions

The TUMF program was established as a uniform impact fee program that is applied to mitigate the cumulative transportation impacts of new development on the regional arterial highway system. In establishing the technical basis for TUMF, like any impact fee program, there are two fundamental requirements that must be addressed: establishing a rational nexus for the program; and determining that any fee is roughly proportional to the impact of a proposed development. These requirements are rooted in two well-known legal cases: *Nollan v. California Coastal Commission* (1987) 483 U.S. 825; and *Dolan v. City of Tigard* (1994) 512 U.S. 374.

Specific to establishing project costs that meet the rough proportionality test for an expansive network of facilities, WRCOG utilizes a conceptual planning level project and cost estimation approach based on typical unit costs for a variety of project types and conditions. These unit costs are intended to reflect a range of values that are typical for the types of projects that are necessary to mitigate the cumulative regional impacts of new development. These unit costs are developed for each typical project type based on actual observed values for the various materials, labor and right-of-way that would typically be required to complete a project. Although the actual materials, labor, right-of-way and associate costs to complete each specific project can be expected to vary based on the particular conditions of each site and project requirements at the time the project is actually implemented, the approach of using typical unit costs as the basis for the TUMF program represents a manageable and appropriate level of effort to establish conceptual project cost estimates that meet the requirement for rough proportionality.

The application of typical unit costs and the associated identification of a maximum TUMF share for each eligible project also provides a framework that protects the program from projects with actual costs that vary significantly from the typical cost estimates used as the program basis. The TUMF program administrative policies limit reimbursement of costs associated with eligible TUMF projects to the lesser of maximum TUMF share identified in the Nexus Study or the actual eligible project costs. In this manner, projects that are completed by participating jurisdictions or developers for less than the maximum TUMF share are reimbursed (or credited) for the actual amount expended, while projects that exceed the maximum TUMF share are only reimbursed (or credited) by the program up to the maximum TUMF share value ensuring that the program is mitigating impacts at a level that is roughly proportional to that typically expected, and is not subject to extreme project costs to address unusual or exceptional local conditions or requirements.

For the purposes of TUMF, unit cost values were developed for various eligible improvement types that all provide additional capacity needed to mitigate the cumulative regional traffic impacts of new development to facilities on the TUMF Network. Eligible improvement types include:

1. Construction of additional Network roadway lanes;
2. Construction of new Network roadway segments;
3. Expansion of existing Network bridge structures;

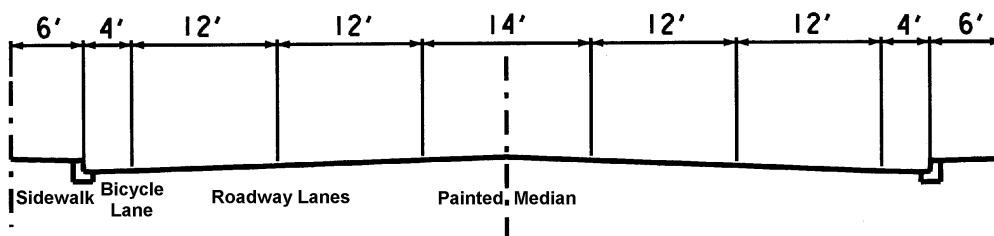
4. Construction of new Network bridge structures;
5. Expansion of existing Network interchanges with freeways;
6. Construction of new Network interchanges with freeways;
7. Grade separation of existing Network at-grade railroad crossings;
8. Expansion of existing Network-to-Network intersections.

Because roadway improvement standards vary considerably between respective jurisdictions, a typical roadway standard for the TUMF Network was recommended by the Public Works Committee (PWC) during the development of the original TUMF Nexus Study adopted by the WRCOG Executive Committee in October 2002 as the basis for developing the TUMF Network cost estimate. The typical roadway standard assumes the following standard design characteristics that are consistent with the minimum requirements of the Caltrans Highway Design Manual:

- Asphalt concrete pavement and appropriate base material to accomplish up to 12 feet per travel lane plus up to four feet for ancillary treatments (e.g. shoulders, or Class II Bike Lane);
- Concrete curb and gutter and associated drainage (e.g. paved roadway shoulders and/or open swale);
- Storm drains located within curb to curb, and associated transverse portions perpendicular to the roadway and adjoining portions longitudinal to the roadway;
- 14 foot paved and painted median (or dual center left turn lane);
- Traffic signals at intersections with state highways and other major arterials that are also on the TUMF Network;
- Pavement striping and roadway signing, as required;
- 6 foot wide concrete sidewalks and associated curb cuts for ADA access at street crossings.

A cross-section of the Typical Roadway Standard is illustrated in **Figure F-1**.

Figure F-1. Typical Roadway Standard Cross-Section



It is recognized that the typical roadway standard is not appropriate in all potential TUMF Network locations. Where appropriate, typical design standards could be substituted with design elements such as open swale drainage and paved roadway shoulders with no curbing that would typically cost less than the implementation of the Typical Roadway Standard. Roadway improvements in excess of the Typical Roadway Standard include, but are not limited to:

- Portland concrete cement pavement or other aesthetic pavement types (except at intersections);
- Major rehabilitation or overlay of existing pavement in adjacent roadway lanes;
- Raised barrier medians;
- Parking lanes;
- Roadway tapers outside the extents of the approved project
- Sanitary sewage infrastructure;
- Water systems
- Dry utilities
- Undergrounding infrastructure
- Relocation of non-prior rights utilities
- Storm Drain Systems in excess of draining the roadway
- Landscaping;
- Streetlighting;
- Class I Bike Lanes (e.g. separate bicycle paths)
- Environmental Permitting
- Detection/Retention Basins outside of Street Right-of-Way
- Agency Staff time in excess of 15% of Engineering
- Agency Staff Time in excess of 15% of Construction

These improvements in excess of Typical Roadway Standards are not eligible for TUMF funding and will be the responsibility of the local funding agency.

Unit cost estimates for the implementation of TUMF Network improvements were developed based on the unit cost to accomplish the Typical Roadway Standard. Initial unit cost estimates were developed as part of the original TUMF Nexus in 2002. These original values were adjusted as part of the 2005 Nexus Update to reflect changes in cost based on relevant indices. The unit cost estimates were fully revised as part of the 2009 Nexus Update to capture the full effects of the economic recession on the costs of labor, materials and property acquisition.

For the 2016 Nexus Update, the unit costs were again fully revised to generate entirely new unit cost values based on the most recent available construction cost, labor cost and land acquisition cost values for comparable projects within Riverside County. The recalculation of the TUMF unit cost components was completed as part of the 2016 Nexus Update to reflect the effects of the ongoing recovery from the economic recession that has seen the costs of materials, labor and land acquisition in California rebound from relative historical lows previously observed at the time of the 2009 Nexus Update.

For simplicity, the roadway unit cost was assumed to provide for the full depth construction (including grading) of 16 feet of new pavement per lane (to accommodate a minimum 12 foot lane and ancillary treatments). The unit cost was assumed to include the following construction elements:

- Sawcut of existing pavement
- Removal of existing pavement
- Roadway excavation and embankment

- 10" thick class 2 aggregate base
- 4.0" thick asphaltic concrete surface
- Concrete curb, gutter and drainage improvements

Roadway unit costs were determined for each unique cost item. The source used to determine the roadway unit costs as part of the 2016 Nexus Update are listed below.

- Caltrans Contract Cost Data 2015
- RCTC SR-91 Express Lanes
- Typical experience for local cities, Western Riverside County
- WSP, Structural Group

All data described above was obtained as of March 2016.

Right-of-way acquisition costs were determined based on the cost to acquire 18 feet of right-of-way per lane of new roadway improvement. For urban and suburban land use areas, the amount of right-of-way to be acquired as part of the TUMF program was reduced by 75% to account for property already owned by a participating jurisdiction through prior acquisition or dedication. Right-of-way unit costs were assumed to include the following elements:

- Land acquisition
- Documentation and legal fees
- Relocation and demolition costs and condemnation compensation requirements
- Utility relocation
- Direct environmental mitigation

Right-of-way unit costs were determined based on a review of actual property sales within the WRCOG region during the prior 18 month period. The task of determining the valuation per square foot of right-of-way for different land uses is completed by Overland Pacific & Cutler.

A typical existing condition of each component type was used as a guide line for quantity assessments.

- Terrain 1: Level terrain with 0% profile grade. Construction cost is per lane mile.
- Terrain 2: Rolling Terrain with 1.5 % profile grade. Construction cost is per lane mile.
- Terrain 3: Mountainous Terrain with 3% profile grade. Construction cost is per lane mile.
- Land Use 1, 2 and 3; ROW cost factor per lane mile, for Urban, Suburban and Rural areas respectively.
- Interchange 1: Complex New Interchange/Interchange Modification. Existing complex interchange at I-15 & SR-91 was used as a guide line for quantity assessments.
- Interchange 2: New Interchange/Interchange Modification is assumed to be a New Cloverleaf Interchange consisting of 4 (3 lane) direct ramps and 4 (2 lane) loop ramps.

- Interchange 3: Major Interchange Improvement is assumed to correspond to adding 1 lane to each ramp on a Cloverleaf Interchange.
- Bridge: New Bridge cost. Construction cost is per linear foot per lane.
- RRXing 1: New Rail Grade Crossing. Construction cost is per lane per crossing.
- RRXing 2: Widening Existing Grade Crossing. Construction cost is per lane per crossing.

The cost estimating methodology here is intended to provide a Present Value Cost Estimate for the WRCOG Transportation Uniform Mitigation Fee based on year 2016 unit Prices. A more detailed description of cost categories is detailed below.

I. Roadway Items

Roadway Excavation:

A unit cost of \$10.34 per cubic yard (Source: Caltrans Contract Cost Data 2015) is applied to account for the excavation quantities. Assuming proposed profiles to be at 0% grade, the excavation values are estimated based on the component type as follows:

- Terrain 2 and 3: excavation for one lane (16 feet wide and 4 feet deep) is assumed.

Imported Borrow:

The unit cost used for imported borrow is \$7.72 per cubic yard (Source: Caltrans Contract Cost Data 2015). Locations where imported borrow is required are determined from aerial photos.

- Terrain 2 and 3: Excavation for one lane (16 feet wide and 4 feet deep) is assumed.
- Interchanges 1, 2, and 3: Vertical clearance of 24.5 feet is used to calculate the maximum amount of imported borrow at areas adjacent to an undercrossing.
- RRXing 1 and 2: Vertical clearance of 31.5 feet and Bridge approach of 1,000 feet is used to determine the quantity of Imported borrow for this component type.

Clearing and Grubbing:

The unit cost for clearing and grubbing is \$9,625.00 per acre (Source: Caltrans Contract Cost Data 2015).

- Terrain 1, 2 and 3: The area of clearing and grubbing is assumed to extend 16 feet for the addition of each new lane.
- Interchange 1 and 2: The area of clearing and grubbing is assumed to extend 40 feet beyond the proposed outside edge of shoulder. The clearing and grubbing width varies depending on the number of added lanes.
- Interchange 3 and Intersection: The area of clearing and grubbing is assumed to extend 16 feet for the addition of each lane.

Development of Water Supply:

A lump sum value is used to account for develop water supply. The lump sum cost is estimated as 10% of the combined cost for roadway excavation and imported borrow (Source: RCTC).

PCC Pavement:

The unit cost for PCC pavement is \$245.00 per cubic yard (Source: Caltrans Contract Cost Data 2015).

- Terrain 1, 2 and 3: It is assumed that PCC is used at mainline shoulders. The PCC pavement is considered to be 4 inch thick and 4 feet wide.

Asphalt Concrete Type A:

It is assumed that Asphalt Concrete is used at mainline and where ramp and bridge widening is required. A unit cost of \$170.00 per cubic yard (Source: Caltrans Contract Cost Data 2015) is used to account for asphalt concrete quantities. The asphalt concrete overlay is assumed to be 4 inch thick.

Aggregate Base:

The unit cost for aggregate base is \$31.00 per cubic yard (Source: Caltrans Contract Cost Data 2015). Aggregate base quantities are estimated by means of calculating the areas of additional lanes. The aggregate base layer is considered to be 10 inch thick. It is assumed that aggregate base is used over the entire widening width below the PCC pavement and asphalt concrete layers.

Curb and Gutter:

The unit cost used for curb and gutter is \$41.00 per linear foot (Source: Caltrans Contract Cost Data 2015). It is assumed that type A2-6 curb and gutter is used on the entire length of travel way where required.

Project Drainage:

A lump sum value is used to account for project drainage cost of roadway construction. The project drainage cost is estimated as 15% (Source: RCTC project 2007) of combined cost for earthwork and pavement structural section.

Traffic Signals:

The costs for traffic signals are calculated per ramp termini intersection. The unit cost used for traffic signals is \$300,000 (Source: Typical experience, Western Riverside County) per intersection. Traffic signals costs are considered only at the Intersection (Network-to-Network) upgrade.

Striping:

The unit cost used for Striping is \$1.12 per linear foot (Source: Caltrans Contract Cost Data 2015). It is assumed that two lines of thermo-plastic striping are required for every lane addition.

Marking:

The unit cost used for marking is \$4.30 per square foot (Source: Caltrans Contract Cost Data 2015).

- Terrains 1, 2 and 3: It is assumed that there are 8 arrow markers, 2 Stop sign markers and 4 Bike sign markers.
- Interchanges 1, 2, and 3: It is assumed that there are 2 Type I arrows on each on ramp, and 2 Type IV (L) arrows on each off ramp.

- Intersection (network to network) upgrade: It is assumed that there are 2 right turn arrows and two right lane drop arrows for each lane modification for the interchange upgrade

Pavement Marker:

Type G one-way clear retroreflective pavement markers (Spacing @ 48 feet) were assumed for Terrain 1, 2 and 3 component types only. The unit cost used for pavement marker is \$2.65 each (Source: Caltrans Contract Cost Data 2015).

Signage:

The signage unit cost accounts for the costs of one-post signs and two-post signs. The unit cost used for one-post signs and two-post signs are \$263.00 and \$625.00 each, respectively (Source: Caltrans Contract Cost Data 2015). The post sign quantities assumed for each component type is summarized below.

Sign Type	Terrain 1, 2 & 3	Interchange			Intersection
		1	2	3	
One Post Signs	33	14	36	20	3
Two Post Signs	-	4	4	4	0

Minor Items, Roadway Mobilization, and Roadway Additions:

A lump sum value is used to account for minor items, roadway mobilization and roadway additions as described below. These lump sum values are recommended based on provisions in Project Development Procedure manual (PDPM) and the date from individual sources presented in the introduction of this report (Source: RCTC)

Items	Unit Cost
Minor Items	10% of earthwork, pavement structure, drainage, specialty items and traffic items.
Roadway Mobilization	10% of earthwork, pavement structure, drainage, specialty items, traffic items and minor items.
Roadway Additions	10% of earthwork, pavement structure, drainage, specialty items, traffic items and minor items.

II. Structure Items

New Bridge:

New interchanges account for construction of a new bridge. The unit cost for a new travel way bridge construction and RRXings1 and 2 (New and Widening of Rail Grade Crossings) is \$265.00 per square foot (Source: WSP | PB Structural group). The width of a new bridge is assumed to be 82 feet (4 lanes x 12ft + 10ft shoulder x 2 + 14ft median).

Bridge Widening:

Bridge widenings account for the widening of existing bridges. The unit cost is \$295.00 per square foot (Source: WSP | PB Structural group). The width of a bridge

widening is assumed to be: 2 lanes x 12ft + 10ft shoulder. The width of an arterial crossing over rail road is assumed to be 16 feet (1 lane x 12ft + 4ft shoulder).

Structural Mobilization:

The cost for structural mobilization is estimated as 10% of total structure item cost (Source: Typical experience).

III. Right of Way Items

The right of way unit cost varies with land use designation. The unit cost for ROW was developed by Overland, Pacific & Cutler, Inc. based on a review of actual property sales within the WRCOG region during the prior 18 month period. The area of right of way acquisition for the travel way is calculated per additional lane mile, assuming the width of the right-of-way required to be 18 feet per lane (to accommodate a 12 foot roadway lane, shoulders and ancillary amenities, like storm water drainage). The right of way acquisition for RRxings1 and 2 is calculated based on ROW acquisition for bridge approaches.

Property costs per square foot are derived by reviewing a large sample of recently sold land and improved properties within the greater Riverside area. The properties reviewed are identified specifically from completed semi large to very large infrastructure projects and upcoming projects with preferred alternatives and/or approved environmental reports. For the purposes of the 2016 Nexus Study update, an overall sample of 670 properties was used, although an original search sample of almost twice the number of comparative properties was obtained and screened to eliminate extreme outliers and acquisitions primarily for other purposes.

The properties were designated as: urban areas (generally considered downtown, or very close to downtown in the larger cities - predominantly Corona and Riverside, with a few parcels in Temecula and Moreno Valley); suburban (primarily considered the greater areas of Hemet, Perris, San Jacinto, Moreno Valley, Lake Elsinore, outer portions of Riverside / Corona, Temecula, Murrieta, Calimesa, Eastvale, Norco, and other cities of relative size and location as those previously mentioned); and rural (considered the exurban areas between Corona / Lake Elsinore and Perris along the SR-74/79, Lake Matthews, between Wildomar and Murrieta, Temecula and Perris and other similar areas) to correspond with the land use classifications used for cost estimating purposes in the TUMF program. The properties were also determined to be partial or full property takes to determine the relative percentage of each in order to appropriately weight the average cost per square foot of each type of property. Specialty cost percentages as a share of total acquisition costs (i.e. relocation and demolition) were also derived from actual costs based on a sample of the Inland Empire projects that Overland, Pacific & Cutler was directly involved in and therefore able to obtain reliable data.

The result is an estimated average cost per square foot for ROW acquisition by land use classification which is then multiplied by the number of square feet per lane mile to obtain the required ROW to accomplish the TUMF typical cross section. The ROW requirement is then reduced by a factor of 75% for urban and suburban areas based on the collective recommendation of the PWC during the development of

the initial program cost estimation methodology to reflect the assumption that a majority of the proposed TUMF facilities in these areas already exist and/or have a substantial portion of the necessary right-of-way already owned by or dedicated to the responsible jurisdiction. As a result, the TUMF program only includes the estimated cost for 25% of the right-of-way that could potentially be required to accomplish the TUMF cross sections for the conceptual improvement projects identified as part of the program in urban and suburban areas.

Maintenance of Traffic:

A lump sum value is used to account for maintenance of traffic cost of roadway construction. The project maintenance of traffic cost is estimated as 5% (Source: RCTC) of the total project cost.

The consolidated unit cost values include typical per mile or lump sum costs for each of the eligible improvement element. These elements include new roadways, bridge improvements, interchange improvements and railroad grade separation construction costs, and right of way acquisition.

The consolidated unit costs as developed for the 2016 Nexus Update are summarized in **Exhibit F-1**. **Exhibit F-2** provides a summary of the unit costs for the various roadway and structures construction elements defined. **Exhibit F-3** provides a summary of the unit costs for the various right of way categories. **Exhibit F-4** provides worksheets showing the detailed unit cost calculation for each TUMF unit cost category related to roadway and structures construction, and right of way acquisition.

The unit cost assumptions were subsequently applied to the TUMF Network improvements identified to mitigate the cumulative regional transportation impacts of future new development. The resultant cost value was tabulated for each unique segment of the network, by improvement type. A separate cost estimate was generated for regional transit improvements based on information provided by RTA and added to the TUMF Network Cost Estimate table.

Supplemental categories have been added to the cost assumptions to better delineate the costs associated with planning and engineering a project, accommodating contingencies, mitigating the cumulative multi-species habitat impacts of TUMF arterial highway improvements in accordance with the adopted Riverside County Multi-Species Habitat Conservation Plan (MSHCP), and administering the TUMF program.

Soft Costs

The TUMF program provides for planning, engineering and contingency costs (collectively referred to as soft costs) for eligible projects to be reimbursed through the program. As indicated in Table 4.1, planning costs are considered to include those costs associated with planning, preliminary engineering and environmental assessment of the proposed project, with the eligible amount being 10% of the estimated TUMF eligible construction cost only. Engineering costs are considered to include project study report, design, permitting and construction oversight costs based on 25% of the

estimated eligible construction cost only. Contingency is provided based on 10% of the total estimated eligible facility cost.

The TUMF 10 Year Strategic Plan further defines these soft costs as follows: “eligible infrastructure improvements would also include ... all reasonable required planning, environmental clearance and mitigation, right-of-way documentation, engineering design, plan, specification and estimate preparation and construction management and oversight costs necessary to accomplish the project.”

The estimated cost factors for planning, engineering and contingency were initially established in 2002 by the WRCOG Public Works Committee, which was responsible for the development of the initial TUMF Nexus Study. The percentage multipliers were established by consensus of the PWC based on the collective experience of members in delivering similar public highway projects.

A review of various data sources indicates the cost factors are generally consistent with industry guidance for conceptual cost estimation purposes. The City of Los Angeles, Department of Public Works, Bureau of Engineering *California Multi-Agency CIP Benchmarking Study* (December 2016) indicates that combined design and construction management costs for roadway projects represent, on average, 50% of the total cost of construction¹². Similarly, the American Association of State Highway and Transportation Officials (AASHTO) *Practical Guide for Estimating* (December 2011) also cites the following average multipliers for a range of planning and engineering activities based on national research as a basis for conceptual cost estimation:

- Preliminary Engineering Costs (including survey/data collection, design, environmental, utilities and contract administration) – 10% to 25% of total construction cost¹³
- Construction Engineering – 10% to 26% of total construction costs¹⁴

Furthermore, the contingency rate utilized in the TUMF program is significantly less than the industry norm for conceptual cost estimation purposes. Specifically, Caltrans *Project Development Procedures Manual* (October 2014) advocates for contingency rates of 30% to 50% of total costs to be used at the project feasibility (conceptual

¹² City of Los Angeles, Department of Public Works, Bureau of Engineering *California Multi-Agency CIP Benchmarking Study* (December 2016), Table 3-6 Average Project Delivery Costs by Project Type (% of TCC) (Full Range of TCC).

¹³ AASHTO Technical Committee on Cost Estimating (TCCE) *AASHTO Practical Guide for Estimating* (December 2011), Table 2.4. Preliminary Engineering Costs' Average Percentage Ranges (% of Construction).

¹⁴ AASHTO Technical Committee on Cost Estimating (TCCE) *AASHTO Practical Guide for Estimating* (December 2011), Section 2.2.3.2.3 Construction Engineering, “highway improvement projects in an urban environment”.

planning) phase of project development¹⁵, with contingency rates reduced to 10% for preliminary engineers cost estimates completed during project design¹⁶.

MSHCP

Section 8.5.1 of the Riverside County Integrated Project (RCIP) Multiple Species Habitat Conservation Plan (MSHCP) adopted by the Riverside County Board of Supervisors on June 17, 2003 states that “each new transportation project will contribute to Plan implementation. Historically, these projects have budgeted 3% - 5% of their construction costs to mitigate environmental impacts.” This provision is reiterated in the MSHCP Final Mitigation Fee Nexus Report (David Taussig and Associates, Inc., July 1, 2003) section 5.3.1.2 which states that “over the next 25 years, regional infrastructure projects are expected to generate approximately \$250 million in funding for the MSHCP” based on mitigation at 5% of construction costs. To clearly demonstrate compliance with the provisions of the MSHCP, the TUMF program will incorporate a cost element to account for the required MSHCP contribution to mitigate the multi-species habitat impacts of constructing TUMF projects.

In accordance with the MSHCP Nexus Report, an amount equal to 5% of the construction cost for new TUMF network lanes, bridges and railroad grade separations will be specifically included as part of TUMF program with revenues to be provided to the Western Riverside County Regional Conservation Authority (RCA) for the acquisition of land identified in the MSHCP. The relevant sections of the MSHCP document and the MSHCP Nexus Report are included in this Appendix as **Exhibits F-5** and **F-6**, respectively.

Similarly, an amount of 4% of the total TUMF eligible network cost is included as part of the TUMF program with revenues to be utilized by WRCOG to cover the direct costs to administer the program. The costs incurred by WRCOG include direct salary, fringe benefit and overhead costs for WRCOG staff assigned to administer the program and support participating jurisdictions, and costs for consultant, legal and auditing services to support the implementation of the TUMF program.

Table 4.1 summarizes the unit cost estimate assumptions used to develop the TUMF network cost estimate, including a comparison of the original TUMF unit cost assumptions and the current revised unit cost assumptions developed as part of the 2009 Update of the TUMF Nexus Study. Cost estimates are provided in year of original values as indicated.

¹⁵ California Department of Transportation (Caltrans) Division of Design *Project Development Procedures Manual* (October 2014), Chapter 20 – Project Development Cost Estimates, Section 2 – Project Planning Cost Estimates, Article 2 Project Feasibility Cost Estimate, Contingencies.

¹⁶ California Department of Transportation (Caltrans) Division of Design *Project Development Procedures Manual* (October 2014), Chapter 20 – Project Development Cost Estimates, Section 3 – Project Design Cost Estimates, Article 4 Preliminary Engineer's Cost Estimate, Contingencies.

EXHIBIT F-1

2016 TUMF Nexus Update - Arterial Highway Cost Assumptions:

Component Type	Cost Assumptions as published October 18, 2002	Cost Assumption per 2009 Nexus Update October 5, 2009	Cost Assumption per 2016 Nexus Update	Description
Terrain 1	\$550,000	\$428,000	\$492,000	Construction cost per lane mile - level terrain
Terrain 2	\$850,000	\$761,000	\$978,000	Construction cost per lane mile - rolling terrain
Terrain 3	\$1,150,000	\$895,000	\$1,064,000	Construction cost per lane mile - mountainous terrain
Landuse 1	\$900,000	\$1,682,000	\$2,509,000	ROW cost factor per lane mile - urban areas
Landuse 2	\$420,000	\$803,000	\$2,263,000	ROW cost factor per lane mile - suburban areas
Landuse 3	\$240,000	\$237,000	\$287,000	ROW cost factor per lane mile - rural areas
Interchange 1	n/a	\$43,780,000	\$50,032,000	Complex new interchange/interchange modification cost
Interchange 2	\$20,000,000	\$22,280,000	\$25,558,000	New interchange/interchange modification total cost
Interchange 3	\$10,000,000	\$10,890,000	\$12,343,000	Major interchange improvement total cost
Bridge 1	\$2,000	\$2,880	\$3,180	Bridge total cost per lane per linear foot
RRXing 1	\$4,500,000	\$4,550,000	\$4,376,000	New Rail Grade Crossing per lane
RRXing 2	\$2,250,000	\$2,120,000	\$2,733,000	Existing Rail Grade Crossing per lane
Planning	10%	10%	10%	Planning, preliminary engineering and environmental assessment costs based on construction cost only
Engineering	25%	25%	25%	Project study report, design, permitting and construction oversight costs based on construction cost only
Contingency	10%	10%	10%	Contingency costs based on total segment cost
Administration		3%	4%	TUMF program administration based on total TUMF eligible network cost
MSHCP		5%	5%	TUMF component of MSHCP based on total TUMF eligible construction cost

EXHIBIT F-2
WRCOG Transportation Uniform Mitigation Fee
2016 Nexus Update Master Unit Cost Summary

I. Roadway Items	Unit	Unit Cost	Notes
Section 1: Earthwork			
Roadway Excavation			
Travel way	cubic yard	\$10.34	Source: Ave unit value from Caltrans Contract Cost Data 2015 - ITEM 190101
Imported Borrow			
Travel way	cubic yard	\$7.72	Source: Ave unit value from Caltrans Contract Cost Data 2015 - ITEM 198010
Clearing & Grubbing			
Travel way	acre	\$9,625.00	Source: Ave unit valus from Caltrans Contract Cost Data 2014 - ITEM 160103
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	Same as RCTC
Section 2: Pavement Structural Section			
PCC	cubic yard	\$245.00	Source: Ave unit value from Caltrans Contract Cost Data 2015 - ITEM 401050
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	\$170.00	Source: Caltrans Contract cost data 2015 - ITEM 390132 (\$87.34/TON = \$170/CY) Density=144 LB/CY
Aggregate Base (Including Bike Lane)	cubic yard	\$31.00	Source: Caltrans Contract Cost Data 2015 - ITEM 260203
Curb and Gutter	linear foot	\$41.00	Source: Caltrans Contract Cost Data 2015 - ITEM 731504. Standard Plan (Type A2-6), Sheet # A87A (\$689.43/CY x .05903 CY/LF)
Section 3: Drainage			
Project Drainage	lump sum	15% of Sections 1 and 2	Same as RCTC
Section 4: Specialty Items			
Retaining Walls	square foot	\$90.00	Source: Shenping Chou (structural group). Assuming an average wall height of 16'
Ramp Realignment	each		
Water Quality and Erosion Control	lump sum	3% of sections 1 to 3	Same as RCTC
Environmental Mitigation	lump sum	3% of sections 1 to 3	Same as RCTC
Section 5: Traffic Items			
Lighting	each	\$7,500	Source: RCTC SR-91
Traffic Signals	each	\$300,000	Typical for public agency projects in Western Riverside County
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	Source: Caltrans Contract Cost Data 2015 - ITEM 840506. Assuming 2 - 6" thermoplastic stripes lines per lane (\$0.56 x 2 = \$1.12)
Marking - Thermo plastic cross walks & pavement marking	square foot	\$4.30	Source: Ave unit value from Caltrans Contract Cost Data 2015 - Item 840159.
Pavement Marker Retroreflective	each	\$2.65	Source: Ave unit value from Caltrans Contract Cost Data 2015 - ITEM 850111.
Signage - 1 Post	each	\$263.00	Source: Ave unit value from Caltrans Contract Cost Data 2015 - ITEM 152316
Signage - 2 Post	each	\$625.00	Source: Ave unit value from Caltrans Contract Cost Data 2015 - ITEM 152317
Section 6: Minor Items	lump sum	10% of sections 1 to 5	Same as RCTC
Section 7: Roadway Mobilization	lump sum	10% of sections 1 to 6	Same as RCTC
Section 8: Roadway Additions	lump sum	10% of sections 1 to 6	Same as RCTC
II. STRUCTURE ITEMS			
Major New Interchange - 2 Lane New Bridge	square foot	\$265.00	Interchange/Interchange, Cloverleaf Interchange - Cost provided by WSP Structural Group
New Interchange - 2 Lane New Bridge	square foot	\$265.00	Interchange/Interchange, Diamond Interchange - Cost provided by WSP Structural Group
Major Interchange Improvement - 2 Lane Bridge Widening	square foot	\$295.00	Interchange/Interchange, Cloverleaf Interchange - Cost provided by WSP Structural Group
Bridge	square foot	\$265.00	Cost provided by WSP Structural Group
Structure Mobilization	lump sum	10% of structure cost	Typical for public agency projects in Western Riverside County
III. RIGHT OF WAY ITEMS			
Urban			
Travel Way - Additional lane	square foot	\$106	Provided by Overland, Pacific & Cutler, Inc.
Suburban			
Travel Way - Additional lane	square foot	\$95	Provided by Overland, Pacific & Cutler, Inc.
Rural			
Travel Way - Additional lane	square foot	\$3	Provided by Overland, Pacific & Cutler, Inc.
Utility Relocation	lump sum	10% of ROW	Includes mobilization for one occurrence per lane mile
Total Items		I + II + III	Same as RCTC
Maintenance of Traffic	lump sum	5% of total items	Same as RCTC

EXHIBIT F-3
WRCOG Transportation Uniform Mitigation Fee
2016 Nexus Update Master Property Cost Summary

URBAN	Avg. \$ per SF	% of Total Area	Weighted Cost
Commercial			
Part Take	\$35	31.73	\$11.11
Full Take	\$325	8.65	\$28.11
		40%	
Industrial			
Part Take	\$18	3.53	\$0.62
Full Take	\$110	1.92	\$2.11
		5%	
Single Family Residential			
Part Take	\$55	37.82	\$20.80
Full Take	\$235	12.82	\$30.13
		51%	
Multi Family Residential			
Part Take	\$35	2.56	\$0.90
Full Take	\$185	0.96	\$1.78
		4%	
Average Unit Price per Square Foot:			\$95.55
Residential & Non-Res. Relocation (7.5%):			\$7.17
Demolition (3%)			\$2.87
Urban Unit Cost per Square Foot:			\$105.58
SUBURBAN	Avg. \$ per SF	% of Total Area	Weighted Share
Commercial			
Part Take	\$20	32.12	\$6.42
Full Take	\$245	6.95	\$17.03
		39%	
Industrial			
Part Take	\$13	8.94	\$1.12
Full Take	\$90	3.31	\$2.98
		12%	
Single Family Residential			
Part Take	\$45	12.91	\$5.81
Full Take	\$160	27.81	\$44.50
		41%	
Multi Family Residential			
Part Take	\$20	2.32	\$0.46
Full Take	\$140	5.63	\$7.88
		8%	
Average Unit Price per Square Foot:			\$86.20
Residential & Non-Res. Relocation (7.5%):			\$6.46
Demolition (3%)			\$2.59
Suburban Unit Cost per Square Foot:			\$95.25
RURAL	\$ per SF		
Range of Value of Rural Vacant land sold within last year:			\$0.3 - \$10.6
Average price per square foot of rural land:			\$2.75
Miscellaneous improvements (10%):			\$0.28
Rural Unit Cost per Square Foot:			\$3.03

EXHIBIT F-4
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
Terrain 1 - Level Terrain

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Roadway Excavation				
Travel way	cubic yard	\$10.34	0.00	\$0
Imported Borrow				
Travel way	cubic yard	\$7.72	0.00	\$0
Clearing & Grubbing				
Travel way	acre	\$9,625.00	1.94	\$18,667
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	\$0
<u>Section 2: Pavement Structural Section</u>				
Sidewalk				
PCC	cubic yard	\$2445.00	258.13	\$63,243
Travel way				
Asphalt Concrete Type A	cubic yard	\$170.00	1,032.53	\$175,531
Aggregate Base	cubic yard	\$31.00	2,596.98	\$80,506
Curb and Gutter	linear foot	\$41.00	5,280.00	\$216,480
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$83,164
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	10,560.00	\$11,827
Marking	square foot	\$4.30	211.50	\$909
Pavement Marker (Type G One-way Clear Retroreflective)	each	\$2.65	110.00	\$292
Signage - 1 Post (Mainline)	each	\$263.00	33.00	\$8,679
Total Items		1		\$659,297
Maintenance of Traffic		5% of total items	1.00	\$32,965
Project Cost / Lane mile				\$692,262

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
Terrain 2 - Rolling Terrain

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Roadway Excavation				
Travel way	cubic yard	\$10.34	7,739.26	\$80,024
Imported Borrow				
Travel way	cubic yard	\$7.72	7,739.26	\$59,747
Clearing & Grubbing				
Travel way	acre	\$9,625.00	1.94	\$18,667
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	\$13,977
<u>Section 2: Pavement Structural Section</u>				
Sidewalk				
PCC	cubic yard	\$245.00	258.13	\$63,243
Travel way				
Asphalt Concrete Type A	cubic yard	\$170.00	1,032.53	\$175,531
Aggregate Base	cubic yard	\$31.00	2,596.98	\$80,506
Curb and Gutter	linear foot	\$41.00	5,280.00	\$216,480
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$106,226
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	10,560.00	\$11,827
Marking	square foot	\$4.30	211.50	\$909
Pavement Marker (Type G One-way Clear Retroreflective)	each	\$2.65	110.00	\$292
Signage - 1 Post (Mainline)	each	\$263.00	33.00	\$8,679
Total Items		1		\$836,108
Maintenance of Traffic		5% of total items	1.00	\$41,805
Project Cost / Lane mile				\$877,913

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
Terrain 3 - Mountainous Terrain

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Roadway Excavation				
Travel way	cubic yard	\$10.34	15,478.52	\$160,048
Imported Borrow				
Travel way	cubic yard	\$7.72	15,478.52	\$119,494
Clearing & Grubbing				
Travel way	acre	\$9,625.00	1.94	\$18,667
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	\$27,954
<u>Section 2: Pavement Structural Section</u>				
Sidewalk				
PCC	cubic yard	\$245.00	258.13	\$63,243
Travel way				
Asphalt Concrete Type A	cubic yard	\$170.00	1,032.53	\$175,531
Aggregate Base	cubic yard	\$31.00	2,596.98	\$80,506
Curb and Gutter	linear foot	\$41.00	5,280.00	\$216,480
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$129,288
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	10,560.00	\$11,827
Marking	square foot	\$4.30	211.50	\$909
Pavement Marker (Type G One-way Clear Retroreflective)	each	\$2.65	110.00	\$292
Signage - 1 Post (Mainline)	each	\$263.00	33.00	\$8,679
Total Items		1		\$1,012,918
Maintenance of Traffic		5% of total items	1.00	\$50,646
Project Cost / Lane mile				\$1,063,564

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update

Landuse 1 - ROW Urban areas

	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
III. RIGHT OF WAY ITEMS				
<u>Urban</u>				
Travel Way	square foot	\$105.58	95,040.00	\$10,034,348
Project Cost / Lane mile			25%	\$2,508,587

Landuse 2 - ROW Suburban Areas

	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
III. RIGHT OF WAY ITEMS				
<u>Suburban</u>				
Travel Way	square foot	\$95.25	95,040.00	\$9,052,603
Project Cost / Lane mile			25%	\$2,263,151

Landuse 3 - ROW Rural areas

I. Roadway Items	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
III. RIGHT OF WAY ITEMS				
<u>Rural</u>				
Travel Way	square foot	\$3.03	95,040.00	\$287,496
Project Cost / Lane mile				\$287,496

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
Interchange 1 - Complex New Interchange/Interchange Modification

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Imported Borrow				
Travel way	cubic yard	\$7.72	700,000.00	\$5,404,000
Clearing & Grubbing				
Travel way	acre	\$9,625.00	51.93	\$499,823
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	\$540,400
<u>Section 2: Pavement Structural Section</u>				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	\$170.00	13,500.00	\$2,295,000
Aggregate Base (Including Bike Lane)	cubic yard	\$31.00	34,000.00	\$1,054,000
Curb and Gutter	linear foot	\$41.00	31,000.00	\$1,271,000
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$1,659,633
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	84,250.00	\$94,360
Marking	square foot	\$4.30	368.00	\$1,582
Signage - 1 Post	each	\$263.00	14.00	\$3,682
Signage - 2 Post	each	\$625.00	4.00	\$2,500
II. STRUCTURE ITEMS				
Complex New Interchange - 2 Lane New Bridge	square foot	\$265.00	140,400.00	\$37,206,000
Total Items		I + II + III		\$50,031,981
Total Project Cost / lane mile				\$50,031,981

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
Interchange 2 - New Interchange/Interchange Modification

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Imported Borrow				
Travel way	cubic yard	\$7.72	400,000.00	\$3,088,000
Clearing & Grubbing				
Travel way	acre	\$9,625.00	25.12	\$241,818
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	\$308,800
<u>Section 2: Pavement Structural Section</u>				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	\$170.00	7,040.00	\$1,196,800
Aggregate Base (Including Bike Lane)	cubic yard	\$31.00	17,706.67	\$548,907
Curb and Gutter	linear foot	\$41.00	16,000.00	\$656,000
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$906,049
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	43,200.00	\$48,384
Marking	square foot	\$4.30	368.00	\$1,582
Signage - 1 Post	each	\$263.00	36.00	\$9,468
Signage - 2 Post	each	\$625.00	4.00	\$2,500
II. STRUCTURE ITEMS				
New Interchange - 2 Lane New Bridge	square foot	\$265.00	70,000.00	\$18,550,000
Total Items		I + II + III		\$25,558,308
Total Project Cost / lane mile				\$25,558,308

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
Interchange 3 - Major Interchange Improvement

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Imported Borrow	cubic yard	\$7.72	180,000.00	\$1,389,600
Travel way	acre	\$9,625.00	3.97	\$38,182
Clearing & Grubbing	lump sum	10% of Excavation and Borrow Cost	1.00	\$138,960
Travel way				
Develop Water Supply				
<u>Section 2: Pavement Structural Section</u>				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	\$170.00	3,128.89	\$531,911
Aggregate Base (Including Bike Lane)	cubic yard	\$31.00	7,869.63	\$243,959
Curb and Gutter	linear foot	\$41.00	16,000.00	\$656,000
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$449,792
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	32,000.00	\$35,840
Marking	square foot	\$4.30	184.00	\$791
Signage - 1 Post	each	\$263.00	20.00	\$5,260
Signage - 2 Post	each	\$625.00	4.00	\$2,500
II. STRUCTURE ITEMS				
Major Interchange Improvement - 2 Lane Bridge Widening	square foot	\$295.00	30,000.00	\$8,850,000
Total Items		I + II + III		\$12,342,794
Total Project Cost / lane mile				\$12,342,794

EXHIBIT F-4 (Continued)
 WRCOG Transportation Uniform Mitigation Fee
 Cost Assumption Estimate - 2016 Nexus Update
 Bridge 1 - New Bridge Cost

II. STRUCTURE ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Bridge	square foot	\$265.00	12.00	\$3,180
Total Items		I + II + III		\$3,180
Total Project Cost / lane mile				\$3,180

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
RRXing 1 - New Rail Grade Crossing

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Imported Borrow				
Travel way	cubic yard	\$7.72	17,931.03	\$138,428
<u>Section 2: Pavement Structural Section</u>				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	\$170.00	782.22	\$132,978
Aggregate Base (Including Bike Lane)	cubic yard	\$31.00	1,967.41	\$60,990
Curb and Gutter	linear foot	\$41.00	1,180.00	\$48,380
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$57,116
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	1,180.00	\$1,322
II. STRUCTURE ITEMS				
Bridge	square foot	\$265.00	2,880.00	\$763,200
III. RIGHT OF WAY ITEMS				
<u>Urban</u>				
Travel Way - Additional lane	square foot	\$105.58	49,000.00	\$5,173,433
Total Items		I + II + III		\$6,375,846
Total Project Cost / lane mile				\$6,375,846

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2016 Nexus Update
RRXing 2 - Widen Existing Rail Grade Crossing

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
<u>Section 1: Earthwork</u>				
Imported Borrow				
Travel way	cubic yard	\$7.72	17.78	\$137
<u>Section 2: Pavement Structural Section</u>				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	\$170.00	782.22	\$132,978
Aggregate Base (Including Bike Lane)	cubic yard	\$31.00	1,967.41	\$60,990
Curb and Gutter	linear foot	\$41.00	1,180.00	\$48,380
<u>Section 3: Drainage</u>				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	\$36,373
<u>Section 5: Traffic Items</u>				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	\$1.12	1,180.00	\$1,322
II. STRUCTURE ITEMS				
Bridge	square foot	\$265.00	2,880.00	\$763,200
III. RIGHT OF WAY ITEMS				
<u>Urban</u>				
Travel Way - Additional lane	square foot	\$105.58	16,000.00	\$1,689,284
Total Items		I + II + III		\$2,732,663
Total Project Cost / lane mile				\$2,732,663

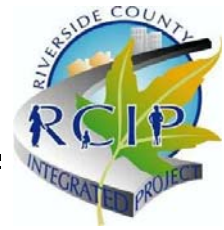
EXHIBIT F-5

Riverside County Integrated Project (RCIP) Multiple Species Habitat Conservation Plan (MSHCP)

adopted by the Riverside County Board of Supervisors on June 17, 2003

Section 8.0 MSHCP Funding/Financing of Reserve Assembly and Management

8.0 MSHCP Funding/Financing of Reserve Assembly and Management



8.5 LOCAL FUNDING PROGRAM

The following local funding plan describes the local commitment for funding Reserve Assembly, Management, and Monitoring.

The local funding program includes funding from a variety of sources, including but not limited to, regional funding resulting from the importation of waste into landfills in Riverside County, mitigation for regional public infrastructure projects, mitigation for private infrastructure projects, mitigation for private Development, funds generated by local or regional incentive programs that encourage compact growth and the creation of transit-oriented communities, and dedications of lands in conjunction with local approval of private development projects.

The local funding program will fund the local portion of:

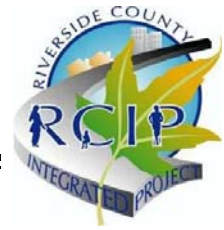
- Land acquisition
- Management
- Monitoring
- Adaptive Management
- Plan administration

8.5.1 Funding Sources

Local funding sources include funding from both public and private developers and regional entities in an effort to spread the financial burden of the MSHCP over a broad base. The mix of funding sources provides an equitable distribution of the cost for local mitigation under the MSHCP. In addition to equitably distributing mitigation for local projects, utilizing a mixture of funding sources will help ensure the long-term viability of the local funding program because a temporary decline in funding from one source may be offset by increases from another. The proposed local funding sources are described below and include:

- Local Development Mitigation Fees
- Density Bonus Fees
- Regional Infrastructure Project Contribution
- Landfill Tipping Fees

8.0 MSHCP Funding/Financing of Reserve Assembly and Management



- Other Potential New Revenue Sources
- **Local Development Mitigation Fees**

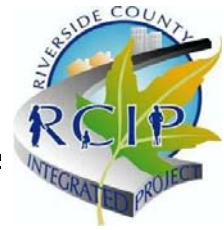
New Development affects the environment directly through construction activity and cumulatively through population bases that result from Development. Government Code Section 66000 et seq. allows cities and counties to charge new Development for the costs of mitigating the impacts of new Development. The Cities and County will implement a Development Mitigation Fee pursuant to the MSHCP; this fee will be one of the primary sources of funding the implementation of the MSHCP. The fee ordinance adopted by the Cities and the County will provide for an annual CPI adjustment based upon the Consumer Price Index for “All Urban Consumers” in the Los Angeles-Anaheim-Riverside Area, measured as of the month of December in the calendar year which ends in the previous Fiscal Year. There will also be a provision for the fee to be reevaluated and revised should it be found to insufficiently cover mitigation of new Development. A fee of approximately \$1,500 per residential unit (or an equivalent fee per acre) and \$4,800 per acre of commercial or industrial Development was used in the revenue projection shown in *Appendix B-05* of this document. The projected revenues from the Development Mitigation Fee are anticipated to be approximately \$540 million over the next 25 years. A nexus study is required to demonstrate that the proposed fee is proportionate to the impacts of the new Development.

➤ **Density Bonus Fees**

The New Riverside County General Plan creates a number of incentive plans that have the potential both to further the goals of the County’s General Plan and to facilitate the implementation of the MSHCP. *Section 8.4.2* above discusses the use of the Rural Incentive Program to aid in the Conservation of lands through non-acquisition means. An additional component of the Incentive Program enables developers to acquire the right to develop at an additional 25% increase in density by providing enhancements to their projects and by paying a “Density Bonus Fee.” The fee is anticipated to be \$3,000 – \$5,000 per additional unit. This program offers a significant incentive to developers when compared with the typical cost of creating a new buildable lot.

The Density Bonus program is new to Riverside County, and it is, therefore, difficult to project annual revenues. The Local Funding Program assumes that between 10% and 20% of the residential units built in the unincorporated County area will participate in the incentive program and that only 50% of the revenues of the program will be committed to the MSHCP, with the remaining portion staying in the local community in which the additional units are located to provide additional

8.0 MSHCP Funding/Financing of Reserve Assembly and Management



amenities that will help offset the greater density. Of the 330,000 units projected to be built over the next 25 years, 10% (or 33,000 units) are assumed to be built utilizing the Density Bonus Fee resulting in \$132,000,000 in revenues of which 50% (or \$66,000,000) will be allocated to the MSHCP.

➤ Regional Infrastructure Project Contribution

Regional infrastructure projects directly affect the environment not only through the effect they have on species and their Habitats, but also by facilitating continued new Development. It is appropriate, therefore, for regional infrastructure projects to contribute to Plan implementation . Four general categories of infrastructure projects have been identified:

- Transportation Infrastructure
- Regional Utility Projects
- Local Public Capital Construction Projects
- Regional Flood Control Projects

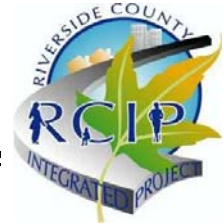
Transportation Infrastructure

The RCIP has identified the need for approximately \$12 billion in new transportation infrastructure to support the Development proposed for the next 25 years. Each new transportation project will contribute to Plan implementation . Historically, these projects have budgeted 3% – 5% of their construction costs to mitigate environmental impacts. The local funding program anticipates that more than one-half of the \$12 billion cost of contribution to acquisition of Additional Reserve Lands will be funded locally and will result in approximately \$371 million in contribution over the next 25 years as discussed below.

▶ Riverside County's ½ cent sales tax for Transportation

In 1988, Riverside County voters approved a measure to increase local sales tax by ½ cent to fund new transportation projects (Measure A). The sales tax measure is due to be reauthorized in 2002. Under the reauthorization, \$121 million will be allocated as local contribution under the MSHCP. (For further information on the sales tax measure, see *Section 13.5* of the MSHCP Implementing Agreement and *Appendix B-07* of this document).

8.0 MSHCP Funding/Financing of Reserve Assembly and Management



Regional Utility Projects

As Riverside County's population doubles over the next 25 years, new regional utility infrastructure will be required. Since the utilities are not Permittees under the MSHCP, they may choose to mitigate under the Plan or seek their own regulatory permits. In either case, their mitigation will be focused on the objectives of the MSHCP and will contribute to the local implementation funding. No estimate of the number of projects or the scope or costs is available at this time; consequently, no estimate of mitigation funding has been made. The Permittees expect that regional utility projects will contribute to the implementation of the MSHCP and provide an additional contingency should other revenue sources not generate the projected levels of funding or should implementation costs be higher than projected.

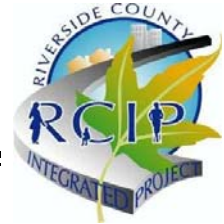
Local Public Capital Construction Projects

Local public capital construction projects may include construction of new schools, universities, City or County administrative facilities, jails, courts, juvenile facilities, parks, libraries, or other facilities that serve the public. These projects will be mitigated under the MSHCP and will utilize a per acre mitigation fee based on the fee then in place for private, commercial and industrial Development. No attempt has been made to estimate the number or magnitude of these projects. The Permittees expect that local public construction projects will contribute to the implementation of the MSHCP and provide an additional contingency should other revenue sources not generate the projected levels of funding or should implementation costs be higher than projected.

Regional Flood Control Projects

Flood control projects will receive coverage under the MSHCP for both new capital construction and for the maintenance of existing and new facilities. Preliminary estimates from the Riverside County Flood Control and Water Conservation District indicate that they will likely budget approximately \$15 M in projects annually. Based on using 3% of capital costs, the District would be expected to contribute approximately \$450,000 to \$750,000 annually to MSHCP implementation. Since many flood control projects serve existing developed communities and therefore have less impacts than projects adding capacity to serve new Development and may provide some conservation value especially in terms of Constrained Linkages, the District's contributions may average something below the 5% level on average.

8.0 MSHCP Funding/Financing of Reserve Assembly and Management



➤ Landfill Tipping Fees

Riverside County has utilized revenues from public and private landfills in Riverside County to generate funding for conservation and open space projects for over a decade. In 1990, the County utilized \$1 per ton tipping fee assessed all waste deposited in County landfills to fund the acquisition of the Santa Rosa Plateau and approximately \$260,000 annually to fund the operation of the County Park and Open Space Districts. More recently, the County has negotiated agreements with two private landfills in the County to commit \$1 per ton on all waste imported from outside Riverside County to Conservation within Riverside County.

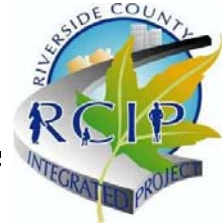
El Sobrante Landfill

This privately owned landfill was permitted to expand its capacity to 10,000 tons per day in 2001. In approving the landfill expansion, the Riverside County Board of Supervisors authorized fifty cents per ton of the County's portion of the revenue from the landfill expansion to be applied to Conservation in addition to the \$1 per ton that was committed under the landfill agreement. The projection of the annual tonnage and revenue for Conservation included in *Appendix B-09* of this document reflects the \$1.5 per ton commitment to Conservation. Over the life of the landfill, 60 million tons of imported waste are allowed. Sixty million tons at \$1.5 per ton will generate \$90 million for Conservation. The Cash Flow Analysis in *Appendix B-10* of this document reflects the annual revenues from the El Sobrante Landfill.

County Landfills

The County Board of Supervisors, beginning in 1990, authorized \$1 per ton for all in-county waste deposited in County landfills to go toward habitat and open space Conservation. After adjusting for the debt service on the Santa Rosa Plateau acquisition and an annual commitment to the Park and Open Space District, there is a projected annual balance of \$400,000 that can be applied to additional Conservation under the MSHCP. *Appendix B-09* of this document includes a projection of tonnage from in-County waste at County landfills. The Cash Flow Analysis in *Appendix B-10* of this document reflects the annual revenues from the County landfills. Over the next 25 years, County landfills will contribute approximately \$10 million to the implementation of the MSHCP.

8.0 MSHCP Funding/Financing of Reserve Assembly and Management



Eagle Mountain

In 1997, the County approved the use of the old Kaiser mine at Eagle Mountain in eastern Riverside County as a regional landfill to serve primarily Los Angeles County. Subsequently, the Los Angeles County Sanitation District has acquired the rights to the Eagle Mountain Landfill and intends to begin operation of the landfill within the next decade. At this time, litigation is still pending that could prohibit the development of the landfill. The Development Agreement with the County would require the payment of \$1 per ton for Conservation if the landfill is developed. Conservation needs in the Coachella Valley would have first priority over the revenues from the Eagle Mountain Landfill; however, some portion of the revenues would be available to support Conservation needs in Western Riverside County. The Permittees expect that the Eagle Mountain Landfill will provide funding to support implementation of the MSHCP over the life of the MSHCP. However, no revenue from the Eagle Mountain Landfill has been projected in the funding program at this time. These potential revenues provide a contingency should other revenue sources not generate the projected levels of funding or should implementation costs be higher than projected.

➤ Potential New Revenue Sources

The County and Cities may levy assessments to pay for services that directly benefit the property on which the fee is levied. Under current law, a local election may be required to initially levy the assessment or to confirm the assessment if a protest is filed. No such assessments are currently projected for the MSHCP. As the MSHCP Conservation Area is developed, however, its value as open space and for recreation opportunities may lend itself to a local funding program for ongoing management and enhancement. In more urban areas, which Western Riverside County will be in 25 years, local voters routinely approve such funding programs.

Other revenue opportunities may be realized over the next 25 years. The County, Cities, and RCA will explore new revenue sources to support the acquisition of the MSHCP Conservation Area and its long-term management and enhancement. A goal of any new fee would be to spread a portion of the costs for the MSHCP across as broad a regional base as possible.

8.0 MSHCP Funding/Financing of Reserve Assembly and Management



**TABLE 8-5
LOCAL PUBLIC/REGIONAL FUNDING SOURCES**

Source Anticipated	\$ Range	Requirements to Implement	Responsible Party
Private Funding Sources:			
Cities and County	\$539.6M	Approval of County Ordinance	County
Development Mitigation Fees		Approval of City(ies) Ordinance	Cities
Density Bonus Fees	\$66M	Approval of General Plan	County
Public Funding Sources			
Local Roads	\$121M	Approval of Measure A, local agreement on allocation	RCTC/County
Other Transportation	\$250M	% of new road construction	RCTC/County
Other infrastructure Projects	\$unknown	Project-by-project negotiation	County and Cities
El Sobrante Landfill	\$90M	In place	County
County Landfills	\$10M	In place	County
Eagle Mountain Landfill	\$unknown	In place pending start-up	County
New Regional funding	\$unknown	Voter approval	County and Cities
TOTAL LOCAL FUNDS	\$1,076.6M		

8.6 ADEQUACY OF FUNDING

The Permittees and the Wildlife Agencies will annually evaluate the performance of the funding mechanisms and, notwithstanding other provisions of the MSHCP, will develop any necessary modifications to the funding mechanisms to address additional funding needs. Additionally, this annual evaluation will include an assessment of the funding plan and anticipate funding needs over the ensuing 18 months for the purpose of identifying any potential deficiencies in cash flow. If deficiencies are identified through this evaluation, then the Permittees and the Wildlife Agencies will develop strategies to address any additional funding needs consistent with the terms and conditions of the MSHCP.

EXHIBIT F-6

MSHCP Final Mitigation Fee Nexus Report
David Taussig and Associates, Inc., July 1, 2003

Section 5.3 Funding Sources for Program Costs

5.3. FUNDING SOURCES FOR PROGRAM COSTS

The local funding program includes revenues from mitigation for local transportation projects, mitigation for regional infrastructure, landfill tipping fees, and local development mitigation fees, as discussed in Sections 5.3.1 through 5.3.4 and summarized in Section 5.3.5. These revenue sources are committed to finance the total MSHCP program costs as described in Section 5.2.

5.3.1 MITIGATION FOR REGIONAL AND LOCAL INFRASTRUCTURE

Transportation, utility, and public capital construction projects are the three general categories of regional and local infrastructure projects, which mitigate for their impacts under the MSHCP. Expected contributions from these sources are discussed in this section of the Nexus Report.

5.3.1.1. Transportation Infrastructure

Riverside County's ½ Cent Sales Tax for Transportation

Under the reauthorization of Measure A, \$121 million will be allocated as local mitigation under the MSHCP.¹⁰⁷

5.3.1.2. Regional Infrastructure

Over the next 25 years, regional infrastructure projects are expected to generate approximately \$250 million in funding for the MSHCP.¹⁰⁸

5.3.1.3. Regional Utility Projects

Public utilities are not Permittees, and therefore have the option to mitigate under the MSHCP or under separate regulatory permits. Mitigation for public utility projects will focus on the objectives of the MSHCP and will contribute to the Local Implementation Funding. No estimate of the number of projects or the scope or costs is available at this time, therefore no estimate of mitigation funding has been made.

¹⁰⁷ The Measure A contribution consists of approximately \$70 million for CETAP projects and approximately \$51 million for "Named Highway Projects" excluding State and Caltrans. Reference is made to Section 13.5 of the IA and Appendix B-07 of Volume I of the Draft MSHCP for further information on the sales tax measure.

¹⁰⁸ Based on \$5 billion in costs and 5% mitigation. Refer to Appendix B-08 of Volume I of the Draft MSHCP for additional information.

5.3.1.4. Local Public Capital Construction Projects

Local public capital construction projects may include construction of new schools, universities, City or County administrative facilities, jails, courts, juvenile facilities, parks, libraries, or other facilities that serve the public. These projects will be mitigated under the MSHCP and pay the same per acre mitigation fee as the fee then in place for private, commercial and industrial Development. No attempt has been made to estimate the number or magnitude of these projects.

5.3.2 LANDFILL TIPPING FEES

The County has committed monies from landfill tipping fees collected from waste imported from outside Riverside County for Habitat conservation.¹⁰⁹ Approximately \$90 million is expected to be generated from the privately owned El Sobrante Landfill. Once operation begins, revenues from the Eagle Mountain Landfill will also contribute to MSHCP implementation, but no revenues have been projected yet.

5.3.3 SUMMARY OF FUNDING SOURCES

As discussed in Sections 5.3.1 through 5.3.3 above, Table 5-3 summarizes the anticipated revenue sources, the requirements for implementation, and the responsible party for approval of implementation by private and public funding sources.

Table 5-3
Mix of Anticipated Revenue Sources

Source Anticipated	\$ Range	Requirements to Implement	Responsible Party
Public Funding Sources:			
Local Roads	\$121,000,000	Approval of Measure A, local agreement on allocation	RCTC/County
Regional Infrastructure	\$250,000,000	% of new infrastructure construction	County/other agencies
El Sobrante Landfill	\$90,000,000	In place	County
TOTAL LOCAL FUNDS	\$461,000,000		

¹⁰⁹ El Sobrante's contribution assumes 60 million tons of imported waste at \$1.50 per ton. Reference is made to Section 8.5.1 and Appendix B-09 of Volume I of the Draft MSHCP.

The use of a variety of funding sources ensures long-term viability of the overall funding program, as a temporary revenue decline from one source may be offset by revenue increases by others.

5.4. COMPARISON OF PROGRAM COSTS WITH ANTICIPATED REVENUE SOURCES

The LDMF may only be used for Habitat acquisition and program administration. Expected revenues of \$461 million from mitigation for local transportation projects, mitigation for regional infrastructure projects, and landfill tipping fees will be used to fund management, adaptive management, and biological monitoring (the “Other Program Costs”). Table 5-4 sets forth the costs for these activities versus expected revenues.

Table 5-4
Other Program Costs versus Expected Revenues – First 25 Years

Other Program Costs	Amount
Conservation Area Management (152,000 acres)	\$110,984,500
Adaptive Management (152,000 acres)	\$44,500,000
Biological Monitoring (152,000 acres)	\$34,700,000
Total Other Program Costs	\$190,184,500
Expected Revenues	Amount
Local Roads	\$121,000,000
Regional Infrastructure	\$250,000,000
El Sobrante Landfill	\$90,000,000
Total Expected Revenues	\$461,000,000
<i>Difference</i>	\$270,815,500

As indicated in Table 5-4 and Figure 5.1, there is a surplus of approximately \$270.8 million. This amount is not sufficient to fund habitat acquisition and program administration, consequently, the LDMF is an essential component of the overall funding program as expected revenues from mitigation for local transportation projects, mitigation for regional infrastructure, and landfill tipping fees will not cover all of the MSHCP program costs.

Appendix G - TUMF 2016 Program Update Disposition of Network Change Requests

As part of the earlier TUMF Nexus Study 2015 Update, the list of proposed improvements to mitigate the cumulative regional impacts of new development in the TUMF Network Cost Estimate table included in the previously adopted Nexus Study was reviewed for accuracy. In particular, the Network Cost table was reviewed to ensure the included projects were consistent with the mitigation needs identified by the RivTAM future year forecast traffic conditions.

To assist in the review of the Network Cost Estimate table, participating local jurisdictions, private developers and the Riverside County Transportation Commission were asked to submit requests for changes to the TUMF Network. WRCOG subsequently reviewed 54 separate requests for network changes.

The specific project requests were screened by the WRCOG Public Works Directors Committee for consistency with TUMF network guidelines during a series of workshop meetings conducted in late 2014. At least one workshop was held within each of the five TUMF zones with the purpose of reviewing those requests affecting the particular zone. Based on the findings of the request screening and workshop reviews, elements of specific projects were revised to reflect only necessary network corrections, modifications to project assumptions and to incorporate a limited number of additional improvements. The resultant project list was subsequently endorsed by the WRCOG Public Works Directors Committee, WRCOG City Managers Technical Advisory Committee and WRCOG Executive Committee. Approximately \$200 million in projects were subsequently eliminated from the TUMF Network as a result of the screening and cooperative review process, while an additional \$61 million in requested projects were not recommended for inclusion in the program based on the screening results. The matrix summarizing the disposition of the requests received as part of the earlier 2015 TUMF Nexus Update is included as **Exhibit G-1** in this Appendix.

Subsequent to the September 14, 2015 action of the WRCOG Executive Committee to “delay finalizing the Nexus Study for the TUMF Program Update until the 2016 Southern California Association of Governments’ 2016 Regional Transportation Plan / Sustainable Communities Strategy growth forecast is available for inclusion in the Nexus Study”, WRCOG staff initiated an additional review of the TUMF Network to consider the effects of the demographic forecasts adopted as part of the 2016 RTP/SCS. As described in Appendix E, this review considered various RivTAM outputs reflecting the TUMF network performance indicators as the basis for determining the continued validity of facilities and associated improvements for inclusion as part of TUMF. Additionally, WRCOG solicited input from the participating jurisdictions regarding the status and validity of facilities and projects, as well as reviewing comments and recommendations provided by the BIA in a letter dated August 5, 2015. In excess of \$300 million in facilities and associated improvements (approximately 10% of the networks value) were eliminated from the TUMF Network as a result of the 2016 Nexus Update network adjustments. **Exhibit G-2** in this Appendix summarizes the disposition of the network adjustments completed specifically as part of the 2016 Nexus Update.

With the release of the Draft 2016 Nexus Update Study Report for a 45 day review period commencing on March 1, 2017 and ultimately ending April 21, 2017, additional comments were provided to WRCOG staff by participating jurisdictions and other stakeholders. These comments included additional recommendations for network revisions to account for projects completed since the preparation of the most recent draft TUMF network as the basis for modeling analysis in early 2017, and for incorporating additional obligated funding derived from SB-1 as approved by Governor Brown on April 28, 2017. The recommended network revisions were reviewed by WRCOG consultant staff, and completed projects were reflected in the existing lanes and/or percent completes in the TUMF network cost table included in **Exhibit H-1**. Furthermore, the SB-1 funding for three TUMF projects specifically earmarked as part of the SB-1 transportation funding bill was reflected in the obligated funding included in **Exhibit H-2**. These revisions resulted in a reduction of approximately 38 lane miles from the TUMF network project list, and added \$93.6 million in obligated funding value.

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Central Zone Network Adjustments						
Moreno Valley	Alessandro Boulevard	I-215 to Perris Blvd.	Correct segment mileage from 3.71 miles to 3.52 miles.	Correct mileage for Alessandro, from I-215 to Perris, from 3.71 miles to 3.52 miles. Network \$5,322 M to \$5,051 M. 60% complete. FI= (\$271,000).	Approved correcting arterial segment mileage, from 3.71 miles to 3.52 miles. FI= (\$271,000).	\$ (271,000)
Moreno Valley	Perris Boulevard	Ironwood Ave. to Reche Vista Ave.	Correct segment mileage from 2.20 miles to 2.09 miles.	Correct mileage for Perris Blvd, from Ironwood to Reche Vista, from 2.20 miles to 2.09. Network. = \$7,099 M to \$6,749 M. 60% complete. FI= (\$350,000).	Approved correcting arterial segment, from 2.20 miles to 2.09. FI= (\$350,000).	\$ (350,000)
Moreno Valley	Alessandro Boulevard	Moreno Beach to Gilman Springs	Separate Alessandro (Moreno Beach to Gilman Springs) into 2 line items on the Network: Moreno Beach to Merwin 1.35 miles with 100% local funding obligations to cover maximum TUMF share; and Alessandro, Merwin to Gilman Springs, 2.78 miles to remain on Network at maximum TUMF share.	Remove costs for Alessandro, from Moreno Beach to Merwin segment from the Network. City to provide letter to WRCOG stating that the segment will be delivered by the City with local funding source. Facility 0% complete. FI=(\$3,164 M).	Approved removing segment costs from the Network. City to provide letter to WRCOG stating that the segment will be delivered by the City with local funding source. FI=(\$3,164 M).	\$ (3,164,000)
Moreno Valley	Eucalyptus Avenue	Frederick St. to Moreno Beach Dr.	Add Eucalyptus Avenue (Frederick St. to Moreno Beach) 4.44-mile segment, 4 to 4 lanes, 100% completed as part of the larger Eucalyptus Street (SR-60 to Theodore) arterial necessary to provide regional connectivity in the area. No costs associated with segment.	Add Eucalyptus Avenue, from Frederick St. to Moreno Beach to Network to provide regional connectivity. City to provide letter to WRCOG stating that the segment will be delivered by the City with local funding source. Facility 100% complete. FI= \$0.00 M.	Approved adding segment to Network. City to provide letter to WRCOG stating that the segment will be delivered by the City with local funding source. FI= \$0.00 M.	\$ -
Moreno Valley	Eucalyptus Avenue	Moreno Beach Dr. to Redlands Ave.	Add Eucalyptus (Moreno Beach to Redlands) 1.28-mile segment, 0 to 4 new lanes as part of the larger Eucalyptus Street (Nason to Theodore) arterial necessary to provide regional connectivity in the area.	Add Eucalyptus Avenue, from Moreno Beach to Redlands in order to provide regional connectivity. Facility 23% complete. FI= \$4,618 M.	Approved adding arterial segment to Network. FI= \$4,618 M.	\$ 4,618,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Central Zone Network Adjustments, continued						
Moreno Valley	Eucalyptus Avenue	Redlands Ave. to Theodore St.	Add Eucalyptus (Redlands to Theodore) 1.00-mile segment, 2 to 4 lanes as part of the larger Eucalyptus Street (Nason to Theodore) arterial necessary to provide regional connectivity in the area.	Add Eucalyptus Avenue, from Redlands to Theodore in order to provide regional connectivity. Facility 40% complete. FI= \$1,406 M.	Approved adding arterial segment to Network. FI= \$1,406 M.	\$ 1,406,000
Moreno Valley	Ironwood Avenue	SR-60 to Day St.	Separate Ironwood Avenue (SR-60 to Redlands) into 3 line items on the Network to show SR-60 to Day 1.33 miles, 50% complete 2 to 4 lanes, full funding obligated for I/C at Box Springs from other sources. Remove Ironwood/SR-60/I-215 from Network.	Remove SR-60/I-215/Ironwood/Box Springs Road Interchange costs from Network. City will fund from local sources. City to provide letter to WRCOG stating Interchange will be delivered by the City with local funding. Facility 50% complete. FI= (\$15,790,500 M).	Approved removing arterial segment costs from Network. City to provide letter to WRCOG stating Interchange will be delivered by the City with local funding. FI= (\$15,790,500 M).	\$ (15,790,500)
Moreno Valley	Ironwood Avenue	Day St. to Perris Blvd.	Separate Ironwood Avenue (SR-60 to Redlands) into 3 line items on the Network to show 3.02 mile segment from Day to Perris 100% completed, no costs associated on Network.	Remove completed section of Ironwood costs from the Network. Facility 100% complete. FI= \$0.00.	Approved removing completed arterial segment costs from the Network. Facility 100% complete. FI= \$0.00.	\$ -
Moreno Valley	Day Street	SR-60 Interchange, Ironwood to SR-60	Add type 3 interchange at Day Street and SR-60.	Add type 3 interchange at Day Street/SR-60 to Network. Costs are offset by City's funding type 3 interchange at Ironwood/Box Springs Road/I-215/SR-60 with local sources. Facility 0% complete. Pending existing need. FI=\$0.00.	Approved adding type 3 interchange to Network. Costs are offset by City's funding type 3 interchange at Ironwood/Box Springs Road/I-215/SR-60 with local sources. FI=\$0.00.	\$ -
Moreno Valley	Ironwood Avenue	Perris Blvd. to Redlands Ave.	Separate Ironwood Avenue (SR-60 to Redlands) into 3 line items on the Network to show 4.11 mile Ironwood Avenue segment, from Perris to Redlands from 2 to 4 lanes 0% completed. \$4,731 M to be funded local DIF.	Remove Ironwood Avenue, from Perris to Redlands arterial costs from Network. City to provide letter to WRCOG stating arterial segment will be delivered by the City with local funding source. Facility 0% complete. FI= (\$4,731 M)	Approved removing arterial costs from Network. City to provide letter to WRCOG stating arterial segment will be delivered by the City with local funding source. FI= (\$4,731 M)	\$ (4,731,000)

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Central Zone Network Adjustments, continued						
Moreno Valley	Lasselle Street	Eucalyptus Ave. to Alessandro Blvd.	Remove \$2.145 M TUMF funding for 1.00-mile segment of Lasselle (Eucalyptus to Alessandro) from 2014 Network. Reported as 40% complete. City to deliver in local DIF Program.	Remove Lasselle Street, from Eucalyptus to Alessandro arterial Network costs. City to provide letter to WRCOG stating arterial segment will be delivered by the City with local funding source. Facility 40% complete. FI= (\$2.145 M)	Approved removing arterial costs from the Network. City to provide letter to WRCOG stating arterial segment will be delivered by the City with local funding source. FI= (\$2.145 M)	\$(2,145,000)
Moreno Valley	Theodore Street	SR-60 Interchange to Eucalyptus Avenue	Add new interchange at Theodore/SR-60, plus 2 additional lanes from SR-60 to Eucalyptus (0.23 miles) to Network to provide regional connectivity.	Add new type 2 interchange at Theodore/SR-60 and add 2 additional lanes on Theodore, from the interchange to Eucalyptus (0.23 miles). City will provide \$20 M in local funding source to contribute to the construction. Facility 0% complete. Interchange costs = \$32.845 - \$17 M. FI=\$15.845 M in 2009 costs. (Approximately \$21.683M in 2015 Network costs)	Approved adding type 2 interchange and 2 future lanes from the interchange to Eucalyptus (0.23 miles). City will provide \$20 M in local funding source to contribute to the construction. FI=\$15.845 M	\$15,845,000
Perris	Case Road	Goetz Rd. to I-215 Interchange	Add Case Road, from Goetz to I-215 to the Network to provide connectivity between the Perris Transit Station and the proposed RCTC Metro South Station.	Add Case Road, from I-215 to Goetz, from 2 to 4 lanes. Recent Modeling results support adding 2.36 miles of Case Road, plus a 122' bridge to the Network to provide connectivity between the Perris and proposed RCTC Metro South Stations. Facility 00% complete. FI= 9,493 M.	Approved adding arterial segment and 122' bridge to the Network to provide connectivity between the Perris and proposed RCTC Metro South Stations. FI= 9,493 M.	\$9,493,000
Perris/San Jacinto/Unincorporated	Mid-County Parkway/ Placentia and Ramona Expressway	I-215 to Sanderson/SR-79	Realign Mid-County Parkway along existing Placentia and Ramona Expressway for 22.8 miles and increase future lanes from 4 to 6 and 2 to 6 lanes, respectively.	Realign the Mid-County Parkway as proposed to reflect the final alignment, to include type 1 interchange, and one each 300' and 1,300' bridges. The approved alignment has a positive fiscal impact. Revised Facility 0 to 28% complete. FI= approximately (\$100 M)	Approved realigning Mid-County Parkway as proposed (which includes existing type 1 interchange and one each 300' and 1,300' bridges). The approved alignment has a positive fiscal impact. FI= approximately (\$100 M)	\$(100,000,000)
Central Zone Fiscal Impact=					Central Zone Fiscal Impact=	\$(95,089,500)

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Hemet/San Jacinto Zone Network Adjustments						
Unincorporated	SR-79 (Hemet/San Jacinto Bypass)	Ramona Expressway to Winchester Road	At the Zone Network Review meeting recent modeling results recommend reducing future lanes for 11.22 miles on SR-79 (Hemet/San Jacinto Bypass), from Ramona Expressway to Winchester Road, from 0 to 6 to 0 to 4 on Network.	Reduce future lanes on SR-79 (Hemet/San Jacinto Bypass), from 6 to 4 between Ramona Expressway and Winchester Road. FI= (\$28,789 M)	Approved reducing future lanes on arterial segment, from 6 to 4 between Ramona Expressway and Winchester Road. FI= (\$28,789 M)	\$ (28,789,000)
Hemet/San Jacinto Zone Fiscal Impact						
						\$ (28,789,000)
Northwest Zone Network Adjustments						
Corona	Cajalco Road	I-15 Interchange	Upgrade the existing Cajalco Road/I-15 Interchange from a type 2 to a type 1 Interchange on the Network.	Change the Cajalco Road/I-15 Interchange from a type 2 to a type 1. Cajalco Road provides regional connectivity from the I-15 to the San Jacinto Valley, connecting to SR-79 to the Pass Zone and I-10. Developer is willing to cost-share construction phase. FI=\$31.175 M.	Approved upgrading Interchange from a type 2 to a type 1. Developer is willing to cost-share construction phase. FI=\$31.175 M.	\$ 31,175,000
Corona	Foothill Parkway	Lincoln Ave. to Paseo Grande	Maximum TUMF Share for Construction Phase shown as obligated by City for 2009 Network Update. Please show \$7,282 M Construction as not obligated on the Network Update.	Add \$7,282 to the Network. FI=\$7,282 M.	Approved adding \$7,282 back on arterial segment to cover loss of State and Federal funds to the Network. FI=\$7,282 M.	\$ 7,282,000
Eastvale/ Administrative	Schleisman Road	Harrison Street to Sumner Avenue. 2 to 4 lanes.	Reduce future lanes on Schleisman Road, from Harrison to Sumner Avenue, from 2 to 6 lanes to 4 to 4 lanes.	Reduce the future lanes on Schleisman Road, from Harrison St. to Sumner Avenue, from 6 to 4 to support new traffic volume. Facility 100% complete. FI= (\$1,790 M)	Approved reducing future lanes on arterial, from Harrison St. to Sumner Avenue, from 6 to 4. FI= (\$1,790 M)	\$ (1,790,000)

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Northwest Zone Network Adjustments, continued						
Eastvale	Schleisman Road	I-15 Interchange, Hamner Avenue to Arlington	Remove proposed Schleisman/I-15 Interchange and arterial, from Hamner Avenue to Arlington from Network. No longer considered viable build option. Emphases is on improving nearby Limonite Avenue and I-15 Interchange instead.	Remove the Schleisman Road/I-15 Type 1 interchange and Hamner Avenue to Arlington arterial segment, with a 1,000' bridge from the Network, which is consistent with Norco and Jurupa Valley's current development trends and General Plans. Facility 0% complete. FI= \$91,992 M to \$0.00	Approved removing Type 1 interchange, arterial segment, and a 1,000' bridge from the Network, which is consistent with Norco and Jurupa Valley's current development trends and General Plans. FI= \$91,992 M to \$0.00	\$ (91,992,000)
Eastvale	Limonite Avenue	Harrison Street to Hellman Avenue, plus a 200' bridge	Add new segment - Limonite Avenue, Archibald to Hellman (at Keller) to Network 1.12 miles, 0 to 6 lanes, plus a 200' bridge.	Add Limonite Avenue, from Archibald to Hellman (at Keller), from 0 to 4 lanes, with a 200' bridge, 1.12 miles. Facility 0% complete. FI=\$8,588 M.	Approved adding arterial segment and a 200' bridge to the Network and widening from 0 to 4 lanes to complete regional connectivity. FI=\$8,588 M.	\$ 8,588,000
Eastvale	Archibald Avenue	County Line to River Road	Re-locate 1,200 foot bridge from Archibald Avenue segment on the Network to River Road (Archibald to Corydon) segment. Bridge construction was completed using other funding sources.	Correct location of the bridge from Archibald to River Road. Bridge is completed. Facility 100% complete. FI=(\$0.00) M.	Approved correcting bridge location on the Network. Facility 100% complete. FI=(\$0.00)	\$ -
Northwest Zone Fiscal Impact						\$ (46,737,000)
Southwest Zone Network Adjustments						
Wildomar	Bundy Canyon Road	I-15 to Murrieta	Reduce Bundy Canyon Road, from I-15 to Murrieta (4.42 miles) future lanes from 6 to 4.	Reduce Bundy Canyon Road, from I-15 to Murrieta future lanes from 6 to 4. FI= (\$11,684 M.)	Approved reducing Bundy Canyon Road, from I-15 to Murrieta future lanes from 6 to 4. FI= (\$11,684 M.)	\$ (11,684,000)
Lake Elsinore/ Wildomar	Corydon Road	Mission Trail to Grand Ave.	Add and realign Corydon Street, from Mission Trail to Grand Avenue, 1.53 miles arterial to Network as a 4-lane facility. (1.53 miles, from 2 to 4 lanes)	Add the realigned Corydon Road, from Mission Trail to Grand Avenue, from 2 to 4 lanes. This missing link will provide additional regional connectivity. Facility 50% complete. FI= 1,792 M.	Approved adding arterial to the Network and widening from 2 to 4 lanes. This missing link will provide additional regional connectivity. FI= 1,792 M.	\$ 1,792,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Southwest Zone Network Adjustments, continued						
Lake Elsinore	Franklin Street (Integral to Railroad Canyon Interchange)	I-15 Interchange	Add a new type 2 interchange at Franklin Street to augment Railroad Canyon Road/I-15 interchange and the connector feeder system to connect the two interchanges.	Add a type 2 interchange at Franklin Street, as part of the ultimate Railroad Canyon Road/I-15 Interchange configuration. Facility 0% complete. FI=\$32,306 M.	Approved adding a type 2 interchange as part of the ultimate Railroad Canyon Road/I-15 Interchange configuration. FI=\$32,306 M.	\$ 32,306,000
Lake Elsinore	Lake Street	I-15 to Temescal Canyon Road	Add 107' bridge to Network. Increase Lake Street, from I-15 to Temescal Canyon Road from 4 to 8 future lanes to accommodate increased traffic from development.	Add existing 107' Lake Street bridge to the Network. Recent modeling results do not support increasing future lanes to 8 lanes, recommend from 2 to 6 lanes. 25% complete. FI= \$5,077 M.	Approved adding 107' bridge and widening arterial from 2 to 6 lanes. FI= \$5,077 M.	\$ 5,077,000
Lake Elsinore	Lake Street	Temescal Canyon Rd. to Mountain Ave.	Widen arterial from 2 to 6 lanes to accommodate increased traffic from new development.	Increase the number of lanes from 2 to 6 on Lake Street, from Temescal Canyon Rd. to Mountain Ave. Facility 25% complete. FI= \$4,225 M.	Approved increasing number of future lanes from 2 to 6 on arterial segment. FI=\$4,225 M.	\$ 4,225,000
Lake Elsinore	Nichols Road	I-15 Interchange, I-15 to Lake Street	Add a new type 2 interchange at Nichols Road at the I-15 to Network and widen Nichols Road from I-15 to Lake Street. (2 to 6 lanes).	Add a new type 2 interchange at Nichols Road/I-15 and Nichols Road connector from proposed I-15 interchange to Lake Street. (1.8 miles, from 2 to 4 lanes) 30% complete. Interchange 0% complete. FI= \$32,502 M Interchange. FI=\$5,008 M arterial.	Approved adding type 2 interchange and arterial connector from proposed I-15 interchange to Lake Street. FI= \$32,502 M Interchange. FI=\$5,008 M arterial.	\$ 37,510,000
Unincorporated	Temescal Canyon Road	Indian Truck Trail to Lake Street	Correct segment by adding 2.57 miles of arterial segment and costs to 2014 Network. (from 2 to 4 lanes)	Correct mileage on Temescal Canyon Road, from Indian Truck Trail to Lake Street to 3.78 miles and separate into two sections between Unincorporated and Lake Elsinore City Limits. Unincorporated, Temescal Canyon Road, from Indian Truck Trail to I-15 north of Alberhill revised mileage 2.57 miles, from 2 to 4 lanes. Revised FI= \$8,404 M	Approved correcting arterial segment mileage on Network. Revised FI= \$8,404 M	\$ 8,404,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Southwest Zone Network Adjustments, continued						
Lake Elsinore	Temescal Canyon Road	I-15 (north of Alberhill) to Lake St.	Realign, widen, and lengthen Temescal Canyon Road from 500' north of current bridge to Lake Street from 2 to 6 lanes and bridge from 100' to 245' - 1.21 miles.	Widen and realign Temescal Canyon Road, from I-15 north of Alberhill to Lake Street (1.21 miles) and bridge to 246', from 2 to 4 lanes. City will fund the bridge construction with \$8 M Highway Bridge Replacement Funding. Arterial segment FI=\$3,252,798 M. Bridge FI=\$0.	Approved realigning and widening arterial segment from 2 to 4 lanes and bridge from 100' to 246'. City will fund the bridge construction with \$8 M Highway Bridge Replacement funding. Arterial segment FI=\$3,252,798 M.	\$ 3,805,000
Murrieta	Whitewood Road	Murrieta Hot Springs Rd. to Jackson Ave.	Add 1.09-mile segment to Network, widen 0 to 4 lanes to connect to Jackson Avenue.	Add 1.09 mile segment of Whitewood Road, from Murrieta Hot Springs Rd. to Jackson Ave. to connect with Jackson Avenue as a gap closure to complete regional connectivity. Facility 30% complete. FI= \$5,948 M.	Approved adding 1.09 mile arterial to Network as a gap closure to complete regional connectivity. FI= \$5,948 M.	\$ 5,948,000
Temecula	Butterfield Stage Road	Murrieta Hot Springs Rd. to Rancho California Rd.	Separate Butterfield Stage Road (Murrieta Hot Springs Rd to Rancho California Rd.)segment into 3 smaller segments to better reflect construction phases/stages and remove 650' bridge from Network (no need for bridge along this entire segment.)	Separate Butterfield Stage Road into 3 segments: 1). Murrieta Hot Springs Road to Calle Chapos (1.78 miles completed to 4 lanes); 2). Calle Chapos to La Serena (0.71 miles 0 to 4 lanes to be completed with CFD bond proceeds, about 30% completed - January 2014); and 3). La Serena to Rancho California (0.89 miles 2 to 4 lanes to be completed by developer.) Remove current 650' bridge and update current number of lanes. Facility 50% complete. FI= (\$15,419 M).	Approved separating Butterfield Stage Road into 3 segments, removing current 650' bridge, and updating current number of lanes. FI= (\$15,419 M).	\$ (15,419,000)
Temecula	French Valley Parkway	Overcrossing and Interchange (Ynez Rd. to Murrieta Creek Dr.)	Reinstate City's reported state/federal obligation amount from Maximum TUMF Share for Construction phase, now shown as obligated by City for 2009 Network Update. Due to reported loss of \$18,980 M of state and federal funding as originally deducted from Network maximum TUMF share. Please reinstate \$18,980 M as not obligated on the Network Update.	Add \$12,921 million back on the Network due to loss of State and Federal funding. Facility 0% complete. FI=\$12,921 M.	Approved adding \$12,921 million back on the Network due to loss of State and Federal funding. FI=\$12,921 M.	\$ 12,921,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Southwest Zone Network Adjustments, continued						
Temecula	French Valley Parkway	Murrieta Creek Dr. to Rancho California Rd.	Shift the current proposed northerly segment: French Valley Parkway (Murrieta Creek to Rancho California Road) to connect to Diaz Road. The Western Bypass Corridor preferred alignment would represent a westerly FVP/Cherry Street (from Jefferson to Murrieta Creek) and Western Bypass/Diaz Rd.(from Cherry Street to Rancho California Road) extension. Change arterial title from French Valley Parkway to Western Bypass at Diaz Road and Murrieta Creek.	Shift the northerly French Valley Parkway/Cherry Street, from Jefferson to Murrieta Creek from its current alignment along the foothills to existing Cherry Street and Diaz Road south to Rancho California Road and rename as Western Bypass (Diaz) at Murrieta Creek. Facility 22 to 80% complete. FI=(\$26,977 M).	Approved shifting the northerly arterial segment to Murrieta Creek and Diaz Road and renaming new alignment. FI=(\$26,977 M)	\$ (26,977,000)
Temecula	French Valley Parkway	Rancho California Rd. to I-15 (Front)	Shift the current proposed southerly segment: French Valley Parkway (Rancho California Road to I-15 (Front)) to extend along Diaz Road/Rancho California to I-15 (Front) intersection, in a southerly direction along the existing Vincent Moraga Road alignment, to its prior terminus at I-15 (Front). Change arterial title from French Valley Parkway to Western Bypass (Front) at Diaz Road and Murrieta Creek.	Shift the southerly French Valley Parkway/ Western Bypass, from Rancho California Road to I-15 (Front) from its current alignment to existing Diaz Road to Vincent Moraga and rename as Western Bypass/ Diaz (Front) and new alignment. Facility 8% complete. FI=(\$6,433 M)	Approved shifting the southerly arterial segment to Diaz Road and renaming new alignment. FI=(\$6,433 M)	\$ (6,433,000)
Temecula	SR-79 Eastern Bypass/Washington/Anza	SR-79 (Winchester) to Pala	Reduce SR-79 Eastern Bypass future lanes from 6 to 4 to support the recent modeling results, which no longer Approved a 6 lane facility.	Reduce SR-79 Eastern Bypass, from SR-79 (Winchester) to Pala future lanes from 6 to 4. Facility 0% complete. From \$123,867 M to \$74,685 M FI = (\$49,182 M).	Approved reducing arterial segment future lanes from 6 to 4. FI = (\$49,182 M).	\$ (49,182,000)

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone YAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Southwest Zone Network Adjustments, continued						
Temecula	SR-79 Eastern Bypass	I-15 Interchange South	Upgrade type 2 interchange to a type 1 to accommodate Casino traffic	Reduce SR-79 Eastern Bypass/ I-15 South Interchange from a type 2 to a type 3 and reduce future lanes from 6 to 4. Facility 0% complete. From \$76.721 M to \$45.401 M FI = (\$31.320 M).	Approved reducing interchange from a type 2 to a type 3 and future lanes from 6 to 4. FI = (\$31.320 M).	\$ (31,320,000)
Southwest Zone Fiscal Impact						\$ (29,027,000)
Total Fiscal Impact Network Additions & Corrections						\$ (199,642,500)

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Central Zone Adjustment Requests Not Approved						
Menifee	Ethanac Road	I-215 to Goetz Rd.	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic for a total of 6 lanes.	Recent Modeling results do not support adding 2 extra future lanes at this time. The cost of creating a 6-lane Ethanac Corridor (I-215 to SR-74) by adding 2 lanes to the 2009 TUMF Network will be considerable. Pending final existing need analysis, land-use, topo, and modeling results for 2014, and final Committee action, consider whether the associated cost of adding 2 extra lanes to the Network will be worth the impact to potential fee increase. Ethanac Rd (I-215 to Goetz Rd) portion within Menifee 2009 Network costs increase from \$22.329M to \$29.329M for a FI = \$6.770 M. (Total Ethanac Corridor FI=\$16.081M)	Model does not support lane increase.	\$ 6,770,000
Moreno Valley	Alessandro Boulevard	Nason St. to Moreno Beach Dr.	City to use local DIF to pay improvement costs on Alessandro (Nason to Moreno Beach) 0.99 miles, 2 to 4 lanes to help offset adding Theodore/SR-60 Interchange to the Network.	City named Eucalyptus as priority corridor. City DIF to fund \$3.556 M costs for Alessandro (Nason to Moreno Beach); however, City needs to guarantee Network arterial delivery with alternate funds. 0% complete. FI= (\$3.556 M).	No longer priority corridor; City named Eucalyptus as priority corridor.	\$ (3,556,000)
Moreno Valley	Cactus Avenue	Heacock St to Nason St	Add Cactus (Heacock to Nason) segment already widened to 4 lanes at 100% capacity but part of larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	City's request to add Cactus (Heacock to Nason) to the Network for creating alternate arterial to extend east of Redlands in order to provide Regionality and traffic flow does not address regional connectivity. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider not adding arterial sub-segment and maintain Alessandro instead. Facility 100% complete. FI= \$0.00.	Does not meet minimum eligibility requirements at this time.	\$ -
Moreno Valley	Cactus Avenue	Nason St to Oliver St	Add Cactus (Nason to Oliver) segment, widen 2 to 4 lanes as part of the larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	City's request to add Cactus (Nason to Oliver) to Network for creating alternate arterial to extend east of Redlands in order to provide Regionality and traffic flow does not address regional connectivity. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider adding arterial segment. Facility 0% complete. FI= \$1.803 M.	Does not meet minimum eligibility requirements at this time.	\$ 1,803,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Central Zone Adjustment Requests Not Approved, continued						
Moreno Valley	Cactus Avenue	Oliver St. to Redlands Ave.	Add Cactus (Oliver to Redlands) segment completed to 4 lanes as part of the larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	City's request to add Cactus (Oliver to Redlands) to create alternate arterial to extend east of Redlands in order to provide Regionality and traffic flow does not necessarily add regional connectivity. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider adding completed sub-segment. Facility 100% complete. FI= \$0.00 M.	Does not meet minimum eligibility requirements at this time.	\$ -
Moreno Valley	Cactus Avenue	Redlands Ave. to Merwin St.	Add Cactus (Redlands to Merwin) segment add 0 to 4 new lanes as part of the larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	City's request to add Cactus (Redlands to Merwin) 0 to 4 new lanes to complete an alternate arterial to extend east of Redlands appears to be benefit new development. Developers have currently constructed 2 of the new lanes. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider the necessity of adding new segment to Network. Facility 50% complete. FI= \$586,000 M.	Does not meet minimum eligibility requirements at this time.	\$ 586,000
Moreno Valley	Theodore Street	Ironwood Ave. to SR-60	Add a 0.43-mile Theodore (Ironwood to SR-60) arterial widening segment 2 to 4 lanes, for regional connectivity.	Recent modeling results do not support this addition. City DIF to fund \$1,007 M of this new segment. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider adding segment. City needs to guarantee project delivery with alternate funds. Does not appear to add regional connectivity. Facility 0% complete. FI= 0.00.	Model does not support adding to Network.	\$ -
Moreno Valley	Theodore Street	SR-60 to E. Dracaena Ave.	Add a 0.68-mile Theodore (SR-60 to E. Dracaena) arterial widening segment 2 to 4 lanes, for regional connectivity.	Recent modeling results do not support this addition. City DIF to fund \$3,186 M of this new segment. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider adding segment pending RivTAM model results; however, City needs to guarantee Network arterial delivery with alternate funds. Does not appear to add regional connectivity. Facility 0% complete. FI= 0.00.	Model does not support adding to Network.	\$ -

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Central Zone Adjustment Requests Not Approved, continued						
Moreno Valley	Theodore Street	East Dracaena Ave. to Alessandro Blvd.	Add a 0.70-mile Theodore (E. Dracaena to Alessandro) arterial widening segment. 2 to 4 lanes, for regional connectivity. 0% complete.	Recent modeling results do not support this addition. City to demonstrate why they are not also funding this 0.7 mile portion of Theodore in local DIF as well. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider need to add segment to Network and having City fund with DIF. Does not appear to add regional connectivity. Facility 0% complete. FI= 1,628 M.	Model does not support adding to Network.	\$ 1,628,000
Perris	Ethanac Road	Goeltz Rd. to Keystone Drive	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic for a total of 6 lanes.	Recent Modeling Results do not support adding 2 extra future lanes at this time. Pending final existing need analysis, land-use, topo, and modeling results for 2014, and final Committee action, consider whether the associated cost of adding 2 extra lanes to the Network will be worth the impact to potential fee increase. Ethanac Rd (Goeltz to Keystone Rd) portion within Perris 2009 Network costs increase from \$13.609 M to \$20.413M for FI=\$6.804M. (Total Ethanac Corridor FI=\$16.081M)	Model does not support lane increase.	\$ 6,804,000
County of Riverside	Ethanac Road	Keystone Drive to SR-74	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic for a total of 6 lanes.	Recent Modeling Results do not support adding 2 extra future lanes at this time. Pending final existing need analysis, land-use, topo, and modeling results for 2014, and final Committee action, consider whether the associated cost of adding 2 extra lanes to the Network will be worth the impact to potential fee increase. Ethanac Rd (Keystone Drive to SR-74) portion within Unincorporated area 2009 Network costs increase from \$5.013 M to \$7.520M for FI= \$2,507 M. (Total Ethanac Corridor FI=\$16.081M).	Model does not support lane increase.	\$ 2,507,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Southwest Zone Adjustment Requests Not Approved						
Menifee	Newport Boulevard	Goetz Rd. to Murrieta Rd.	Add developer delivered portion (80% or 1.78 miles) of Newport Road, from Goetz Rd to Murrieta onto the 2009 TUMF Network to enable developer to recapture TUMF funding for work completed.	It is not appropriate to add this costs into the 2015 Network, rather this is a 2007 Network issue. Credit or reimbursement is still possible grandfathered in. In July and September 2011, the PWC and Executive Committees recommended consideration of the addition during the 2014 CCI Update. County TLMA completed final 20% with \$3.080M Zone TUMF. Pending final Committee action, consider whether reinstating costs is worth the impact to potential fee increase. 100% complete. FI=\$10,499,089-\$3,080 M=\$7,419 M.	Not appropriate to add completed 2007 improvement costs to 2015 Network.	\$ 7,419,000
Lake Elsinore	Camino Del Norte	Main St. to Canyon Estates, 1.00 mile, 2 to 4 lanes	Add Camino Del Norte Street, from Main Street to Canyon Estates, 1.00 mile arterial and widen from 2 to 4 lanes to the Network..	Recent modeling results do not support adding new 1-mile 4-lane arterial to the Network needs justification to address Regionality and adherence to each of the TUMF Administrative Plan Network Amendment criteria requirements. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider adding 1.00 mile Camino Del Norte, from Main Street to Canyon Estates and widen 2 to 4 lanes to tie into proposed new type 3 Interchange. Facility 0% complete. FI= 2,729 M.	Model does not support adding to Network.	\$ 2,729,000
Lake Elsinore	Camino Del Norte	I-15 Interchange	Add new type 3 interchange at I-15 and Camino Del Norte Street to the Network.	Recent modeling results do not support adding new type 3 interchange to the Network. Jurisdiction needs to address Regionality and adherence to each of the TUMF Administrative Plan Network Amendment criteria requirements. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider adding 1.00 mile Camino Del Norte, from Main Street to Canyon Estates, a type 3 interchange, and widen 2 to 4 lanes. Facility 0% complete. FI= 15,791 M.	Model does not support adding to Network.	\$ 15,791,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Southwest Zone Adjustment Requests Not Approved, continued.						
Lake Elsinore	Franklin Street	Main St. to Avenue 6	Add Franklin Street, from Main Street to Avenue 6, 1.10 mile arterial to Network and widen from 2 to 4 lanes to tie in to proposed interchange at Franklin/I-15.	City and recent modeling results unable to demonstrate regionality and support for widening Franklin Street, from Main Street to Avenue 6. 2 to 4 lanes. Facility 40% complete. FI \$469,000	Model does not support adding to Network.	\$ 469,000
Lake Elsinore	Railroad Canyon Road	I-15 to Canyon Hills	Increase future lanes from 6 to 8 on arterial segment.	Recent modeling results do not support increasing future lanes on Railroad Canyon Road west of the freeway from 6 to 8 is not in line with Regionality standards and would be dependent on new traffic counts – there are 6 lanes north of the freeway, which is a more regional segment. Seventh and eighth lanes appear to be turn lanes, which are not covered by Program. Pending final existing need analysis, land-use, topo, and modeling results for 2014, consider maintaining 6 future lanes instead of 8. Facility 0% complete. FI for 6 new future lanes= \$0.	Model does not support adding to Network.	\$ -
Murrieta	Keller Road	I-215 Interchange	Add type 3 Interchange at Keller Road	Recent modeling results do not support adding new type 3 interchange to Network. While improvements do correct local traffic flow problems to nearby hospital, a new interchange does not appear to address regionality or fully adhere to each of the TUMF Administrative Plan Network Amendment criteria requirements. Pending final documentation, justification, existing need analysis, land-use, topo, and modeling results for 2014 and nearness to Scott Road Interchange, consider whether or not to add type 3 interchange. Facility 0% complete. FI= \$15,791 M.	Model does not support adding to Network.	\$ 15,791,000

EXHIBIT G-1 WRCOG TUMF 2015 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	WRCOG Staff/ Zone TAC Action	Committee Action	Estimated Fiscal Impact in 2009 TUMF
	Name	Limits				
Southwest Zone Adjustment Requests Not Approved, continued.						
Murrieta	Keller Road	I-215 to E. City Limits	Add 0.975-mile segment to Network, widen 2 to 4 lanes.	Recent modeling results do not support adding new segment to Network. Improvements do not appear to address regionality or fully adhere to each of the TUMF Administrative Plan Network Amendment criteria requirements. Pending final documentation, justification, existing need analysis, land-use, topo, and modeling results for 2014, consider adding 0.975 mile segment. Facility 20% complete. FI= \$2.285M.	Model does not support adding to Network.	\$ 2,285,000
						\$ 61,026,000

EXHIBIT G-2 WRCOG TUMF 2016 Nexus Update - Adjustment Request Disposition Matrix

Requesting Jurisdiction	Segment		Requested Correction	Request Summary	WRCOG Committee Action
	Name	Limits			
Central Zone Network Adjustments					
Moreno Valley	Alessandro Boulevard	I-215 to Perris Blvd.	Correct segment mileage from 3.71 miles to 3.52 miles.	City requesting to correct segment mileage from 3.71 miles to 3.52 miles.	Approved correcting arterial segment mileage, from 3.71 miles to 3.52 miles.
Moreno Valley	Perris Boulevard	Ironwood Ave. to Reche Vista Ave.	Correct segment mileage from 2.20 miles to 2.09 miles.	Correct segment mileage from 2.20 miles to 2.09 miles.	Approved correcting arterial segment.
Moreno Valley	Alessandro Boulevard	Moreno Beach to Gilman Springs	Separate Alessandro (Moreno Beach to Gilman Springs) into 2 line items on the Network: Moreno Beach to Merwin 1.35 miles with 100% local funding obligations to cover maximum TUMF share; and Alessandro, Merwin to Gilman Springs. 2.78 miles to remain on Network at maximum TUMF share.	Separate Alessandro (Moreno Beach to Gilman Springs) arterial segment into 2 line items on the Network: Alessandro, Moreno Beach to Merwin, 1.35 miles with 100% local funding obligations to cover maximum TUMF share, and Alessandro, Merwin to Gilman Springs. 2.78 miles to remain on Network at maximum TUMF share.	Approved removing segment costs from the Network. City to provide letter to WRCOG stating that the segment will be delivered by the City with local funding source.
Moreno Valley	Eucalyptus Avenue	Frederick St. to Moreno Beach Dr.	Add Eucalyptus Avenue (Frederick St. to Moreno Beach) 4.44-mile segment, 4 to 4 lanes, 100% completed as part of the larger Eucalyptus Street (SR-60 to Theodore) arterial necessary to provide regional connectivity in the area. No costs associated with segment.	Add 4.44-mile Eucalyptus (Frederick St. to Moreno Beach) segment, 4 to 4 new lanes, for regional connectivity. FI=\$0.00 100% completed.	Approved adding segment to Network. City to provide letter to WRCOG stating that the segment will be delivered by the City with local funding source.
Moreno Valley	Eucalyptus Avenue	Moreno Beach Dr. to Redlands Ave.	Add Eucalyptus (Moreno Beach to Redlands) 1.28-mile segment, 0 to 4 new lanes as part of the larger Eucalyptus Street (Nason to Theodore) arterial necessary to provide regional connectivity in the area.	Add 1.28-mile Eucalyptus (Moreno Beach to Redlands) segment, 0 to 4 new lanes, for regional connectivity. 23% completed.	Approved adding arterial segment to Network.
Moreno Valley	Eucalyptus Avenue	Redlands Ave. to Theodore St.	Add Eucalyptus (Redlands to Theodore) 1.00-mile segment, 2 to 4 lanes as part of the larger Eucalyptus Street (Nason to Theodore) arterial necessary to provide regional connectivity in the area.	Add 1.28-mile Eucalyptus (Redlands to Theodore) segment, 2 to 4 lanes for regional connectivity. 40% completed.	Approved adding arterial segment to Network.
Moreno Valley	Ironwood Avenue	SR-60 to Day St.	Separate Ironwood Avenue (SR-60 to Redlands) into 3 line items on the Network to show SR-60 to Day 1.33 miles, 71% complete 2 to 4 lanes, full funding obligated for I/C at Box Springs from other sources. Remove Ironwood/SR-60/I-215 from Network.	Separate Ironwood Avenue (SR-60 to Redlands) into 3 line items on the Network to show SR-60 to Day, 1.33 miles, 2 to 4 lanes, 50% complete, full funding obligated for I/C at Box Springs from other sources. Remove Ironwood/SR-60/I-215 from Network.	Approved removing arterial segment costs from Network. City to provide letter to WRCOG stating Interchange will be delivered by the City with local funding.
Moreno Valley	Ironwood Avenue	Day St. to Perris Blvd.	Separate Ironwood Avenue (SR-60 to Redlands) into 3 line items on the Network to show 3.02 mile segment from Day to Perris 100% completed, no costs associated on Network.	Separate 3.02-mile segment from Day to Perris 100% completed, no costs associated on Network.	Approved removing completed arterial segment costs from the Network. Facility 100% complete.
Moreno Valley	Day Street	SR-60 Interchange, Ironwood to SR-60	Add Type 3 interchange at Day Street and SR-60.	Add type 3 interchange at Day Street and SR-60.	Approved adding Type 3 interchange to Network. Costs are offset by City's funding Type 3 interchange at Ironwood/Box Springs Road/I-215/SR-60 with local sources.
Moreno Valley	Ironwood Avenue	Perris Blvd. to Redlands Ave.	Separate Ironwood Avenue (SR-60 to Redlands) into 3 line items on the Network to show 4.11 mile Ironwood Avenue segment, from Perris to Redlands from 2 to 4 lanes 0% completed.	Separate 4.11-mile Ironwood Avenue segment, from Perris to Redlands from 2 to 4 lanes 0% completed. \$4.731 M to be funded local DIF.	Approved removing arterial costs from Network. City to provide letter to WRCOG stating arterial segment will be delivered by the City with local funding source.
Moreno Valley	Lasselle Street	Eucalyptus Ave. to Alessandro Blvd.	Remove \$2.145 M TUMF funding for 1.00-mile segment of Lasselle (Eucalyptus to Alessandro) from Network. Reported as 40% complete. City to deliver in local DIF Program.	Obligate \$2.145 M TUMF funding for 1.00-mile segment of Lasselle (Eucalyptus to Alessandro) from 2014 Network. Reported to be 40% complete. City to deliver in local DIF Program.	Approved removing arterial costs from the Network. City to provide letter to WRCOG stating arterial segment will be delivered by the City with local funding source.
Moreno Valley	Theodore Street	SR-60 Interchange to Eucalyptus Avenue	Add new interchange at Theodore/SR-60, plus 2 additional lanes from SR-60 to Eucalyptus (0.23 miles) to Network to provide regional connectivity.	Add new interchange at Theodore/SR-60, plus 2 additional lanes from SR-60 to Eucalyptus to Network to provide regional connectivity. (0.23 miles, 2 to 4 lanes)	Approved adding type 2 interchange and 2 future lanes from the interchange to Eucalyptus (0.23 miles). City will provide \$17 M in local funding source to contribute to the construction.
Moreno Valley	Moreno Beach Drive	Moreno Beach Drive/SR-60 Interchange	Add the Moreno Beach Drive/SR-60 Interchange to the TUMF Network as a type 2 Interchange.	City requesting to add back the Moreno Beach Drive/SR-60 Interchange as a Type 2 Interchange.	To date, the TUMF Program has programmed \$12.3M for the Project. Project will be swapped for the Nason Street/SR-60 Interchange. Phase II of the interchange remains to be completed. Overcrossing left on TUMF Network.
Moreno Valley	Nason Street	SR-60 Interchange	Remove the Nason Street/SR-60 Interchange from the TUMF Network. Facility is 100% completed.	City is reporting that the interchange is complete and to remove the type 2 Nason Street/SR-60 Interchange. The facility was completed in 2014.	Removed type 2 interchange at Nason Street and SR-60.
Menifee	Scott Road	I-215 Interchange	Adjust the obligated funding segment of the Scott Road/I-215 Interchange to reflect the revised amount that the Scott Road CFD can contribute to the project.	The Scott Road CFD is not sufficient to fully fund the project and the TUMF Network needs to be revised to reflect that.	The Max TUMF Share in the TUMF Network has been revised to reflect the adjustment.
Perris	Perris Boulevard	Harley Knox Road to Ramona Expressway	1 mile segment of Perris Boulevard (Harley Knox Road to Ramona Expressway) is completed and should be revised to reflect 6 existing lanes.	City requesting to revise the existing lanes of Perris Boulevard from 2 to 6 lanes. Project is 100% complete.	Removed 1 mile segment of Perris Boulevard. Facility is 100% complete.
Perris	Ramona Expressway	I-215 Interchange	Add the Ramona Expressway/I-215 Interchange as a Type 3.	City requesting to add the Type 3 Interchange at Ramona Expressway/I-215.	Added the Type 3 Interchange at Ramona Expressway/I-215. City has been reimbursed \$6.3M TUMF.
Perris	Evans Road	Rider Street to Placentia Avenue	.19 mile segment of Evans Road (Placentia Avenue to Sparrow Way) is currently a 2 lane facility.	City requesting to revise a .19 mile segment of Evans Road (Placentia Avenue to Sparrow Way) from 4 to 2 lanes.	Removed cost associated with segment between Rider and Placentia. Did not meet volume to capacity criteria.
Perris	Ellis Road	SR-74 to I-215, including Interchange and Grade Separation	City requesting review as it anticipates future development in the area.	Facility does not meet criteria based on a minimum of four lanes at ultimate in the TUMF Program.	Removed costs from these facilities. Did not meet necessary criteria for inclusion in the TUMF Network.
Perris	Case Road	Goetz Rd. to I-215 Interchange	Add Case Road, from Goetz to I-215 to the Network to provide connectivity between the Perris Transit Station and the proposed RCTC Metro South Station.	Add Case Road, from Goetz to I-215 to the Network to provide connectivity between the Perris Transit Station and the proposed RCTC Metro South Station.	Approved adding arterial segment and 122' bridge to the Network to provide connectivity between the Perris and proposed RCTC Metro South Stations.
Perris/San Jacinto/Unincorporated	Mid-County Parkway/Placentia and Ramona Expressway	I-215 to Sanderson/SR-79	Realign Mid-County Parkway along existing Placentia and Ramona Expressway for 22.8 miles and increase future lanes from 4 to 6 and 2 to 6 lanes, respectively.	Realign Mid-County Parkway along existing Placentia and Ramona Expressway for 22.8 miles and increase future lanes from 4 to 6 and 2 to 6 lanes, respectively.	Approved realigning Mid-County Parkway as proposed (which includes existing type 1 interchange and one each 300' and 1,300' bridges).

Requesting Jurisdiction	Segment		Requested Correction	Request Summary	WRCOG Committee Action
	Name	Limits			
Hemet/San Jacinto Zone Network Adjustments					
Unincorporated	SR-79 (Hemet/San Jacinto Bypass)	Ramona Expressway to Winchester Road	At the Zone Network Review meeting recent modeling results recommend reducing future lanes for 11.22 miles on SR-79 (Hemet/San Jacinto Bypass), from Ramona Expressway to Winchester Road, from 0 to 6 to 0 to 4 on Network.	At the Zone Network Review meeting recent modeling results recommend reducing future lanes for 11.22 miles on SR-79 (Hemet/San Jacinto Bypass), from Ramona Expressway to Winchester Road, from 0 to 6 to 0 to 4 on Network.	Approved reducing future lanes on arterial segment, from 6 to 4 between Ramona Expressway and Winchester Road.
Northwest Zone Network Adjustments					
Corona	Cajalco Road	I-15 Interchange	Upgrade the existing Cajalco Road/I-15 Interchange from a type 2 to a type 1 Interchange on the Network.	Upgrade the existing Cajalco Road/I-15 Interchange from a type 2 to a type 1 Interchange on the Network.	Approved upgrading Interchange from a type 2 to a type 1. Developer to fund construction phase.
Corona	Foothill Parkway	Lincoln Ave. to Paseo Grande	Maximum TUMF Share for Construction Phase shown as obligated by City for 2009 Network Update. Please show \$7,282 M Construction as not obligated on the Network Update.	Correct TUMF Network to reflect \$7,282 M portion of the Construction Phase as not obligated for a maximum TUMF Share of \$7,282 Million as being eligible for reimbursement on the construction phase.	Approved adding \$7,282 back on arterial segment to cover loss of State and Federal funds to the Network.
Norco	6th Street	Hamner Avenue to California Avenue	Remove 6th Street, between Hamner Avenue and California Avenue, for a length of 1.71 miles. Project is complete.	City requesting to remove 6th Street, between Hamner Avenue and California Avenue because the project is complete.	Removed 1.71 mile segment of 6th Street, between Hamner Avenue and California Avenue. 100% complete.
Norco	Corydon Avenue	River Road to 5th Street	Remove Corydon Avenue, between River Road and 5th Street, for a length of 1.46 miles. Project is complete.	City requesting to remove Corydon Avenue, between River Road and 5th Street because the project is complete.	Removed 1.46 mile segment of Corydon Avenue, between River Road and 5th Street. 100% complete.
Norco	North Drive	California Avenue to Arlington Avenue	Remove North Drive, California Avenue to Arlington Avenue, for a length of .81 miles. Project is complete.	City requesting to remove North Drive, between California Avenue and Arlington Avenue because the project is complete.	Removed .81 mile segment of North Drive, between California Avenue and Arlington Avenue.
Norco	Hamner Avenue	Santa Ana River Bridge	Revise jurisdiction name from the City of Eastvale to the City of Norco.	City requesting to revise the jurisdiction name of the line item for the Hamner Avenue Bridge from the City of Eastvale to the City of Norco.	Revised the jurisdiction name of the Hamner Avenue Bridge to the City of Norco. The bridge over the Santa Ana River is within the City of Norco boundary.
Eastvale/ Administrative	Schleisman Road	Harrison Street to Sumner Avenue. 2 to 4 lanes.	Reduce future lanes on Schleisman Road, from Harrison to Sumner Avenue, from 2 to 6 lanes to 4 to 4 lanes.	Reduce future lanes on Schleisman Road, from Harrison to Sumner Avenue, from 2 to 6 lanes to 4 to 4 lanes.	Approved reducing future lanes on arterial, from Harrison St. to Sumner Avenue, from 6 to 4.
Eastvale	Schleisman Road	I-15 Interchange, Hamner Avenue to Arlington	Remove proposed Schleisman/I-15 Interchange and arterial, from Hamner Avenue to Arlington from Network. No longer considered viable build option. Emphases is on improving nearby Limonite Avenue and I-15 Interchange instead.	Remove proposed Schleisman/I-15 Interchange and arterial, from Hamner Avenue to Arlington from Network. No longer considered viable build option. Emphases is on improving nearby Limonite Avenue and I-15 Interchange instead.	Approved removing Type 1 interchange, arterial segment, and a 1,000' bridge from the Network, which is consistent with Norco and Jurupa Valley's current development trends and General Plans.
Eastvale	Limonite Avenue	Harrison Street to Hellman Avenue, plus a 200' bridge	Add new segment - Limonite Avenue, Archibald to Hellman (at Kimball) to Network 1.12 miles, 0 to 6 lanes, plus a 200' bridge.	Add new segment - Limonite Avenue, Archibald to Hellman to Network 0.6 miles, 0 to 6 lanes, plus a 200' bridge.	Approved adding arterial segment and a 200' bridge to the Network and widening from 0 to 4 lanes to complete regional connectivity.
Eastvale	Archibald Avenue	County Line to River Road	Re-locate 1,200 foot bridge from Archibald Avenue segment on the Network to River Road (Archibald to Corydon) segment. Bridge construction was completed using other funding sources.	Re-locate 1,200 foot bridge from Archibald Avenue segment to River Road (Archibald to Corydon) segment. Bridge construction was completed using other funding sources.	Approved correcting bridge location on the Network. Facility 100% complete.
Riverside	Iowa Avenue	University Avenue to Martin Luther King Boulevard	Add portion of Iowa Avenue as an existing 2 lane facility and 4 future lanes.	City requesting to add a portion of Iowa Avenue for Network connectivity.	Added portion of Iowa Avenue as an existing 2 lane facility and 4 future lanes. Model results support facility addition to the TUMF Network.
Riverside	Overlook Parkway	Bodewin/Via Montecito to Crystal View	Remove the segment of Overlook Parkway between Bodewin/Via Montecito and Crystal View.	City requesting to remove Overlook Parkway from the TUMF Network.	Removed Overlook Parkway from the TUMF Network.
Riverside	Overlook Parkway	Crystal View to Via Vista	Remove the segment of Overlook Parkway between Crystal View and Via Vista	City requesting to remove Overlook Parkway from the TUMF Network.	Removed Overlook Parkway from the TUMF Network.
Riverside	Overlook Parkway	Alessandro Arroyo Bridge	Remove the Alessandro Arroyo Bridge.	City requesting to remove Overlook Parkway from the TUMF Network.	Removed Overlook Parkway from the TUMF Network.
Riverside	Overlook Parkway	Via Vista to Sandtrack	Remove the segment of Overlook Parkway between Via Vista and Sandtrack	City requesting to remove Overlook Parkway from the TUMF Network.	Removed Overlook Parkway from the TUMF Network.
Riverside	Adams Street/SR-91 Interchange	Type 3 Interchange	City requesting to swap the funding on the Adams Street Grade Separation Project with the Adams Street/SR-91 Interchange Project.	Swap the Grade Separation Project at Adams Street with the SR-91 Interchange Project at Adams Street.	Type 3 Interchange to be swapped in for the Grade Separation. Model run results support type 3 interchange.
Southwest Zone Network Adjustments					
Wildomar	Bundy Canyon Road	I-15 to Murrieta	Reduce Bundy Canyon Road, from Monte Vista to Murrieta (4.1 miles) future lanes from 6 to 4.	Reduce Bundy Canyon Road, from I-15 to Murrieta (4.42 miles) future lanes from 6 to 4.	Approved reducing Bundy Canyon Road, from Monte Vista to Murrieta future lanes from 6 to 4.
Lake Elsinore/ Wildomar	Corydon Road	Mission Trail to Grand Ave.	Add and realign Corydon Street, from Mission Trail to Grand Avenue, 1.53 miles arterial to Network as a 4-lane facility. (1.53 miles, from 2 to 4 lanes) Facility 50% complete.	Add and realign Corydon Street, from Mission Trail to Grand Avenue, 1.53 miles arterial to Network as a 4-lane facility.	Approved adding arterial to the Network and widening from 2 to 4 lanes. This missing link will provide additional regional connectivity.
Lake Elsinore	Franklin Street (integral to Railroad Canyon Interchange)	I-15 Interchange	Add a new type 2 interchange at Franklin Street to augment Railroad Canyon Road/I-15 Interchange and the connector feeder system to connect the two interchanges. And upgrade Railroad Canyon Road Interchange to a Type 1.	Add a new type 2 interchange at Franklin Street to augment Railroad Canyon Road/I-15 Interchange and the connector feeder system that connects the two interchanges.	Approved adding a type 2 interchange as part of the ultimate Railroad Canyon Road/I-15 Interchange configuration.

Requesting Jurisdiction	Segment		Requested Correction	Request Summary	WRCOG Committee Action
	Name	Limits			
Southwest Zone Network Adjustments (continued)					
Lake Elsinore	Lake Street	I-15 to Lincoln	Add 107' bridge to Network. Increase Lake Street, from I-15 to Lincoln from 2 to 6 future lanes to accommodate increased traffic from development.	Add current 107' bridge structure to Network and widen both bridge and arterial from 2 to 8 lanes to accommodate increased traffic from future development.	Approved adding 107' bridge and widening arterial from 2 to 6 lanes.
Lake Elsinore	Lake Street	Temescal Canyon Rd. to Mountain Ave.	Widen arterial from 2 to 6 lanes to accommodate increased traffic from new development.	Widen arterial from 2 to 6 lanes to accommodate increased traffic from development.	Approved increasing number of future lanes from 2 to 6 on arterial segment.
Lake Elsinore	SR-74	I-15 Interchange	Add the Type 2 Interchange at SR-74.	City requesting to add the Type 2 SR-74/I-15 Interchange to the TUMF Network.	Add type 2 Interchange. City has been reimbursed \$3.1M TUMF to date on the project.
Lake Elsinore	Grand Avenue	Lincoln Street to Toft Drive	Remove the duplicate line item - Grand Avenue (Lincoln Street to Toft Drive).	City requesting to remove the duplicated line item for Grand Avenue (Lincoln Street to Toft Drive).	Grand Avenue (Lincoln Street to Toft Drive) is duplicated on the TUMF Network and has been removed.
Lake Elsinore	Grand Avenue	Toft Drive to SR-74 (Riverside)	Remove the duplicate line item - Grand Avenue (Toft Drive to SR-74).	City requesting to remove the duplicated line item for Grand Avenue (Toft Drive to SR-74).	Grand Avenue (Toft Drive to SR-74) is duplicated on the TUMF Network and has been removed.
Lake Elsinore	Nichols Road	I-15 Interchange, I-15 to Lake Street	Add a new type 2 interchange at Nichols Road at the I-15 to Network and widen Nichols Road from I-15 to Lake Street. (2 to 6 lanes).	Add a new type 2 interchange at Nichols Road at the I-15 to Network and widen Nichols Road from I-15 to Lake Street to accommodate proposed interchange traffic to Network. 1.8 miles (2 to 6 lanes).	Approved adding type 2 interchange and arterial connector from proposed I-15 interchange to Lake Street.
Unincorporated	Temescal Canyon Road	Indian Truck Trail to Lake Street	Correct segment by adding 2.57 miles of arterial segment and costs to 2017 Network. (from 2 to 4 lanes)	Correct miles for this segment is 2.57 miles and costs to 2014 Network. (from 2 to 4 lanes)	Approved correcting arterial segment mileage on Network.
Lake Elsinore	Temescal Canyon Road	I-15 (north of Alberhill) to Lake St.	Realign, widen, and lengthen Temescal Canyon Road from 500' north of current bridge to Lake Street from 2 to 6 lanes and bridge from 100' to 246' - 1.21 miles.	Re-align, lengthen, and widen 100' bridge to 246' and widen 1.21 miles of arterial segment from 2 to 6 lanes from 500' north of bridge to Lake Street.	Approved realigning and widening arterial segment from 2 to 4 lanes and bridge from 100' to 246'. City will fund the bridge construction with \$8 M Highway Bridge Replacement funding. Arterial segment
Murrieta	Jackson Avenue	Whitewood Road to Ynez Road	Project is complete and can be removed from the Network.	Remove the completed segment between Whitewood Road and Ynez Road.	Removed the completed segment from the TUMF Network. Project is 100% complete.
Murrieta	Whitewood Road	Murrieta Hot Springs Rd. to Jackson Ave.	Add .80-mile segment to Network, widen 0 to 4 lanes to connect to Jackson Avenue.	Add .80-mile Whitewood Road, (Murrieta Hot Springs Road to Jackson Avenue) segment to Network, widen 0 to 4 lanes.	Approved adding .80 mile arterial to Network as a gap closure to complete regional connectivity.
Murrieta	Keller Road	I-215 Interchange	Add type 3 Interchange at Keller Road	Add a new type 3 interchange at Keller Road.	Approved adding a new type 3 interchange at Keller Road.
Murrieta	Keller Road	I-215 to E. City Limits	Add 0.75-mile segment to Network, widen 2 to 4 lanes.	Add 0.975-mile Keller Road, (I-215 to East City Limits) segment to Network, widen 2 to 4 lanes.	Approved adding .75 mile segment to Network.
Temecula	Butterfield Stage Road	Murrieta Hot Springs Rd. to Rancho California Rd.	Separate Butterfield Stage Road (Murrieta Hot Springs Rd to Rancho California Rd.)segment into 3 smaller segments to better reflect construction phases/stages and remove 650' bridge from Network (no need for bridge along this entire segment.)	City requested to separate Butterfield Stage Road (0 to 4 lanes) segment into 3: 1). Murrieta Hot Springs Road to Calle Chapos (1.78 miles completed to 4 lanes); 2). Calle Chapos to La Serena (0.71 miles 0 to 4 lanes to be completed with CFD bond proceeds, about 30% completed - January 2014); and 3). La Serena to Rancho California (0.89 miles 2 to 4 lanes to be completed by developer.) Remove current 650' bridge and update current number of lanes.	Approved separating Butterfield Stage Road into 3 segments, removing current 650' bridge, and updating current number of lanes.
Temecula	French Valley Parkway	Overcrossing and Interchange (Ynez Rd. to Murrieta Creek Dr.)	Reinstate City's reported state/federal obligation amount from Maximum TUMF Share for Construction phase, now shown as obligated by City for 2009 Network Update. Due to reported loss of \$18,980 M of state and federal funding as originally deducted from Network maximum TUMF share. Please reinstate \$18,980 M as not obligated on the Network Update.	The City reported state and federal funding sources as \$12,921 M in 2009. Correct TUMF Network to reflect \$12,921 M portion of the project as de-obligated for an additional Maximum TUMF Share of \$12,921M as being eligible for reimbursement.	Approved adding \$12,921 million back on the Network due to loss of State and Federal funding.
Temecula	French Valley Parkway	Murrieta Creek Dr. to Rancho California Rd.	Shift the current proposed northerly segment: French Valley Parkway (Murrieta Creek to Rancho California Road) to connect to Diaz Road. The Western Bypass Corridor preferred alignment would represent a westerly FVP/Cherry Street (from Jefferson to Murrieta Creek) and Western Bypass/Diaz Rd.(from Cherry Street to Rancho California Road) extension. Change arterial title from French Valley Parkway to Western Bypass at Diaz Road and Murrieta Creek.	Over the past several years, the City has requested to realign French Valley Parkway (Western Bypass) to utilize existing Cherry Street and Diaz Road, which is a less circuitous and mountainous route eliminating need for additional ROW to lower budget costs.	Approved shifting the northerly arterial segment to Murrieta Creek and Diaz Road and renaming new alignment.
Temecula	French Valley Parkway	Rancho California Rd. to I-15 (Front)	Shift the current proposed southerly segment: French Valley Parkway (Rancho California Road to I-15 (Front) to extend along Diaz Road/Rancho California to I-15 (Front) intersection, in a southerly direction along the existing Vincent Moraga Road alignment, to its prior terminus at I-15 (Front). Change arterial title from French Valley Parkway to Western Bypass (Front) at Diaz Road and Murrieta Creek.	Over the last several years, the City has requested to rename the French Valley Parkway as Western Bypass at Diaz Rd/Murrieta Creek and realign to existing Diaz Road south from Rancho California Road along Vincent Moraga to I-15 (front), which is a less circuitous and mountainous route eliminating need for additional engineering, ROW, and construction costs.	Approved shifting the southerly arterial segment to Diaz Road and renaming new alignment.
Temecula	SR-79 Eastern Bypass/Washington/Anza	SR-79 (Winchester) to Pala	Reduce SR-79 Eastern Bypass future lanes from 6 to 4 to support the recent modeling results, which no longer Approved a 6 lane facility.	Reduce SR-79 Eastern Bypass future lanes from 6 to 4 to Approved the recent modeling results, which no longer Approved a 6 lane facility.	Approved removal of arterial segment. Facility no longer meets criteria to be included in TUMF Network. Remove all associated costs.
Temecula	SR-79 Eastern Bypass	I-15 Interchange South	Upgrade type 2 interchange to a type 1 to accommodate Casino traffic	Upgrade type 2 interchange at I-15/SR-79 South from a type 2 to a type 1 to accommodate nearby Casino traffic.	Approved removing Interchange. Facility no longer meets criteria to be included in TUMF Network. Remove all associated costs.

Requesting Jurisdiction	Segment		Requested Correction	Request Summary	WRCOG Committee Action
	Name	Limits			
Central Zone Adjustment Requests Not Approved					
Menifee	Ethanac Road	I-215 to Goetz Rd.	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic for a total of 6 lanes.	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic. Increase future lanes from 4 to 6 along Ethanac Rd (Goetz Rd. to I-215) 1.98 miles to the 2009 TUMF Network.	Model does not support lane increase.
Moreno Valley	Alessandro Boulevard	Nason St. to Moreno Beach Dr.	City to use local DIF to pay improvement costs on Alessandro (Nason to Moreno Beach) 0.99 miles, 2 to 4 lanes to help offset adding Theodore/SR-60 Interchange to the Network.	City to use local DIF to pay improvement costs on Alessandro (Nason to Moreno Beach) 0.99 miles, 2 to 4 lanes to help offset adding Theodore/SR-60 Interchange to the Network.	No longer priority corridor; City named Eucalyptus as priority corridor.
Moreno Valley	Cactus Avenue	Heacock St to Nason St	Add Cactus (Heacock to Nason) segment already widened to 4 lanes at 100% capacity but part of larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	Add 2.99-mile segment to Network, widened 4 to 4 lanes, for system connectivity. Part of larger segment. 100% complete.	Does not meet minimum eligibility requirements at this time.
Moreno Valley	Cactus Avenue	Nason St to Oliver St	Add Cactus (Nason to Oliver) segment, widen 2 to 4 lanes as part of the larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	Add 0.50-mile Cactus (Nason to Oliver) segment to Network, widen 2 to 4 lanes, for system connectivity. Part of larger segment. 0% complete.	Does not meet minimum eligibility requirements at this time.
Moreno Valley	Cactus Avenue	Oliver St. to Redlands Ave.	Add Cactus (Oliver to Redlands) segment completed to 4 lanes as part of the larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	Add 1.50-mile Cactus (Oliver to Redlands) segment completed to 4 lanes, for system connectivity. FI=\$0.00 100% complete.	Does not meet minimum eligibility requirements at this time.
Moreno Valley	Cactus Avenue	Redlands Ave. to Merwin St.	Add Cactus (Redlands to Merwin) segment add 0 to 4 new lanes as part of the larger Cactus Avenue (Heacock to Merwin) arterial necessary to provide alternate east/west connectivity in the area.	Add 0.25-mile Cactus (Redlands to Merwin) segment, 0 to 4 new lanes , for system connectivity.	Does not meet minimum eligibility requirements at this time.
Moreno Valley	Theodore Street	Ironwood Ave. to SR-60	Add a 0.43-mile Theodore (Ironwood to SR-60) arterial widening segment 2 to 4 lanes, for regional connectivity.	Add a 0.43-mile Theodore (Ironwood to SR-60) arterial widening segment 2 to 4 lanes, for regional connectivity. 0% complete, City to fund locally.	Model does not support adding to Network.
Moreno Valley	Theodore Street	SR-60 to E. Dracaena Ave.	Add a 0.68-mile Theodore (SR-60 to E. Dracaena) arterial widening segment 2 to 4 lanes, for regional connectivity.	Add 0.68-mile Theodore (SR-60 to E. Dracaena) arterial widening segment 2 to 4 lanes, for regional connectivity. 0% complete.	Model does not support adding to Network.
Moreno Valley	Theodore Street	East Dracaena Ave. to Alessandro Blvd.	Add a 0.70-mile Theodore (E. Dracaena to Alessandro) arterial widening segment, 2 to 4 lanes, for regional connectivity. 0% complete.	Add 0.70-mile Theodore (E. Dracaena to Alessandro) arterial widening segment 2 to 4 lanes. 0% complete.	Model does not support adding to Network.
Perris	Ethanac Road	Goetz Rd. to Keystone Drive	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic for a total of 6 lanes.	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic. Increase future lanes from 0 to 4 to 6 along Ethanac Rd (Goetz Rd. to Keystone Drive) 2.24 miles to the 2009 TUMF Network.	Model does not support lane increase.
County of Riverside	Ethanac Road	Keystone Drive to SR-74	Add two new lanes to the 2009 TUMF Network to accommodate existing and future Traffic for a total of 6 lanes.	Add two new lanes to the 2009 TUMF Network arterial for 6 new lanes total to accommodate existing and future Traffic to connect Ethanac Rd (Keystone Drive to SR-74) 1.07 miles to the 2009 TUMF Network.	Model does not support lane increase.
Southwest Zone Adjustment Requests Not Approved					
Menifee	Newport Boulevard	Goetz Rd. to Murrieta Rd.	Add developer delivered portion (80% or 1.78 miles) of Newport Road, from Goetz Rd to Murrieta onto the 2009 TUMF Network to enable developer to recapture TUMF funding for work completed.	Reinstate 1.78 miles of completed Newport Rd, from Goetz Rd to Murrieta to the 2009 TUMF Network.	Not appropriate to add completed 2007 improvement costs to 2017 Network.
Lake Elsinore	Camino Del Norte	Main St. to Canyon Estates, 1.00 mile, 2 to 4 lanes	Add Camino Del Norte Street, from Main Street to Canyon Estates, 1.00 mile arterial and widen from 2 to 4 lanes to the Network..	Add Camino Del Norte Street, from Main Street to Canyon Estates, 1.00 mile arterial and widen from 2 to 4 lanes.	Model does not support adding to Network.
Lake Elsinore	Camino Del Norte	I-15 Interchange	Add new type 3 interchange at I-15 and Camino Del Norte Street to the Network.	Add new type 3 interchange at I-15 and Camino Del Norte Street to the Network.	Model does not support adding to Network.
Lake Elsinore	Franklin Street	Main St. to Avenue 6	Add Franklin Street, from Main Street to Avenue 6, 1.10 mile arterial to Network and widen from 2 to 4 lanes to tie in to proposed interchange at Franklin/I-15.	Add Franklin Street, from Main Street to Avenue 6, 1.10 mile arterial to Network and widen from 2 to 4 lanes to tie in to proposed interchange at Franklin/I-15.	Model does not support adding to Network.
Lake Elsinore	Railroad Canyon Road	I-15 to Canyon Hills	Increase future lanes from 6 to 8 on arterial segment.	Increase future lanes from 6 to 8 on arterial segment.	Model does not support adding to Network.

Appendix H - TUMF Network Cost Estimate and Evaluation

For the purpose of calculating the “fair share” fee to be applied to new development under the TUMF program, a planning level cost estimate was developed to reflect the cost to complete improvements to the Regional System of Highways and Arterials to adequately accommodate future traffic growth. The planning level cost estimate was established by applying the unit cost values (presented in **Table 4.1**) to the proposed changes identified for the future Regional System of Highways and Arterials. The resultant cost value was tabulated for each unique segment of the network, by improvement type, based on the proposed list of improvements recommended following the review of the TUMF Network (as described in **Section 4.3, Appendix E and Appendix G**). A separate cost estimate was generated for regional transit improvements based on information provided by RTA and added to the summary table. The TUMF Network cost estimate table is summarized in **Table 4.4** of the Nexus Report. The detailed TUMF Network cost estimate table is included in this Appendix as **Exhibit H-1**. The detailed TUMF transit cost estimate table is included as **Table 4.5** of the Nexus Report.

Where existing obligated funding has previously been secured through traditional funding sources to complete necessary improvements to the TUMF Network, the cost of these improvements will not be recaptured from future developments through the TUMF program. As a result, the TUMF network cost was adjusted accordingly to reflect the availability of obligated funds.

Each jurisdiction in Western Riverside County (including the County of Riverside, participating cities and RCTC) was asked to review their current multi-year capital improvement programs to identify transportation projects on the TUMF system that had previously secured alternate sources of funding. **Exhibit H-2** identifies those projects included on the TUMF Network having previously obligated funding. **Exhibit H-2** was subsequently updated following the 45 day review of the Draft 2016 Nexus Update Study Report to include obligated funding for three TUMF projects as defined in accordance with SB-1, which was approved by Governor Brown on April 28, 2017.

To account for existing needs in the original TUMF Nexus Study, the cost for facilities identified as currently experiencing LOS E or F was adjusted by extracting the share of the cost to improve the portion of those facilities identified in the 2012 Baseline network scenario Level of Service plot with a volume to capacity ratio of greater than 0.90, which is the threshold for LOS E. The adjustment to account for existing need as part of the TUMF Nexus Study provides for the mitigation of incremental traffic growth on those facilities with existing need.

The following approach was applied to account for incremental traffic growth associated with new development as part of the existing need methodology:

1. Facilities with an existing need were identified by reviewing the RivTAM 2012 Baseline scenario assigned traffic on the 2015 existing network and delineating those facilities included on the TUMF Cost Fee Summary Table that have an average directional v/c exceeding 0.90.

- a. Weighted directional v/c values were used to determine existing need for network segments, which was calculated by:
 - i. Determining the length for the portion of each segment (model link), and calculating the ratio of link length to the overall segment length
 - ii. Generating the average directional v/c for each link, for both directions in AM and PM periods, and multiplying by link/segment length ratio
 - iii. Determining the maximum peak-period peak-direction v/c for each link, representing the highest directional v/c in either AM or PM
 - iv. Calculating weighted average v/c for each TUMF segment, based on the sum of all weighted max v/c values of each link within a segment
 - b. A similar method was used to determine existing need for spot improvements including interchanges, railroad crossings and bridges. However, no weighting was used in the calculation of existing need for spot improvements. For these facilities, the peak-period peak-direction v/c values (highest directional v/c in either AM or PM) were utilized in the existing need calculation. This was based on the individual link within a network segment where a bridge or railroad crossing is located, or on- and off-ramps in the case of interchanges.
2. Initial costs of addressing the existing need were calculated by estimating the share of a particular roadway segments “new lane” cost, or individual spot improvement cost (including all associated ROW and soft costs).
 3. Incremental growth in v/c was determined by comparing the average directional base year v/c for the TUMF facilities (delineated under step one) with the horizon year v/c for the corresponding segments and spot improvements calculated based on the RivTAM 2040 No-Build scenario assigned traffic on the 2015 existing network using the same methodology as the base year v/c.
 4. The proportion of the incremental growth attributable to new development was determined by dividing the result of step three with the total 2040 No-Build scenario v/c in excess of LOS E.
 5. For those segments experiencing a net increase in v/c over the base year, TUMF will ‘discount’ the cost of existing need improvements by the proportion of the incremental v/c growth through 2040 No-Build compared to the 2012 Baseline v/c (up to a maximum of 100%).

Exhibit H-2 includes a detailed breakdown of the existing highway improvement needs on the TUMF network, including the associated unfunded improvement cost estimate for each segment experiencing unacceptable LOS.

For transit service improvements, the cost to provide for existing demand was determined by multiplying the total transit component cost by the share of future projected daily bus transit ridership representing existing demand. **Exhibit H-3** reflects the calculation of the existing transit need share and the existing transit need cost.

To validate the effectiveness of the TUMF Network improvements to mitigate the cumulative regional transportation impacts of new development in Western Riverside County, the future TUMF Network was evaluated. The proposed improvements to the Regional System of Highways and Arterials were coded on the 2015 existing network derived from RIVTAM and the model was run to determine the relative impacts on traffic conditions. To quantify the impacts of the TUMF Network improvements, the various traffic measures of effectiveness described in **Section 3.1** for the 2012 Baseline and 2040 No-Build scenarios were calculated for the 2040 TUMF Build network scenario. The results for VMT, VHT, VHD, and total VMT experiencing unacceptable level of service (LOS E) were then compared to the results presented in **Table 3.1** for the no-build conditions. The consolidated results are provided in **Table 4.6**.

EXHIBIT H-1 WRCOG TUMF 2016 Nexus Update - TUMF Network Detailed Cost Estimate

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN	MILES TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	NEWLN	COST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE		
Central	Menifee		Ethanac	Murrieta	Backbone	0.99	2	2	2	0%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Ethanac	Murrieta	I-215	Backbone	0.90	2	2	0%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Ethanac		Interchange	Backbone	0.00	0	0	0%	0.00	1	2	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,084,000	\$1,234,000	\$17,897,000	\$15,766,000	
Central	Menifee		Ethanac	Sherman	Matthews	Backbone	0.61	2	4	0%	1.23	1	3	0	0	0	0	\$848,000	\$352,000	\$0	\$0	\$0	\$0	\$85,000	\$212,000	\$120,000	\$1,617,000	\$1,617,000	
Central	Menifee		Ethanac	BNSF San Jacinto Branch	railroad crossing	Backbone	0.00	2	4	0%	0.00	1	3	0	0	1	0	\$0	\$0	\$0	\$0	\$25,504,000	\$2,550,000	\$6,376,000	\$2,550,000	\$36,980,000	\$33,018,000		
Central	Menifee		Menifee	SR-74 (Pinacate)	Simpson	Backbone	2.49	2	2	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Menifee	Salt Creek	bridge	Backbone	0.00	2	2	0%	0.00	1	3	0	200	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Menifee	Simpson	Aldergate	Backbone	0.64	4	4	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Menifee	Aldergate	Newport	Backbone	0.98	4	4	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Menifee	Newport	Holland	Backbone	1.07	4	4	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Menifee	Holland	Garbani	Backbone	1.03	4	4	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Menifee	Garbani	Scott	Backbone	1.00	2	4	0%	2.00	1	3	0	0	0	0	\$1,382,000	\$573,000	\$0	\$0	\$0	\$138,000	\$346,000	\$196,000	\$2,635,000	\$2,635,000		
Central	Menifee		Menifee/Whitewood	Murrieta City Limit	Backbone	0.53	4	4	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Newport	Goetz	Murrieta	Backbone	1.81	6	6	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Newport	Murrieta	I-215	Backbone	2.05	4	6	0%	4.10	1	3	0	0	0	0	\$2,835,000	\$1,176,000	\$0	\$0	\$0	\$0	\$284,000	\$709,000	\$401,000	\$5,405,000	\$5,405,000	
Central	Menifee		Newport	I-215	Menifee	Backbone	0.95	6	6	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Newport	Menifee	Lindenberger	Backbone	0.77	6	6	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Newport	Lindenberger	SR-79 (Winchester)	Backbone	3.58	6	6	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Scott	I-215	Briggs	Backbone	2.04	4	4	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Menifee		Scott	I-215	Interchange	Backbone	0.00	0	0	0%	0.00	1	3	2	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$37,060,000	
Central	Menifee		Scott	Sunset	Murrieta	Backbone	1.01	2	4	0%	2.01	1	3	0	0	0	0	\$1,392,000	\$578,000	\$0	\$0	\$0	\$0	\$139,000	\$348,000	\$197,000	\$2,654,000	\$2,654,000	
Central	Menifee		Scott	Murrieta	I-215	Backbone	1.94	2	6	0%	7.77	1	3	0	0	0	0	\$5,379,000	\$2,231,000	\$0	\$0	\$0	\$0	\$538,000	\$1,345,000	\$761,000	\$10,254,000	\$10,254,000	
Central	Menifee		SR-74	Matthews	Briggs	Backbone	1.89	4	6	0%	3.79	1	3	0	0	0	0	\$2,620,000	\$1,086,000	\$0	\$0	\$0	\$0	\$262,000	\$655,000	\$371,000	\$4,994,000	\$4,994,000	
Central	Moreno Valley		Alessandro	I-215	Perris	Backbone	3.52	4	6	74%	1.83	1	2	0	0	0	0	\$1,267,000	\$4,142,000	\$0	\$0	\$0	\$0	\$127,000	\$317,000	\$541,000	\$6,394,000	\$6,394,000	
Central	Moreno Valley		Alessandro	Perris	Nason	Backbone	2.00	2	6	19%	6.48	1	2	0	0	0	0	\$4,484,000	\$14,664,000	\$0	\$0	\$0	\$0	\$448,000	\$1,121,000	\$1,915,000	\$22,632,000	\$22,632,000	
Central	Moreno Valley		Alessandro	Nason	Moreno Beach	Backbone	0.99	2	4	0%	1.98	1	2	0	0	0	0	\$1,371,000	\$4,485,000	\$0	\$0	\$0	\$0	\$137,000	\$343,000	\$586,000	\$6,922,000	\$6,922,000	
Central	Moreno Valley		Alessandro	Moreno Beach	Gilman Springs	Backbone	4.13	2	4	0%	8.26	1	3	0	0	0	0	\$5,719,000	\$2,372,000	\$0	\$0	\$0	\$0	\$572,000	\$1,430,000	\$809,000	\$10,902,000	\$10,902,000	
Central	Moreno Valley		Gilman Springs	Alessandro	SR-60	Backbone	1.67	2	4	0%	3.34	1	3	0	0	0	0	\$2,314,000	\$960,000	\$0	\$0	\$0	\$0	\$231,000	\$579,000	\$327,000	\$4,411,000	\$4,411,000	
Central	Moreno Valley		Gilman Springs	SR-60	Interchange	Backbone	0.00	0	0	0%	0.00	1	3	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$17,897,000	
Central	Moreno Valley		Perris	Reche Vista	Ironwood	Backbone	2.09	2	2	90%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Moreno Valley		Perris	Ironwood	Sunnymead	Backbone	0.52	4	4	80%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Moreno Valley		Perris	SR-60	Interchange	Backbone	0.00	0	0	0%	0.00	1	2	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$17,897,000	
Central	Moreno Valley		Perris	Sunnymead	Cactus	Backbone	2.00	4	4	25%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Moreno Valley		Perris	Cactus	Harley Knox	Backbone	3.50	6	6	0%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Moreno Valley		Reche Vista	Moreno Valley City Limit	Heacock	Backbone	0.44	2	4	0%	0.88	2	2	0	0	0	0	\$773,000	\$1,991,000	\$0	\$0	\$0	\$0	\$77,000	\$193,000	\$276,000	\$3,310,000	\$1,705,000	
Central	Perris		11th/Case	Goetz	Backbone	0.30	2	4	0%	0.60	1	2	0	0	0	0	0	\$416,000	\$1,360,000	\$0	\$0	\$0	\$0	\$42,000	\$104,000	\$178,000	\$2,100,000	\$2,100,000	
Central	Perris		Case	Goetz	I-215	Backbone	2.36	2	4	0%	4.72	1	2	0	0	0	0	\$3,266,000	\$10,681,000	\$0	\$0	\$0	\$0	\$327,000	\$817,000	\$1,395,000	\$16,486,000	\$13,538,000	
Central	Perris		Case	San Jacinto River	bridge	Backbone	0.00	2	4	0%	0.00	1	2	0	122	0	0	\$0	\$0	\$0	\$776,000	\$0	\$0	\$0	\$78,000	\$194,000	\$78,000	\$495,000	\$495,000
Central	Perris		Ethanac	Keystone	Goetz	Backbone	2.24	0	4	38%	5.56	1	3	0	0	0	0	\$3,844,000	\$1,594,000	\$0	\$0	\$0	\$0	\$384,000	\$961,000	\$544,000	\$7,327,000	\$7,327,000	
Central	Perris		Ethanac	San Jacinto River	bridge	Backbone	0.00	0	4	0%	0.00	1	3	0	400	0	0	\$0	\$0	\$0	\$5,088,000	\$0	\$0	\$0	\$509,000	\$1,272,000	\$509,000	\$7,378,000	\$7,378,000
Central	Perris		Ethanac	I-215	Sherman	Backbone	0.35	2	4	0%	0.70	1	2	0	0	0	0	\$482,000	\$1,578,000	\$0	\$0	\$0	\$0	\$48,000	\$121,000	\$206,000	\$2,435,000	\$1,945,000	
Central	Perris		Case	Goetz	Ethanac	Backbone	2.00	2	4	0%	3.99	1	2	0	0	0	0	\$2,763,000	\$1,146,000	\$0	\$0	\$0	\$0	\$276,000	\$691,000	\$391,000	\$5,267,000	\$2,506,000	
Central	Perris		Goetz	San Jacinto River	bridge	Backbone	0.00	2	4	0%	0.00	1	3	0	400	0	0	\$0	\$0	\$0	\$2,544,000	\$0	\$0	\$0	\$254,000	\$636,000	\$254,000	\$3,688,000	\$1,925,000
Central	Perris		Mid-County (Placentia)	I-215	Perris	Backbone	0.87	0	6	28%	3.76	1	2	0	0	0	0	\$2,601,000	\$8,505,000	\$0	\$0	\$0	\$0	\$260,000	\$650,000	\$1,111,000	\$13,127,000	\$12,627,000	
Central	Perris		Mid-County (Placentia)	I-215	Interchange	Backbone	0.00	0	0	0%	0.00	1	2	2	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$37,354,000	
Central	Perris		Mid-County	Evans	Backbone	1.57	0	0	0	0%	9.42	1	2	0	0	0	0	\$6,519,000	\$21,317,000	\$0	\$0	\$0	\$0	\$652,000	\$1,630,000	\$2,784,000	\$32,902,000	\$32,902,000	
Central	Perris		Mid-County	Perris Valley Storm Channel	bridge	Backbone	0.00	0	6	0%	0.00	1	2	0	300	0	0	\$0	\$0	\$0	\$5,724,000	\$0	\$0	\$572,000	\$1,431,000	\$572,000	\$8,299,000	\$8,299,000	
Central	Perris		Harley Knox	Ramona	Backbone	1.00	6	6	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Perris		Perris	Ramona	Citrus	Backbone	2.49	4	6	0%	4.99	1	3	0	0	0	0	\$3,451,000	\$1,431,000	\$0	\$0	\$0	\$0	\$345,000	\$863,000	\$488,000	\$6,578,000	\$6,578,000	
Central	Perris		Perris	Citrus	Nuevo	Backbone	0.50	6	6	0%	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Perris		Perris	Nuevo	11th	Backbone	1.75	2	4	0%	3.49	1	2	0	0	0	0	\$2,418,000	\$7,908,000	\$0	\$0	\$0	\$0	\$242,000	\$605,000	\$1,033,000	\$12,206,000	\$9,034,000	
Central	Perris		Perris	I-215 overcrossing	bridge	Backbone	0.00	2	4	0%	0.00	1	2	0	300	0	0	\$0	\$0	\$0	\$1,908,000	\$0	\$0	\$0	\$191,000	\$477,000	\$191,000	\$2,767,000	\$1,356,000
Central	Perris		Ramona	I-215	Perris	Backbone	1.47	4	6	73%	0.79	1	2	0	0	0	0	\$549,000	\$1,794,000	\$0	\$0	\$0	\$0	\$55,000	\$137,000	\$234,000	\$2,769,000	\$2,769,000	
Central	Perris		Ramona	I-215	Interchange	Backbone	0.00	0	0	0%	0.00	1	2	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$5,965,000	
Central	Perris		Ramona	Perris	Evans	Backbone	1.00	6	6	0%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Central	Perris		Ramona	Evans	Mid-County (2,800 ft E of Rider)	Backbone	2.6																						

EXHIBIT H-1 WRCOG TUMF 2016 Nexus Update - TUMF Network Detailed Cost Estimate

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN	MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE		
Northwest	Unincorporated	Alessandro	Vista Grande	I-215	Backbone	1.22	6	6	0%	0.00	0.00	2	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Northwest	Unincorporated	Alessandro	Vista Grande	I-215	Backbone	1.26	6	6	0%	0.00	0.00	2	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Northwest	Unincorporated	Cajalco	Harley John	I-215	Backbone	0.76	2	6	0%	3.02	3.02	2	3	0	0	0	0	\$2,656,000	\$868,000	\$0	\$0	\$0	\$0	\$266,000	\$664,000	\$352,000	\$4,806,000	\$3,465,000	
Northwest	Unincorporated	Cajalco	Harley John	Harvil	Backbone	5.79	2	6	0%	23.16	23.16	1	2	0	0	0	0	\$16,026,000	\$52,409,000	\$0	\$0	\$0	\$0	\$1,603,000	\$4,007,000	\$6,844,000	\$80,889,000	\$66,905,000	
Northwest	Unincorporated	Cajalco	Harvil	I-215	Backbone	0.28	4	6	0%	0.57	0.57	1	3	0	0	0	0	\$393,000	\$163,000	\$0	\$0	\$0	\$0	\$39,000	\$98,000	\$56,000	\$749,000	\$749,000	
Northwest	Unincorporated	Cajalco	Temescal Canyon	La Sierra	Backbone	3.21	2	6	0%	12.84	12.84	3	3	0	0	0	0	\$13,662,000	\$3,685,000	\$0	\$0	\$0	\$0	\$1,366,000	\$3,416,000	\$1,735,000	\$23,864,000	\$23,864,000	
Northwest	Unincorporated	Cajalco	Temescal Wash	bridge	Backbone	0.00	2	6	0%	0.00	0.00	3	3	0	175	0	0	\$0	\$0	\$0	\$2,226,000	\$0	\$0	\$0	\$223,000	\$557,000	\$223,000	\$3,229,000	\$3,229,000
Northwest	Unincorporated	Cajalco	El Sobrante	La Sierra	Backbone	6.11	2	6	0%	24.44	24.44	3	3	0	0	0	0	\$26,004,000	\$7,014,000	\$0	\$0	\$0	\$0	\$2,600,000	\$6,501,000	\$3,302,000	\$45,421,000	\$45,421,000	
Northwest	Unincorporated	Van Buren	Mockingbird Canyon	Wood	Backbone	4.41	4	6	0%	8.81	8.81	1	2	0	0	0	0	\$6,099,000	\$19,946,000	\$0	\$0	\$0	\$0	\$6,100,000	\$1,525,000	\$2,405,000	\$30,785,000	\$28,309,000	
Northwest	Unincorporated	Van Buren	Orange Terrace	I-215	Backbone	1.89	4	6	42%	2.19	2.19	1	2	0	0	0	0	\$1,513,000	\$4,949,000	\$0	\$0	\$0	\$0	\$151,000	\$378,000	\$646,000	\$7,637,000	\$7,637,000	
Pass	Beaumont	Beaumont	Oak Valley (I-14th)	I-10	Backbone	1.37	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont	Potrero	Oak Valley (San Timoteo Cany	SR-60	Backbone	0.72	2	4	15%	1.22	1.22	1	3	0	0	0	0	\$847,000	\$351,000	\$0	\$0	\$0	\$0	\$85,000	\$212,000	\$120,000	\$1,615,000	\$1,615,000	
Pass	Beaumont	Potrero	interchange	SR-60	Backbone	0.00	0	0	0%	0.00	0.00	1	3	2	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$23,760,000	
Pass	Beaumont	Potrero	railroad crossing	UP	Backbone	0.00	2	4	50%	0.00	0.00	1	3	0	0	2	0	\$0	\$0	\$0	\$0	\$5,466,000	\$547,000	\$1,367,000	\$547,000	\$7,927,000	\$7,927,000		
Pass	Beaumont	Potrero	Noble Creek	bridge	Backbone	0.00	2	4	50%	0.00	0.00	1	3	0	500	0	0	\$0	\$0	\$0	\$1,590,000	\$0	\$0	\$159,000	\$398,000	\$159,000	\$2,306,000	\$2,306,000	
Pass	Beaumont	Potrero	4th	SR-60	Backbone	0.45	0	4	0%	1.80	1.80	1	3	0	0	0	0	\$1,246,000	\$517,000	\$0	\$0	\$0	\$0	\$125,000	\$312,000	\$176,000	\$2,376,000	\$2,376,000	
Pass	Beaumont	SR-79 (Beaumont)	Mellow	I-10	Backbone	0.80	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont	SR-79 (Beaumont)	interchange	I-10	Backbone	0.00	0	0	0%	0.00	0.00	1	2	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$5,369,000	
Pass	Unincorporated	SR-79 (Beaumont)	California	Mellow	Backbone	0.38	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Unincorporated	SR-79 (Lamb Canyon)	California	Gilman Springs	Backbone	4.87	4	4	0%	0.00	0.00	2	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
San Jacinto	Hemet	Domenigoni	Warren	Sanderson	Backbone	1.77	4	6	0%	3.54	3.54	1	3	0	0	0	0	\$2,452,000	\$1,017,000	\$0	\$0	\$0	\$0	\$245,000	\$613,000	\$347,000	\$4,674,000	\$4,674,000	
San Jacinto	Hemet	Domenigoni	Sanderson	State	Backbone	2.14	4	4	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
San Jacinto	Hemet	SR-74	Winchester	Warren	Backbone	2.59	4	6	11%	4.61	4.61	1	2	0	0	0	0	\$3,187,000	\$10,421,000	\$0	\$0	\$0	\$0	\$319,000	\$797,000	\$1,361,000	\$16,085,000	\$16,085,000	
San Jacinto	San Jacinto	Mid-County (Ramona)	Warren	Sanderson	Backbone	1.73	4	6	0%	3.45	3.45	1	2	0	0	0	0	\$2,390,000	\$7,817,000	\$0	\$0	\$0	\$0	\$239,000	\$598,000	\$1,021,000	\$12,065,000	\$12,065,000	
San Jacinto	San Jacinto	Mid-County (Ramona)	Sanderson/SR-79 (Hemet Bypa	interchange	Backbone	0.00	0	0	0%	0.00	0.00	1	2	2	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$37,060,000	
San Jacinto	San Jacinto	Ramona	State	Sanderson	Backbone	2.39	6	6	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
San Jacinto	San Jacinto	Ramona	State	Main	Backbone	2.66	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
San Jacinto	San Jacinto	Ramona	Main	Cedar	Backbone	2.08	0	4	60%	3.33	3.33	1	2	0	0	0	0	\$2,303,000	\$7,531,000	\$0	\$0	\$0	\$0	\$230,000	\$576,000	\$983,000	\$11,623,000	\$11,139,000	
San Jacinto	San Jacinto	Ramona	Cedar	SR-74	Backbone	1.10	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
San Jacinto	Unincorporated	Domenigoni	SR-79 (Winchester)	Warren	Backbone	3.10	4	6	0%	6.20	6.20	1	3	0	0	0	0	\$4,287,000	\$1,778,000	\$0	\$0	\$0	\$0	\$429,000	\$1,072,000	\$607,000	\$8,173,000	\$8,173,000	
San Jacinto	Unincorporated	Domenigoni	San Diego Aqueduct	bridge	Backbone	0.00	4	6	0%	0.00	0.00	1	3	0	300	0	0	\$0	\$0	\$0	\$1,908,000	\$0	\$0	\$0	\$191,000	\$477,000	\$191,000	\$2,767,000	\$2,767,000
San Jacinto	Unincorporated	Gilman Springs	bridge	Sanderson	Backbone	2.95	2	4	0%	5.90	5.90	1	3	0	0	0	0	\$4,082,000	\$1,693,000	\$0	\$0	\$0	\$0	\$408,000	\$1,021,000	\$578,000	\$7,782,000	\$7,782,000	
San Jacinto	Unincorporated	Mid-County (Ramona)	Bridge	Warren	Backbone	2.35	2	6	0%	9.40	9.40	1	3	0	0	0	0	\$6,503,000	\$2,697,000	\$0	\$0	\$0	\$0	\$650,000	\$1,626,000	\$920,000	\$12,396,000	\$11,045,000	
San Jacinto	Unincorporated	SR-74	SR-79 (Winchester)	Briggs	Backbone	3.53	4	6	0%	7.05	7.05	1	3	0	0	0	0	\$4,879,000	\$2,024,000	\$0	\$0	\$0	\$0	\$488,000	\$1,220,000	\$690,000	\$9,301,000	\$9,301,000	
San Jacinto	Unincorporated	SR-79 (Hemet Bypass)	SR-74 (Florida)	Domenigoni	Backbone	3.22	0	4	0%	12.88	12.88	1	3	0	0	0	0	\$8,913,000	\$3,697,000	\$0	\$0	\$0	\$0	\$891,000	\$2,228,000	\$1,261,000	\$16,990,000	\$16,990,000	
San Jacinto	Unincorporated	SR-79 (Hemet Bypass)	San Diego Aqueduct	bridge	Backbone	0.00	0	4	0%	0.00	0.00	1	3	0	300	0	0	\$0	\$0	\$0	\$3,816,000	\$0	\$0	\$0	\$382,000	\$954,000	\$382,000	\$5,534,000	\$5,534,000
San Jacinto	Unincorporated	SR-79 (Hemet Bypass)	Domenigoni	Winchester	Backbone	1.50	0	4	0%	6.00	6.00	1	3	0	0	0	0	\$4,152,000	\$1,722,000	\$0	\$0	\$0	\$0	\$415,000	\$1,038,000	\$587,000	\$7,914,000	\$7,914,000	
San Jacinto	Unincorporated	SR-79 (San Jacinto Bypass)	Mid-County (Ramona)	SR-74 (Florida)	Backbone	6.50	0	4	0%	26.00	26.00	1	3	0	0	0	0	\$17,992,000	\$7,462,000	\$0	\$0	\$0	\$0	\$1,799,000	\$4,498,000	\$2,345,000	\$34,296,000	\$30,076,000	
San Jacinto	Unincorporated	SR-79 (Sanderson)	Gilman Springs	Ramona	Backbone	1.92	4	6	0%	3.84	3.84	1	3	0	0	0	0	\$2,654,000	\$1,101,000	\$0	\$0	\$0	\$0	\$265,000	\$664,000	\$376,000	\$5,060,000	\$2,376,000	
San Jacinto	Unincorporated	SR-79 (Sanderson)	San Jacinto River	bridge	Backbone	0.00	4	6	0%	0.00	0.00	1	3	0	1,400	0	0	\$0	\$0	\$0	\$8,904,000	\$0	\$0	\$0	\$890,000	\$2,226,000	\$890,000	\$12,910,000	\$6,100,000
San Jacinto	Unincorporated	SR-79 (Winchester)	Domenigoni	Keller	Backbone	4.90	6	6	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Southwest	Canyon Lake	Canyon Lake	Goetz	Railroad Canyon	Backbone	0.50	4	4	0%	0.00	0.00	2	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Southwest	Canyon Lake	Railroad Canyon	Canyon Hills	Goetz	Backbone	1.95	6	6	0%	0.00	0.00	2	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Southwest	Lake Elsinore	Railroad Canyon	Canyon Hills	I-15	Backbone	2.29	4	6	50%	2.29	2.29	1	3	0	0	0	0	\$1,585,000	\$657,000	\$0	\$0	\$0	\$0	\$159,000	\$396,000	\$224,000	\$3,021,000	\$3,021,000	
Southwest	Lake Elsinore	Railroad Canyon	I-15	interchange	Backbone	0.00	0	0	0%	0.00	0.00	1	3	1	0	0	0	\$0	\$0	\$50,032,000	\$0	\$0	\$0	\$5,003,000	\$12,508,000	\$5,003,000	\$72,546,000	\$28,636,000	
Southwest	Lake Elsinore	SR-74	interchange	I-15	Backbone	0.00	0	0	0%	0.00	0.00	1	3	2	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$17,725,000	\$17,725,000	
Southwest	Murrieta	Clinton Keith	Copper Craft	Toulon	Backbone	0.83	6	6	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Southwest	Murrieta	Clinton Keith	Toulon	I-215	Backbone	0.83	4	6	0%	1.66	1.66	1	3	0	0	0	0	\$1,147,000	\$476,000	\$0	\$0	\$0	\$0	\$115,000	\$287,000	\$162,000	\$2,187,000	\$2,187,000	
Southwest	Murrieta	Clinton Keith	I-215	Whitewood	Backbone	0.75	6	6	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Southwest	Murrieta	French Valley (Date)	Murrieta Hot Springs	Winchester Creek	Backbone	0.24	0	4	0%	0.96	0.96	1	2	0	0	0	0	\$664,000	\$2,172,000	\$0	\$0	\$0	\$0	\$66,000	\$166,000	\$284,000	\$3,352,000	\$3,352,000	
Southwest	Murrieta	French Valley (Date)	Winchester Creek	Margarita	Backbone	0.61	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Southwest	Murrieta	Whitewood	Menifee City Limit	Keller	Backbone	0.55	4	4	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Southwest	Murrieta	Whitewood	Keller																										

EXHIBIT H-1 WRCOG TUMF 2016 Nexus Update - TUMF Network Detailed Cost Estimate

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN	MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	NEWLN	COST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE	
Central		Menifee	Briggs	Newport	Scott	Secondary	3.05	2	2	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Menifee	Goetz	Juanita	Lesser Lane	Secondary	2.61	2	4	0%	5.22		1	3	0	0	0	\$3,611,000	\$1,498,000	\$0	\$0	\$0	\$0	\$0	\$361,000	\$903,000	\$511,000	\$6,884,000	\$6,593,000
Central		Menifee	Goetz	Newport	Juanita	Secondary	1.36	2	2	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Menifee	Holland	Antelope	Haun	Secondary	1.00	0	4	0%	4.00		1	2	0	0	0	0	\$2,768,000	\$9,052,000	\$0	\$0	\$0	\$0	\$277,000	\$692,000	\$1,182,000	\$13,971,000	\$13,971,000
Central		Menifee	Holland	I-215 overcrossing	bridge	Secondary	0.00	0	4	0%	0.00		1	2	0	0	350	0	\$0	\$0	\$0	\$4,452,000	\$0	\$0	\$445,000	\$1,113,000	\$445,000	\$6,455,000	\$6,455,000
Central		Menifee	McCall	I-215	Aspel	Secondary	1.23	4	4	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Menifee	McCall	I-215	interchange	Secondary	0.00	0	0	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$16,930,000	
Central		Menifee	McCall	Aspel	Menifee	Secondary	0.95	2	4	0%	1.91		1	3	0	0	0	0	\$1,320,000	\$548,000	\$0	\$0	\$0	\$0	\$132,000	\$330,000	\$187,000	\$2,517,000	\$2,517,000
Central		Menifee	McCall	Ethanac	McCall	Secondary	1.95	2	2	37%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Menifee	Murrieta	McCall	Newport	Secondary	2.03	4	4	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Menifee	Murrieta	Newport	Bundy Canyon	Secondary	3.00	2	2	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Cactus	I-215	Heacock	Secondary	1.81	4	6	84%	0.58		1	2	0	0	0	0	\$401,000	\$1,310,000	\$0	\$0	\$0	\$0	\$40,000	\$100,000	\$171,000	\$2,022,000	\$0
Central		Moreno Valley	Cactus	I-215	interchange	Secondary	0.00	0	0	0%	0.00		1	2	0	2	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$37,060,000	
Central		Moreno Valley	Day	Ironwood	SR-60	Secondary	0.28	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Day	SR-60	interchange	Secondary	0.00	0	0	0%	0.00		1	2	0	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$17,897,000
Central		Moreno Valley	Day	SR-60	Eucalyptus	Secondary	0.77	6	6	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central		Moreno Valley	Eucalyptus	I-215	Towngate	Secondary	1.00	4	6	42%	1.16		1	2	0	0	0	0	\$802,000	\$2,624,000	\$0	\$0	\$0	\$0	\$80,000	\$201,000	\$343,000	\$4,050,000	\$4,050,000
Central		Moreno Valley	Eucalyptus	Towngate	Frederick	Secondary	0.67	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Eucalyptus	Frederick	Heacock	Secondary	1.01	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Eucalyptus	Heacock	Kitching	Secondary	1.01	2	2	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Eucalyptus	Kitching	Moreno Beach	Secondary	2.42	2	4	98%	0.10		1	2	0	0	0	0	\$67,000	\$219,000	\$0	\$0	\$0	\$0	\$7,000	\$17,000	\$29,000	\$339,000	\$0
Central		Moreno Valley	Eucalyptus	Moreno Beach	Theodore	Secondary	2.28	0	4	47%	4.83		1	2	0	0	0	0	\$3,345,000	\$10,938,000	\$0	\$0	\$0	\$0	\$335,000	\$836,000	\$1,428,000	\$16,882,000	\$16,882,000
Central		Moreno Valley	Frederick	SR-60	Alessandro	Secondary	1.55	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Heacock	Cactus	San Michele	Secondary	2.79	2	4	77%	1.28		1	2	0	0	0	0	\$888,000	\$2,904,000	\$0	\$0	\$0	\$0	\$89,000	\$222,000	\$379,000	\$4,482,000	\$4,482,000
Central		Moreno Valley	Heacock	Reche Vista	Caclus	Secondary	4.73	4	4	90%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Heacock	San Michele	Harley Knox	Secondary	0.74	2	4	0%	1.48		1	3	0	0	0	0	\$1,027,000	\$426,000	\$0	\$0	\$0	\$0	\$103,000	\$257,000	\$145,000	\$1,958,000	\$1,532,000
Central		Moreno Valley	Ironwood	SR-60	Day	Secondary	1.33	2	4	71%	0.77		1	2	0	0	0	0	\$534,000	\$1,746,000	\$0	\$0	\$0	\$0	\$53,000	\$134,000	\$228,000	\$2,695,000	\$2,695,000
Central		Moreno Valley	Day	Ironwood	Heacock	Secondary	2.01	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Lasselle	Alessandro	John F Kennedy	Secondary	1.00	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Lasselle	John F Kennedy	Oleander	Secondary	3.14	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Moreno Beach	Reche Canyon	SR-60	Secondary	1.37	2	4	0%	2.73		1	2	0	0	0	0	\$1,892,000	\$6,186,000	\$0	\$0	\$0	\$0	\$189,000	\$473,000	\$808,000	\$9,548,000	\$9,548,000
Central		Moreno Valley	Moreno Beach	bridge	SR-60 overcrossing	Secondary	0.00	2	4	0%	0.00		1	2	0	250	0	0	\$0	\$0	\$0	\$1,590,000	\$0	\$0	\$159,000	\$398,000	\$159,000	\$2,306,000	\$2,306,000
Central		Moreno Valley	Nason	SR-60	Alessandro	Secondary	1.51	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Pigeon Pass	Ironwood	SR-60	Secondary	0.43	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Pigeon Pass/CETAP Corridor	Cantarini	Ironwood	Secondary	3.23	2	2	80%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Reche Canyon	Locust	Moreno Valley City Limit	Secondary	0.35	2	2	0%	0.00		2	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Moreno Valley	Redlands	Locust	Alessandro	Secondary	2.68	2	4	0%	5.36		1	2	0	0	0	0	\$3,709,000	\$12,130,000	\$0	\$0	\$0	\$0	\$371,000	\$927,000	\$1,584,000	\$18,721,000	\$18,013,000
Central		Moreno Valley	Redlands	interchange	SR-60	Secondary	0.00	0	0	0%	0.00		1	2	2	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$37,060,000	
Central		Moreno Valley	Theodore	SR-60	Eucalyptus	Secondary	0.26	2	4	0%	0.52		1	2	0	0	0	0	\$360,000	\$1,177,000	\$0	\$0	\$0	\$0	\$36,000	\$90,000	\$154,000	\$1,817,000	\$1,817,000
Central		Moreno Valley	Theodore	interchange	SR-60	Secondary	0.00	0	0	0%	0.00		1	2	2	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$19,096,000	
Central		Perris	Evans	Oleander	Ramona	Secondary	0.99	4	4	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Perris	Evans	Ramona	Morgan	Secondary	0.59	4	6	0%	1.18		1	3	0	0	0	0	\$819,000	\$340,000	\$0	\$0	\$0	\$0	\$82,000	\$205,000	\$116,000	\$1,562,000	\$1,562,000
Central		Perris	Evans	Morgan	Rider	Secondary	0.49	4	4	0%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Perris	Evans	Rider	Placentia	Secondary	0.58	2	2	79%	0.00		1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Perris	Evans	Placentia	Nuevo	Secondary	1.50	0	4	83%	1.02		1	3	0	0	0	0	\$706,000	\$293,000	\$0	\$0	\$0	\$0	\$71,000	\$177,000	\$100,000	\$1,347,000	\$1,347,000
Central		Perris	Evans	Nuevo	I-215	Secondary	1.99	0	4	0%	7.98		1	3	0	0	0	0	\$5,519,000	\$2,289,000	\$0	\$0	\$0	\$0	\$552,000	\$1,380,000	\$781,000	\$10,521,000	\$10,521,000
Central		Perris	Evans	San Jacinto River	bridge	Secondary	0.00	0	4	0%	0.00		1	3	0	0	400	0	\$0	\$0	\$0	\$5,088,000	\$0	\$0	\$509,000	\$1,272,000	\$509,000	\$7,378,000	\$7,378,000
Central		Perris	Goetz	Lesser	Ethanac	Secondary	1.04	2	4	0%	2.08		1	3	0	0	0	0	\$1,440,000	\$597,000	\$0	\$0	\$0	\$0	\$144,000	\$360,000	\$204,000	\$2,745,000	\$1,238,000
Central		Perris	Harley Knox	I-215	Indian	Secondary	1.53	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Perris	Harley Knox	I-215	interchange	Secondary	0.00	0	0	0%	0.00		1	2	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$7,110,000
Central		Perris	Harley Knox	Indian	Perris	Secondary	0.50	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Perris	Harley Knox	Redlands	Perris	Secondary	0.50	4	4	0%	0.00		1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Central		Perris	Nuevo	I-215	Murrieta	Secondary	1.36	4	6	0%	2.71		1	2	0	0	0	0	\$1,878,000	\$6,142,000	\$0	\$0	\$0	\$0	\$188,000	\$470,000	\$802,000	\$9,480,000	\$9,480,000
Central		Perris	Nuevo	I-215	interchange	Secondary	0.00	0	0	0%	0.00		1	2	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$17,897,000
Central		Perris	Nuevo	Murrieta	Dunlap	Secondary	1.00	2	4	23%	1.54		1	3	0	0	0	0	\$1,067,000	\$443,000	\$0	\$0	\$0	\$0	\$107,000	\$267,000	\$151,000	\$2,035,000	\$2,035,000
Central		Perris	Nuevo	Perris Valley Storm Channel	bridge	Secondary	0.00	2	4	0%	0.00		1	3	0	0	300	0	\$0	\$0	\$0	\$1,908,000	\$0	\$0	\$191,000	\$477,000	\$191,000	\$2,767,000	\$2,767,000
Central</																													

EXHIBIT H-1 WRCOG TUMF 2016 Nexus Update - TUMF Network Detailed Cost Estimate

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN	MILES TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	NEWLN	COST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE			
Northwest	Corona	6th	SR-91	Secondary	Magnolia	4.50	4	4	0%	0.00	0.00	1	1	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Auto Center	SR-91	Secondary	SR-91	0.48	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Cajalco	I-15	Secondary	Bedford Canyon	0.15	2	4	0%	0.30	0.30	1	2	0	0	0	0	\$208,000	\$479,000	\$0	\$0	\$0	\$0	\$21,000	\$52,000	\$89,000	\$1,049,000	\$1,049,000		
Northwest	Corona	Hidden Valley	Narco Hills	Secondary	McKinley	0.59	4	4	0%	0.00	0.00	2	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Lincoln	Parkridge	Secondary	Ontario	3.20	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Magnolia	6th	Secondary	Sherborn Bridge	0.47	4	6	0%	0.94	0.94	1	2	0	0	0	0	\$650,000	\$2,127,000	\$0	\$0	\$0	\$0	\$65,000	\$163,000	\$278,000	\$3,283,000	\$3,283,000		
Northwest	Corona	Magnolia	Temescal Creek bridge	Secondary	Magnolia	0.00	4	6	0%	0.00	0.00	1	2	0	300	0	0	\$0	\$0	\$0	\$1,908,000	\$0	\$191,000	\$477,000	\$191,000	\$2,767,000	\$2,767,000			
Northwest	Corona	Magnolia	Sherborn Bridge	Secondary	Rimpau	0.52	6	6	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Magnolia	Rimpau	Secondary	Ontario	1.17	6	6	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Main	Grand	Secondary	Ontario	0.88	2	4	0%	1.76	1.76	1	3	0	0	0	0	\$1,219,000	\$506,000	\$0	\$0	\$0	\$0	\$122,000	\$305,000	\$173,000	\$2,325,000	\$575,000		
Northwest	Corona	Main	Ontario	Secondary	Foothill	0.89	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Main	Hidden Valley	Secondary	Parkridge	0.35	4	6	0%	0.70	0.70	1	2	0	0	0	0	\$481,000	\$1,573,000	\$0	\$0	\$0	\$0	\$48,000	\$120,000	\$205,000	\$2,427,000	\$1,912,000		
Northwest	Corona	Main	SR-91	Secondary	Parkridge	0.86	6	6	0%	0.00	0.00	1	1	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Main	SR-91	Secondary	S. Grand	0.86	4	4	0%	0.00	0.00	1	1	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	McKinley	Hidden Valley	Secondary	Promenade	0.40	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	McKinley	Promenade	Secondary	SR-91	0.33	6	6	0%	0.00	0.00	1	1	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	McKinley	SR-91	Secondary	Magnolia	0.31	4	6	0%	0.62	0.62	1	1	0	0	0	0	\$431,000	\$1,564,000	\$0	\$0	\$0	\$0	\$43,000	\$108,000	\$200,000	\$2,346,000	\$2,346,000		
Northwest	Corona	McKinley	bridge	Secondary	Arlington Channel	0.00	4	6	0%	0.00	0.00	1	1	0	100	0	0	\$0	\$0	\$0	\$636,000	\$0	\$64,000	\$159,000	\$64,000	\$923,000	\$923,000			
Northwest	Corona	McKinley	BNST	Secondary	railroad crossing	0.00	4	6	0%	0.00	0.00	1	1	0	0	1	0	\$0	\$0	\$0	\$0	\$38,256,000	\$3,826,000	\$9,564,000	\$3,826,000	\$55,472,000	\$0			
Northwest	Corona	Ontario	I-15	Secondary	El Cerrito	0.89	4	6	0%	1.78	1.78	1	2	0	0	0	0	\$1,232,000	\$4,028,000	\$0	\$0	\$0	\$0	\$123,000	\$308,000	\$526,000	\$6,217,000	\$4,924,000		
Northwest	Corona	Ontario	Buena Vista	Secondary	Buena Vista	0.32	4	6	0%	0.64	0.64	1	2	0	0	0	0	\$444,000	\$1,453,000	\$0	\$0	\$0	\$0	\$44,000	\$111,000	\$190,000	\$2,242,000	\$1,883,000		
Northwest	Corona	Ontario	Buena Vista	Secondary	Main	0.65	6	6	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Ontario	Main	Secondary	Kellogg	0.78	6	6	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Ontario	Kellogg	Secondary	Fullerton	0.32	4	6	0%	0.64	0.64	1	1	0	0	0	0	\$443,000	\$1,607,000	\$0	\$0	\$0	\$0	\$44,000	\$111,000	\$205,000	\$2,410,000	\$1,785,000		
Northwest	Corona	Ontario	Fullerton	Secondary	Rimpau	0.42	6	6	0%	0.00	0.00	1	1	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Ontario	Rimpau	Secondary	I-15	0.60	6	6	0%	0.00	0.00	1	1	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Railroad	Auto Club	Secondary	Buena Vista	2.45	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Railroad	BNST	Secondary	railroad crossing	0.00	4	4	0%	0.00	0.00	1	2	0	0	2	0	\$0	\$0	\$0	\$0	\$10,932,000	\$1,093,000	\$2,733,000	\$1,093,000	\$15,851,000	\$15,851,000			
Northwest	Corona	Railroad	Buena Vista	Secondary	Main (at Grand)	0.58	2	4	0%	1.16	1.16	1	2	0	0	0	0	\$803,000	\$2,625,000	\$0	\$0	\$0	\$0	\$80,000	\$201,000	\$343,000	\$4,052,000	\$3,203,000		
Northwest	Corona	River	Corydon	Secondary	Main	2.27	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Corona	Serfas Club	SR-91	Secondary	Green River	0.96	4	4	0%	0.00	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Eastvale	Archibald	San Bernardino County	Secondary	River	3.63	2	4	82%	1.31	1.31	1	3	0	0	0	0	\$905,000	\$375,000	\$0	\$0	\$0	\$0	\$91,000	\$228,000	\$128,000	\$1,725,000	\$1,725,000		
Northwest	Eastvale	Hamner	Mission	Secondary	Bellevue	3.03	2	6	73%	1.64	1.64	1	3	0	0	0	0	\$1,132,000	\$470,000	\$0	\$0	\$0	\$0	\$113,000	\$283,000	\$160,000	\$2,158,000	\$2,158,000		
Northwest	Eastvale	Hamner	Bellevue	Secondary	Amberhill	0.20	4	6	0%	0.40	0.40	1	3	0	0	0	0	\$277,000	\$115,000	\$0	\$0	\$0	\$0	\$28,000	\$69,000	\$39,000	\$528,000	\$528,000		
Northwest	Eastvale	Hamner	Amberhill	Secondary	Limonite	0.71	2	6	14%	2.44	2.44	1	3	0	0	0	0	\$1,690,000	\$701,000	\$0	\$0	\$0	\$0	\$169,000	\$423,000	\$239,000	\$3,222,000	\$3,222,000		
Northwest	Eastvale	Hamner	Limonite	Secondary	Schleisman	1.00	6	6	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Eastvale	Hamner	Schleisman	Secondary	Santa Ana River	1.00	2	6	50%	2.00	2.00	1	3	0	0	0	0	\$1,384,000	\$574,000	\$0	\$0	\$0	\$0	\$138,000	\$346,000	\$196,000	\$2,638,000	\$2,638,000		
Northwest	Eastvale	Limonite	East Center	Secondary	East Center	0.35	6	6	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Eastvale	Limonite	I-15	Secondary	interchange	0.00	0	0	0%	0.00	0.00	1	3	3	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$0		
Northwest	Eastvale	Limonite	East Center	Secondary	Hamner	0.27	5	6	100%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Eastvale	Limonite	Hamner	Secondary	Sumner	1.00	4	6	50%	1.00	1.00	1	3	0	0	0	0	\$692,000	\$287,000	\$0	\$0	\$0	\$0	\$69,000	\$173,000	\$98,000	\$1,319,000	\$1,319,000		
Northwest	Eastvale	Limonite	Sumner	Secondary	Harrison	0.50	6	6	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Eastvale	Limonite	Harrison	Secondary	Archibald	0.49	4	6	0%	0.98	0.98	1	3	0	0	0	0	\$678,000	\$281,000	\$0	\$0	\$0	\$0	\$68,000	\$170,000	\$96,000	\$1,293,000	\$1,293,000		
Northwest	Eastvale	Limonite	Archibald	Secondary	Hellman (Keller SBD Co.)	1.12	0	4	0%	4.48	4.48	1	3	0	0	0	0	\$3,100,000	\$1,286,000	\$0	\$0	\$0	\$0	\$310,000	\$775,000	\$439,000	\$5,910,000	\$5,910,000		
Northwest	Eastvale	Limonite	Cucamonga Creek	Secondary	bridge	0.00	0	4	0%	0.00	0.00	1	3	0	0	200	0	\$0	\$0	\$0	\$2,544,000	\$0	\$0	\$0	\$0	\$254,000	\$636,000	\$254,000	\$3,688,000	\$3,688,000
Northwest	Jurupa Valley	Armstrong	San Bernardino County	Secondary	Valley	1.53	2	4	67%	1.01	1.01	2	3	0	0	0	0	\$885,000	\$289,000	\$0	\$0	\$0	\$0	\$89,000	\$221,000	\$117,000	\$1,601,000	\$1,601,000		
Northwest	Jurupa Valley	Bellevue	Cantu-Galleano Ranch	Secondary	Van Buren	0.29	2	4	0%	0.58	0.58	1	3	0	0	0	0	\$398,000	\$165,000	\$0	\$0	\$0	\$0	\$40,000	\$100,000	\$56,000	\$759,000	\$759,000		
Northwest	Jurupa Valley	Wineville	Bellevue	Secondary	Wineville	1.82	0	4	75%	1.82	1.82	1	3	0	0	0	0	\$1,259,000	\$522,000	\$0	\$0	\$0	\$0	\$126,000	\$315,000	\$178,000	\$2,400,000	\$2,400,000		
Northwest	Jurupa Valley	Etiwanda	San Bernardino County	Secondary	SR-60	1.00	6	6	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Jurupa Valley	SR-60	Limonite	Secondary	Limonite	3.00	4	4	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Jurupa Valley	Limonite	I-15	Secondary	Wineville	0.40	4	4	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Jurupa Valley	Limonite	Wineville	Secondary	Etiwanda	0.99	3	4	100%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Jurupa Valley	Limonite	Etiwanda	Secondary	Van Buren	2.72	2	6	0%	10.87	10.87	1	3	0	0	0	0	\$7,525,000	\$3,121,000	\$0	\$0	\$0	\$0	\$753,000	\$1,881,000	\$1,065,000	\$14,345,000	\$12,319,000		
Northwest	Jurupa Valley	Limonite	Van Buren	Secondary	Clay	0.79	4	6	20%	1.27	1.27	1	3	0	0	0	0	\$877,000	\$364,000	\$0	\$0	\$0	\$0	\$88,000	\$219,000	\$124,000	\$1,672,000	\$1,672,000		
Northwest	Jurupa Valley	Limonite	Clay	Secondary	Riverview	2.45	4	4	0%	0.00	0.00	1	3	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Northwest	Jurupa Valley	Market	Santa Ana River	Secondary	Rubidoux	1.74	2	4	0%	3.49	3.49	1	3	0	0	0	0	\$2,415,000	\$1,002,000	\$0	\$0	\$0	\$0	\$242,000	\$604,000	\$342,000	\$4,605,000	\$4,314,000		
Northwest	Jurupa Valley	Market	Santa Ana River	Secondary	bridge	0.00																								

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AREA	PLAN	DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN	MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	NEWLN	COST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE
Northwest	Riverside			14th	Market	Martin Luther King	Secondary	0.89	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			1st	Market	Main	Secondary	0.08	2	2	0%	0.00	1	1	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			3rd	SR-91	I-215	Secondary	1.34	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			3rd	BNSF	railroad crossing	Secondary	0.00	4	4	0%	0.00	1	2	0	0	0	1	0	\$0	\$0	\$0	\$0	\$25,504,000	\$2,550,000	\$6,376,000	\$2,550,000	\$36,980,000	\$36,980,000
Northwest	Riverside			Adams	Arlington	SR-91	Secondary	1.56	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Adams	SR-91	Lincoln	Secondary	0.54	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Adams	SR-91	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000
Northwest	Riverside			Buena Vista	Santa Ana River	Redwood	Secondary	0.30	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Canyon Crest	Canyon Crest	Central	Secondary	0.95	4	4	0%	0.00	2	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Canyon Crest	Canyon Crest	Country Club	Secondary	0.59	4	4	0%	0.00	2	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Canyon Crest	Country Club	Via Vista	Secondary	0.94	2	4	0%	1.88	2	3	0	0	0	0	0	\$1,653,000	\$540,000	\$0	\$0	\$0	\$0	\$165,000	\$413,000	\$219,000	\$2,990,000
Northwest	Riverside			Canyon Crest	Via Vista	Alessandro	Secondary	0.68	4	4	0%	0.00	2	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Canyon Crest	Chicago	I-215/SR-60	Central	Secondary	2.15	4	4	0%	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Central	SR-91	Magnolia	Secondary	0.76	4	4	30%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Central	SR-91	Alessandro	Secondary	2.05	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Central	Van Buren	Magnolia	Secondary	3.53	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Chicago	Alessandro	Spruce	Secondary	3.42	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Chicago	Spruce	Columbia	Secondary	0.75	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Columbia	Main	Iowa	Secondary	1.09	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Columbia	I-215	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000
Northwest	Riverside			Iowa	Center	3rd	Secondary	2.25	4	6	12%	3.96	1	2	0	0	0	0	0	\$2,737,000	\$8,951,000	\$0	\$0	\$0	\$0	\$274,000	\$684,000	\$1,169,000	\$13,815,000
Northwest	Riverside			Iowa	3rd	University	Secondary	0.51	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Iowa	University	Martin Luther King	Secondary	0.51	2	4	0%	1.01	1	2	0	0	0	0	0	\$699,000	\$2,287,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			JFK	Troutwein	Wood	Secondary	0.48	4	4	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			La Sierra	Arlington	SR-91	Secondary	3.56	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			La Sierra	SR-91	Indiana	Secondary	0.19	6	6	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			La Sierra	Indiana	Victoria	Secondary	0.78	6	6	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Lemon (NB One way)	Mission Inn	University	Secondary	0.08	3	3	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Lincoln	Van Buren	Jefferson	Secondary	2.00	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Lincoln	Jefferson	Washington	Secondary	1.00	2	4	38%	1.24	1	2	0	0	0	0	0	\$858,000	\$2,806,000	\$0	\$0	\$0	\$0	\$86,000	\$215,000	\$366,000	\$4,331,000
Northwest	Riverside			Lincoln	Washington	Victoria	Secondary	1.43	2	4	18%	2.35	1	2	0	0	0	0	0	\$1,623,000	\$5,309,000	\$0	\$0	\$0	\$0	\$162,000	\$406,000	\$693,000	\$8,193,000
Northwest	Riverside			Madison	SR-91	Victoria	Secondary	0.86	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Madison	BNSF	railroad crossing	Secondary	0.00	4	4	0%	0.00	1	2	0	0	0	2	0	\$0	\$0	\$0	\$0	\$0	\$10,932,000	\$1,093,000	\$2,733,000	\$1,093,000	\$15,851,000
Northwest	Riverside			Madison	BNSF Railroad	Tyler	Secondary	2.70	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Madison	BNSF	railroad crossing	Secondary	0.00	4	4	0%	0.00	1	2	0	0	0	2	0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,932,000	\$1,093,000	\$2,733,000	\$1,093,000
Northwest	Riverside			Madison	BNSF Railroad	Harrison	Secondary	0.65	6	6	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Madison	BNSF	railroad crossing	Secondary	0.00	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Madison	Harrison	14th	Secondary	5.98	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Main	1st	San Bernardino County	Secondary	2.19	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Market	14th	Santa Ana River	Secondary	2.03	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Martin Luther King	14th	I-215/SR-60	Secondary	2.11	4	6	57%	1.82	1	2	0	0	0	0	0	\$1,256,000	\$4,108,000	\$0	\$0	\$0	\$0	\$126,000	\$314,000	\$536,000	\$6,340,000
Northwest	Riverside			Mission Inn	Redwood	Lemon	Secondary	0.79	4	4	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Mission Inn	Redwood [SB One way]	University	Secondary	0.08	4	4	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Troutwein	Alessandro	Van Buren	Secondary	2.19	4	4	0%	0.00	2	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Tyler	SR-91	Magnolia	Secondary	0.43	6	6	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Tyler	SR-91	interchange	Secondary	0.00	0	0	0%	0.00	1	2	2	0	0	0	0	\$0	\$0	\$25,558,000	\$0	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000
Northwest	Riverside			Tyler	Magnolia	Hole	Secondary	0.27	6	6	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Tyler	Hole	Wells	Secondary	1.06	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Tyler	Wells	Arlington	Secondary	1.35	2	4	0%	2.70	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			University	Arlington	SR-91	Secondary	0.86	4	4	0%	0.00	1	3	0	0	0	0	0	\$1,871,000	\$6,118,000	\$0	\$0	\$0	\$0	\$187,000	\$468,000	\$799,000	\$9,443,000
Northwest	Riverside			University	SR-91	Redwood	Secondary	0.00	1	3	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			University	SR-91	I-215/SR-60	Secondary	2.01	4	4	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Victoria	Lincoln	Arlington	Secondary	0.16	2	2	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Victoria	Madison	Washington	Secondary	0.52	2	2	0%	0.00	1	2	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Washington	Victoria	Hermosa	Secondary	2.05	2	4	0%	4.11	1	2	0	0	0	0	0	\$2,844,000	\$9,299,000	\$0	\$0	\$0	\$0	\$284,000	\$711,000	\$1,214,000	\$14,352,000
Northwest	Riverside			Wood	JFK	Van Buren	Secondary	0.70	2	4	50%	0.70	1	3	0	0	0	0	0	\$484,000	\$201,000	\$0	\$0	\$0	\$0	\$48,000	\$121,000	\$69,000	\$923,000
Northwest	Riverside			Wood	Van Buren	Bergamont	Secondary	0.11	4	4	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside			Wood	Wood	Krameria	Secondary	0.39	4	4	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated			Cantu-Galleano Ranch	Hamner	Wineville	Secondary	0.94	4	4	0%	0.00	1	3	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated			Dos Lagos (Weirick)	Temescal Canyon	I-15	Secondary	0.21	4	4	0%	0.00	1	3	0	0	0	0</											

EXHIBIT H-1 WRCOG TUMF 2016 Nexus Update - TUMF Network Detailed Cost Estimate

Updated: May 1, 2017

AREA	PLAN	DIST	CITY	STREETNAME	SEGMENT	FROM	TO	NETWORK	MILES	EXISTING	LN	FUTURE	LN	% COMPLETE	INCREASE	SE	MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	NEW	LN	COST	ROW	COST	INTCHG	COST	BRDGC	COST	RRXC	COST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE		
Pass	Banning			8th	Secondary	Wilson	I-10	0%	0.54	2	0	2	0	0%	0	0.00	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Highland Springs	Wilson (8th)	Sun Lakes	Secondary	0.76	4	0	6	50%	0.76	1	2	0	0	0	0	0	0	0	\$527,000	\$1,724,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning			Highland Springs	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	2	3	0	0	0	0	0	0	\$0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning			Highland Springs	Oak Valley (14th)	Wilson (8th)	Secondary	0.73	2	4	0	0%	1.47	1	2	0	0	0	0	0	0	0	\$1,016,000	\$3,322,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning			Highland Springs	Cherry Valley	Oak Valley (14th)	Secondary	1.53	2	2	2	0	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pass	Banning			I-10 Bypass South	I-10	Marango Trail (Apache Trail)	Secondary	3.29	0	2	0	0%	6.57	1	2	0	0	0	0	0	0	0	\$4,547,000	\$14,871,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning			I-10 Bypass South	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	2	3	0	0	0	0	0	0	\$0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning			I-10 Bypass South	San Gorgonio	bridge	Secondary	0.00	0	2	0	0%	0.00	1	2	0	0	0	0	0	300	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			I-10 Bypass South	UP	railroad crossing	Secondary	0.00	0	2	0	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Lincoln	Sunset	SR-243	Secondary	2.01	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Ramsey	I-10	8th	Secondary	1.70	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Ramsey	8th	Highland Springs	Secondary	3.55	4	4	4	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			SR-243	I-10	Wesley	Secondary	0.62	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Sun Lakes	Highland Home	Sunset	Secondary	1.00	0	4	0	0%	4.00	1	2	0	0	0	0	0	0	0	\$2,768,000	\$9,052,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning			Sun Lakes	Smith Creek	bridge	Secondary	0.00	0	4	0	0%	0.00	1	2	0	0	200	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Sun Lakes	Highland Springs	Highland Home	Secondary	1.33	4	4	4	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Sunset	Ramsey	Lincoln	Secondary	0.28	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Sunset	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	2	3	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Wilson	Highland Home	8th	Secondary	2.51	4	4	4	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Banning			Wilson	Highland Springs	Highland Home	Secondary	1.01	2	4	4	100%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			1st	Pennsylvania	Pennsylvania	Secondary	1.28	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			1st	Pennsylvania	Highland Springs	Secondary	1.10	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			6th	I-10	Highland Springs	Secondary	2.24	4	4	4	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			Desert Lawn	Champions	Oak Valley (STC)	Secondary	0.99	2	4	4	65%	0.69	1	3	0	0	0	0	0	0	0	\$478,000	\$198,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont			Oak Valley (14th)	Highland Springs	Pennsylvania (STC)	Secondary	1.13	4	4	4	0%	0.00	2	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			Oak Valley (14th)	Pennsylvania	Oak View	Secondary	1.40	4	4	4	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			Oak Valley (14th)	Oak View	I-10	Secondary	0.65	2	4	4	50%	0.65	1	2	0	0	0	0	0	0	0	\$450,000	\$1,470,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont			Oak Valley (14th)	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	2	2	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			Oak Valley (STC)	Beaumont City Limits	Cherry Valley (J St / Central Over	Secondary	3.46	2	2	2	0%	0.00	2	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			Oak Valley (STC)	Cherry Valley (J St / Central Over	I-10	Secondary	1.67	2	2	2	0%	0.00	1	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Beaumont			Pennsylvania	6th	1st	Secondary	0.53	2	4	18%	0.86	1	2	0	0	0	0	0	0	0	\$598,000	\$1,955,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pass	Beaumont			Pennsylvania	I-10	interchange	Secondary	0.00	0	0	0	50%	0.00	1	2	3	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Calimesa			Bryant	County Line	Avenue L	Secondary	0.38	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Calimesa			Calimesa	County Line	I-10	Secondary	0.80	4	4	4	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Calimesa			Calimesa	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	2	2	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Calimesa			Tukweli Canyon	Roberts	Palmer	Secondary	0.50	4	4	4	0%	0.00	1	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Calimesa			County Line	Roberts	Bryant	Secondary	1.86	2	2	2	0%	1.86	1	2	0	0	0	0	0	0	0	\$1,287,000	\$4,209,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa			County Line	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	2	3	0	0	0	0	0	0	\$0	\$0	\$0	\$12,343,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa			Desert Lawn	Palmer	Champions	Secondary	1.42	2	2	2	0%	0.00	1	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Calimesa			Singleton	Avenue L	Condit	Secondary	1.86	0	4	4	0%	7.45	2	3	0	0	0	0	0	0	0	\$6,539,000	\$2,138,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa			Singleton	Condit	Roberts	Secondary	0.85	2	2	2	0%	0.00	1	2	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Calimesa			Singleton	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	2	2	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Unincorporated			Cherry Valley	Noble	Desert Lawn	Secondary	3.40	2	2	2	0%	0.00	1	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Unincorporated			Cherry Valley	I-10	interchange	Secondary	0.00	0	0	0	0%	0.00	1	3	2	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Unincorporated			Cherry Valley	San Timoteo Wash	bridge	Secondary	0.00	2	2	2	0%	0.00	1	3	0	0	0	0	0	300	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Unincorporated			Live Oak Canyon	Oak Valley (STC)	San Bernardino County	Secondary	2.81	2	2	2	0%	0.00	2	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Unincorporated			Oak Valley (STC)	San Bernardino County	Beaumont City Limits	Secondary	5.65	2	2	2	0%	0.00	2	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pass	Unincorporated			Oak Valley (STC)	UP	railroad crossing	Secondary	0.00	2	2	2	0%	0.00	2	3	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0</											

EXHIBIT H-1 WRCOG TUMF 2016 Nexus Update - TUMF Network Detailed Cost Estimate

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASESLN	MILES TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE	
Southwest	Lake Elsinore	Corydon	Mission	Grand	Secondary		1.53	2	4	50%		1.53	1	3	0	0	\$1,059,000	\$439,000	\$0	\$0	\$0	\$106,000	\$265,000	\$150,000	\$2,019,000	\$2,019,000	
Southwest	Lake Elsinore	Diamond	Mission	I-15	Secondary		0.24	4	6	100%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Franklin (Integral to Railroad C	I-15	interchange	Secondary		0.00	0	0	0%		0.00	1	3	2	0	\$0	\$0	\$25,558,000	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$14,629,000	
Southwest	Lake Elsinore	Grand	Lincoln	Taft	Secondary		1.29	4	4	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Grand	Taft	SR-74 (Riverside)	Secondary		0.86	2	4	40%		1.03	1	3	0	0	\$712,000	\$295,000	\$0	\$0	\$0	\$0	\$178,000	\$101,000	\$1,357,000	\$1,357,000	
Southwest	Lake Elsinore	Lake	I-15	Lincoln	Secondary		3.10	2	6	25%		9.31	2	3	0	0	\$8,175,000	\$2,672,000	\$0	\$0	\$0	\$0	\$818,000	\$2,044,000	\$1,085,000	\$14,794,000	\$13,592,000
Southwest	Lake Elsinore	Lake	I-15	interchange	Secondary		0.00	0	0	0%		0.00	2	3	3	0	\$0	\$0	\$12,343,000	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$17,291,000	
Southwest	Lake Elsinore	Lake	Temescal Wash	bridge	Secondary		0.00	2	6	0%		0.00	2	3	0	107	\$0	\$0	\$0	\$1,361,000	\$0	\$0	\$136,000	\$340,000	\$136,000	\$1,973,000	\$822,000
Southwest	Lake Elsinore	Mission	Bundy Canyon	I-15	Secondary		2.39	4	4	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Nichols	Lake	I-15	Secondary		1.80	2	4	30%		2.52	1	3	0	0	\$1,744,000	\$723,000	\$0	\$0	\$0	\$0	\$174,000	\$436,000	\$247,000	\$3,324,000	\$3,324,000
Southwest	Lake Elsinore	Nichols	I-15	interchange	Secondary		0.00	0	0	0%		0.00	1	3	2	0	\$0	\$0	\$25,558,000	\$0	\$0	\$2,556,000	\$6,390,000	\$2,556,000	\$37,060,000	\$37,060,000	
Southwest	Lake Elsinore	SR-74 (Collier/Riverside)	I-15	Lakeshore	Secondary		2.10	2	6	0%		8.41	1	2	0	0	\$5,816,000	\$19,021,000	\$0	\$0	\$0	\$0	\$582,000	\$1,454,000	\$2,484,000	\$29,357,000	\$28,315,000
Southwest	Lake Elsinore	Riverside	SR-74 (Ortega)	I-15	Secondary		0.64	2	6	0%		2.55	1	2	0	0	\$1,762,000	\$5,761,000	\$0	\$0	\$0	\$0	\$176,000	\$441,000	\$752,000	\$8,892,000	\$7,495,000
Southwest	Lake Elsinore	SR-74 (Riverside)	Lakeshore	Grand	Secondary		1.74	2	6	10%		6.25	1	2	0	0	\$4,325,000	\$14,144,000	\$0	\$0	\$0	\$0	\$433,000	\$1,081,000	\$1,847,000	\$21,830,000	\$21,830,000
Southwest	Lake Elsinore	Temescal Canyon	I-15	Lake	Secondary		1.21	2	4	0%		2.42	2	3	0	0	\$2,125,000	\$695,000	\$0	\$0	\$0	\$0	\$213,000	\$531,000	\$282,000	\$3,846,000	\$3,846,000
Southwest	Lake Elsinore	Temescal Canyon	Temescal Wash	bridge	Secondary		0.00	2	4	0%		0.00	2	3	0	246	\$0	\$0	\$0	\$1,565,000	\$0	\$0	\$157,000	\$391,000	\$157,000	\$2,270,000	\$2,270,000
Southwest	Murietta	California Oaks	Jefferson	I-15	Secondary		0.32	4	6	75%		0.16	1	2	0	0	\$110,000	\$359,000	\$0	\$0	\$0	\$0	\$11,000	\$28,000	\$47,000	\$555,000	\$555,000
Southwest	Murietta	California Oaks	Jackson	I-15	Secondary		0.50	6	6	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	California Oaks	Jackson	Clinton Keith	Secondary		1.76	4	4	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Jackson	Whitewood	Ynez	Secondary		0.53	4	4	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Palomar	Nutmeg	I-15	Secondary		1.02	0	4	50%		2.04	1	3	0	0	\$1,412,000	\$585,000	\$0	\$0	\$0	\$0	\$141,000	\$353,000	\$200,000	\$2,691,000	\$2,691,000
Southwest	Murietta	Jefferson	Nutmeg	Murietta Hot Springs	Secondary		2.37	2	6	35%		6.16	1	2	0	0	\$4,264,000	\$13,943,000	\$0	\$0	\$0	\$0	\$426,000	\$1,066,000	\$1,821,000	\$21,520,000	\$21,520,000
Southwest	Murietta	Jefferson	Murietta Hot Springs	Cherry	Secondary		2.26	6	6	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Keller	I-215	Whitewood	Backbone		0.75	2	4	70%		0.45	1	2	0	0	\$311,000	\$1,018,000	\$0	\$0	\$0	\$0	\$31,000	\$78,000	\$133,000	\$1,571,000	\$1,571,000
Southwest	Murietta	Keller	I-215	interchange	Backbone		0.00	0	0	0%		0.00	1	2	3	0	\$0	\$0	\$12,343,000	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$17,897,000	
Southwest	Murietta	Los Alamos	Jefferson	I-215	Secondary		1.77	4	4	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Murietta Hot Springs	Jefferson	I-215	Secondary		1.11	6	6	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Murietta Hot Springs	I-215	Margarita	Secondary		1.48	6	6	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Murietta Hot Springs	Margarita	SR-79 (Winchester)	Secondary		1.01	4	6	0%		2.02	1	3	0	0	\$1,395,000	\$579,000	\$0	\$0	\$0	\$0	\$140,000	\$349,000	\$197,000	\$2,660,000	\$2,660,000
Southwest	Murietta	Nutmeg	Jefferson	Clinton Keith	Secondary		1.97	4	4	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Whitewood	Clinton Keith	Los Alamos	Secondary		2.01	4	4	0%		0.00	2	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Whitewood	Los Alamos	Murietta Hot Springs	Secondary		1.93	2	2	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murietta	Whitewood	Murietta Hot Springs	Jackson	Secondary		0.80	0	4	33%		2.14	2	2	0	0	\$1,882,000	\$4,852,000	\$0	\$0	\$0	\$0	\$188,000	\$471,000	\$673,000	\$8,066,000	\$8,066,000
Southwest	Murietta	Ynez	SR-79 (Winchester)	Jackson	Secondary		1.22	4	4	0%		0.00	1	2	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Jefferson	Cherry	Rancho California	Secondary		2.29	4	4	0%		0.00	1	1	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Margarita	Murietta Hot Springs	SR-79 (Temecula Pkwy)	Secondary		7.38	4	4	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Old Town Front	Rancho California	I-15/SR-79 (Temecula Pkwy)	Secondary		1.45	4	4	0%		0.00	1	1	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Pechanga Pkwy	Pechanga Pkwy	Via Gilberto	Secondary		1.32	6	6	0%		0.00	1	1	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Pechanga Pkwy	Via Gilberto	Pechanga Pkwy	Secondary		1.44	4	4	0%		0.00	1	1	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Rancho California	Jefferson	Margarita	Secondary		1.89	4	6	52%		1.81	1	1	0	0	\$1,255,000	\$4,549,000	\$0	\$0	\$0	\$0	\$126,000	\$314,000	\$580,000	\$6,824,000	\$6,824,000
Southwest	Temecula	Rancho California	I-15	interchange	Secondary		0.00	0	0	0%		0.00	1	1	3	0	\$0	\$0	\$12,343,000	\$0	\$0	\$1,234,000	\$3,086,000	\$1,234,000	\$17,897,000	\$12,009,000	
Southwest	Temecula	Rancho California	Margarita	Butterfield Stage	Secondary		1.96	4	4	0%		0.00	1	1	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Rancho California	Butterfield Stage	Glen Oaks	Secondary		4.26	2	4	0%		8.52	1	1	0	0	\$5,896,000	\$21,377,000	\$0	\$0	\$0	\$0	\$590,000	\$1,474,000	\$2,727,000	\$32,064,000	\$32,064,000
Southwest	Temecula	SR-79 (Temecula Pkwy)	I-15	Pechanga Pkwy	Secondary		0.64	6	8	0%		1.28	1	0	0	0	\$887,000	\$368,000	\$0	\$0	\$0	\$0	\$89,000	\$222,000	\$126,000	\$1,692,000	\$1,576,000
Southwest	Temecula	SR-79 (Temecula Pkwy)	Pechanga Pkwy	Butterfield Stage	Secondary		3.08	6	6	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Briggs	Scott	SR-79 (Winchester)	Secondary		3.39	2	4	0%		6.78	1	3	0	0	\$4,695,000	\$1,947,000	\$0	\$0	\$0	\$0	\$470,000	\$1,174,000	\$664,000	\$8,950,000	\$8,950,000
Southwest	Unincorporated	Butterfield Stage	Murietta Hot Springs	Calle Chapos	Secondary		0.82	4	4	0%		0.00	2	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Calle Chapos	La Serena	Secondary		0.70	4	4	0%		0.00	2	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Rancho California	La Serena	Secondary		0.90	2	4	0%		1.80	2	3	0	0	\$1,580,000	\$517,000	\$0	\$0	\$0	\$0	\$158,000	\$395,000	\$210,000	\$2,860,000	\$2,860,000
Southwest	Unincorporated	Butterfield Stage	Rancho California	Pauba	Secondary		0.85	4	4	0%		0.00	2	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Pauba	SR-79 (Temecula Pkwy)	Secondary		1.69	2	4	95%		0.17	2	3	0	0	\$148,000	\$49,000	\$0	\$0	\$0	\$0	\$15,000	\$37,000	\$20,000	\$269,000	\$269,000
Southwest	Unincorporated	Butterfield Stage	SR-79 (Winchester)	Auld	Secondary		2.28	2	4	0%		4.56	2	3	0	0	\$4,004,000	\$1,309,000	\$0	\$0	\$0	\$0	\$400,000	\$1,001,000	\$531,000	\$7,245,000	\$7,245,000
Southwest	Unincorporated	Butterfield Stage	Auld	Murietta Hot Springs	Secondary		2.23	0	4	0%		8.92	2	3	0	0	\$7,832,000	\$2,560,000	\$0	\$0	\$0	\$0	\$783,000	\$1,958,000	\$1,039,000	\$14,172,000	\$14,172,000
Southwest	Unincorporated	Butterfield Stage	Tucalota Creek	bridge	Secondary		0.00	0	4	0%		0.00	2	3	0	200	\$0	\$0	\$0	\$2,544,000	\$0	\$0	\$254,000	\$636,000	\$254,000	\$3,688,000	\$3,688,000
Southwest	Unincorporated	Horsethief Canyon	Temescal Canyon	I-15	Secondary		0.17	2	2	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Indian Truck Trail	Temescal Canyon	I-15	Secondary		0.18	6	6	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Murietta Hot Springs	SR-79 (Winchester)	Pourroy	Secondary		1.75	4	4	0%		0.00	1	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Pala	Pechanga	San Diego County	Secondary		1.38	2	2	0%		0.00	2	3	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Temescal Canyon	Horsethief Canyon Wash	bridge	Secondary		0.00	2	4	0%		0.00	2	3	0	240											

EXHIBIT H-2 WRCOG TUMF 2016 Nexus Update - TUMF Network Cost Adjustments

Updated: May 1, 2017

AREA	PLAN	DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MSHCP	MAX TUMF MSHCP SHARE	% EXIST NEED	>2 LANE ADJUST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST SEGMENT	EXIST SPOT NEED	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Northwest	Unincorporated		Alessandro	Troutwein		Vista Grande	\$0	\$0	\$0	\$0	60%	0.98	0.98	1.34		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Alessandro			Vista Grande	\$0	\$0	\$0	\$0	94%	1.00	1.00	1.55		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Cajalco	El Sabranate		Harley John	\$4,806,000	\$3,465,000	\$133,000	\$96,000	100%	1.36	1.73	1.73	44%	\$1,341,000	\$0	\$1,341,000	\$0	\$1,341,000	\$37,000	\$37,000	\$1,378,000
Northwest	Unincorporated		Cajalco	Harley John		Harvil	\$80,889,000	\$66,905,000	\$801,000	\$662,000	100%	1.13	1.56	1.56	65%	\$13,984,000	\$0	\$13,984,000	\$10,000,000	\$3,984,000	\$139,000	\$139,000	\$4,123,000
Northwest	Unincorporated		Cajalco	I-215		Harvil	\$749,000	\$749,000	\$20,000	\$20,000	0%	0.66	0.87	0.87		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Cajalco	Temescal Canyon		La Sierra	\$23,864,000	\$23,864,000	\$683,000	\$683,000	12%	0.89	1.24	1.24		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Cajalco	Temescal Wash		bridge	\$3,229,000	\$3,229,000	\$111,000	\$111,000	0%	0.79	1.10	1.10		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Cajalco	La Sierra		El Sabranate	\$45,421,000	\$45,421,000	\$1,300,000	\$1,300,000	0%	0.69	1.07	1.07		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Van Buren	Mockingbird Canyon		Wood	\$30,785,000	\$28,309,000	\$305,000	\$280,000	78%	0.95	1.40	1.40	90%	\$2,476,000	\$0	\$2,476,000	\$0	\$2,476,000	\$25,000	\$25,000	\$2,501,000
Northwest	Unincorporated		Van Buren	Orange Terrace		I-215	\$7,637,000	\$7,637,000	\$76,000	\$76,000	38%	0.86	1.35	1.35		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Beaumont	Beaumont		Oak Valley (14th)	\$0	\$0	\$0	\$0	0%	0.22	0.41	0.41		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Potrero			Oak Valley (San Timoteo Canyon)	\$1,615,000	\$1,615,000	\$42,000	\$42,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Potrero			SR-60	\$37,060,000	\$23,760,000	\$0	\$0	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$13,300,000	\$0	\$0	\$0	\$0
Pass	Beaumont		Potrero			UP	\$7,927,000	\$7,927,000	\$273,000	\$273,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Potrero			Noble Creek	\$2,306,000	\$2,306,000	\$80,000	\$80,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Potrero			SR-60	\$2,376,000	\$2,376,000	\$62,000	\$62,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		SR-79 (Beaumont)			I-10	\$0	\$0	\$0	\$0	100%	1.16	1.39	1.39	47%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		SR-79 (Beaumont)			I-10	\$17,897,000	\$5,369,000	\$0	\$0	0%	0.132	1.50	1.50	30%	\$0	\$12,528,000	\$12,528,000	\$0	\$12,528,000	\$0	\$0	\$12,528,000
Pass	Unincorporated		SR-79 (Beaumont)			Mellow	\$0	\$0	\$0	\$0	100%	1.25	1.48	1.48	39%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,528,000
Pass	Unincorporated		SR-79 (Lamb Canyon)			California	\$0	\$0	\$0	\$0	100%	1.50	1.91	1.91	41%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Domenigoni			Warren	\$4,674,000	\$4,674,000	\$123,000	\$123,000	0%	0.71	1.41	1.41		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Domenigoni			Sanderson	\$0	\$0	\$0	\$0	0%	0.22	0.56	0.56		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		SR-74			Winchester	\$16,085,000	\$16,085,000	\$159,000	\$159,000	39%	0.86	1.37	1.37		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Mid-County (Ramona)			Warren	\$12,065,000	\$12,065,000	\$120,000	\$120,000	0%	0.51	0.76	0.76		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Mid-County (Ramona)			Sanderson/ SR-79 (Hemet Bypass)	\$37,060,000	\$37,060,000	\$0	\$0	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Ramona			State	\$0	\$0	\$0	\$0	0%	0.50	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Ramona			State	\$0	\$0	\$0	\$0	0%	0.04	0.74	0.74		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Ramona			Main	\$11,623,000	\$11,139,000	\$115,000	\$110,000	67%	0.82	0.94	0.94		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Ramona			Cedar	\$0	\$0	\$0	\$0	63%	0.93	1.11	1.11	88%	\$484,000	\$0	\$484,000	\$0	\$484,000	\$5,000	\$5,000	\$489,000
San Jacinto	Unincorporated		Domenigoni			SR-79 (Winchester)	\$8,173,000	\$8,173,000	\$214,000	\$214,000	0%	0.19	0.31	0.31		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		Domenigoni			Warren	\$2,767,000	\$2,767,000	\$95,000	\$95,000	0%	0.80	1.35	1.35		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		Gilman Springs			bridge	\$7,782,000	\$7,782,000	\$204,000	\$204,000	10%	0.57	0.93	0.93		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		Mid-County (Ramona)			bridge	\$11,045,000	\$11,045,000	\$325,000	\$290,000	100%	1.08	1.71	1.71	78%	\$1,351,000	\$0	\$1,351,000	\$0	\$1,351,000	\$35,000	\$35,000	\$1,386,000
San Jacinto	Unincorporated		SR-74			SR-79 (Winchester)	\$9,301,000	\$9,301,000	\$244,000	\$244,000	14%	0.85	1.38	1.38		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		SR-74 (Hemet Bypass)			Domenigoni	\$16,990,000	\$16,990,000	\$446,000	\$446,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		SR-79 (Hemet Bypass)			San Diego Aqueduct	\$5,534,000	\$5,534,000	\$191,000	\$191,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		SR-79 (Hemet Bypass)			Domenigoni	\$7,914,000	\$7,914,000	\$208,000	\$208,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		SR-79 (San Jacinto Bypass)			Mid-County (Ramona)	\$34,296,000	\$30,076,000	\$900,000	\$900,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$4,220,000	\$0	\$0	\$0	\$0
San Jacinto	Unincorporated		SR-79 (Sanderson)			Ramona	\$5,060,000	\$2,376,000	\$133,000	\$63,000	100%	1.39	1.82	1.82	47%	\$2,684,000	\$0	\$2,684,000	\$693,000	\$1,991,000	\$70,000	\$70,000	\$2,061,000
San Jacinto	Unincorporated		SR-79 (Sanderson)			San Jacinto River	\$12,910,000	\$6,100,000	\$445,000	\$445,000	0%	0.138	1.81	1.81	47%	\$0	\$6,810,000	\$6,810,000	\$2,160,000	\$4,650,000	\$0	\$0	\$4,650,000
San Jacinto	Unincorporated		SR-79 (Winchester)			Domenigoni	\$0	\$0	\$0	\$0	0%	0.79	1.18	1.18		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Canyon Lake		Canyon Lake			Goetz	\$0	\$0	\$0	\$0	42%	0.79	1.32	1.32		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Canyon Lake		Railroad Canyon			Canyon Hills	\$0	\$0	\$0	\$0	0%	0.57	0.91	0.91		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Lake Elsinore		Railroad Canyon			Canyon Hills	\$3,021,000	\$3,021,000	\$79,000	\$79,000	2%	0.48	0.71	0.71		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Lake Elsinore		Railroad Canyon			I-15	\$72,546,000	\$28,636,000	\$0	\$0	0%	1.59	2.04	2.04	39%	\$0	\$43,910,000	\$43,910,000	\$238,000	\$43,672,000	\$0	\$0	\$43,672,000
Southwest	Lake Elsinore		SR-74			I-15	\$37,060,000	\$17,725,000	\$0	\$0	0%	1.14	1.36	1.36	48%	\$0	\$19,335,000	\$19,335,000	\$3,100,000	\$16,235,000	\$0	\$0	\$16,235,000
Southwest	Murietta		Clinton Keith			Copper Craft	\$0	\$0	\$0	\$0	22%	0.88	1.22	1.22		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Murietta		Clinton Keith			Toulon	\$2,187,000	\$2,187,000	\$57,000	\$57,000	8%	0.89	1.23	1.23		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Murietta		Clinton Keith			I-215	\$0	\$0	\$0	\$0	0%	0.33	0.71	0.71		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Murietta		French Valley (Date)			Murietta Hot Springs	\$3,352,000	\$3,352,000	\$33,000	\$33,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Murietta		French Valley (Date)			Winchester Creek	\$0	\$0	\$0	\$0	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Murietta		Whitewood			Menifee City Limit	\$0	\$0	\$0	\$0	0%	0.17	0.70	0.70		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Murietta		Whitewood			Keller	\$2,111,000	\$2,111,000	\$55,000	\$55,000	0%	0.22	0.93	0.93		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		French Valley (Date)			Margarita	\$0	\$0	\$0	\$0	0%	0.14	0.27	0.27		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		French Valley (Date)			Ynez	\$10,199,000	\$10,199,000	\$101,000	\$101,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		French Valley (Date)			I-15	\$72,546,000	\$55,760,000	\$0	\$0	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$16,786,000	\$0	\$0	\$0	\$0
Southwest	Temecula		French Valley (Cherry)			Jefferson	\$5,711,000	\$5,711,000	\$57,000	\$57,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		French Valley (Cherry)			Murietta Creek	\$7,746,000	\$7,746,000	\$267,000	\$267,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		Western Bypass (Diaz)			Cherry	\$5,382,000	\$5,382,000	\$53,000	\$53,000	21%	0.49	0.75	0.75		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		Western Bypass (Vincent Mar)			Rancho California	\$21,961,000	\$21,961,000	\$290,000	\$290,000	0%	0.01	0.01	0.01		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		Western Bypass (Vincent Mar)			SR-79 (Front)	\$37,060,000	\$20,682,000	\$0	\$0	0%	2.08	4.89	4.89	70%	\$0	\$10,960,000	\$10,960,000	\$16,377,770	\$0	\$0	\$0	\$0
Southwest	Temecula		Western Bypass (Vincent Mar)			Murietta Creek	\$5,534,000	\$5,534,000	\$191,000	\$191,000	0%	0.00	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		SR-79 (Winchester)			Murietta Hot Springs	\$0	\$0	\$0	\$0	26%	0.86	1.23	1.23		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Temecula		SR-79 (Winchester)			I-15	\$17,897,000	\$8,442,000	\$0	\$0	0%	1.46	1.96	1.96	47%	\$0	\$9,455,000	\$9,455,000	\$0	\$9,455,000	\$0	\$0	\$9,455,000
Southwest	Unincorporated		Benton			SR-79	\$0	\$0	\$0	\$0	0%	0.22	0.37	0.37		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Unincorporated		Clinton Keith			Whitewood	\$20,104,000	\$3,604,000	\$527,000	\$527,000	59%	0											

EXHIBIT H-2 WRCOG TUMF 2016 Nexus Update - TUMF Network Cost Adjustments

Updated: May 1, 2017

AREA	PLAN	DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MSHCP	MAX TUMF SHARE	MSHCP	% EXIST NEED	>2 LANE ADJUST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST SEGMENT	EXIST SPOT NEED	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	EXIST NEED	COMBINED UNFUND EXIST NEED
Central	Menifee			Briggs	Newport	Scott	\$0	\$0	\$0	\$0	\$0	0%	0%	0.28	0.78		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			Goetz	Juanita	Lesser Lane	\$6,884,000	\$6,593,000	\$181,000	\$173,000	\$0	82%	82%	0.91	1.13	95%	\$291,000	\$0	\$291,000	\$0	\$291,000	\$8,000	\$8,000	\$0	\$299,000
Central	Menifee			Goetz	Newport	Juanita	\$0	\$0	\$0	\$0	\$0	0%	0%	0.73	1.08		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			Holland	Antelope	Houn	\$13,971,000	\$13,971,000	\$138,000	\$138,000	\$0	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			Holland	I-215 overcrossing	bridge	\$6,455,000	\$6,455,000	\$223,000	\$223,000	\$0	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			McCall	I-215	Aspel	\$0	\$0	\$0	\$0	\$0	0%	0%	0.32	0.79		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			McCall	I-215	interchange	\$17,897,000	\$16,930,000	\$0	\$0	\$0	0%	0%	0.92	1.27	95%	\$0	\$967,000	\$967,000	\$0	\$967,000	\$0	\$0	\$967,000	
Central	Menifee			McCall	Aspel	Menifee	\$2,517,000	\$2,517,000	\$66,000	\$66,000	\$0	0%	0%	0.31	1.03		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			McCall	Ethanac	McCall	\$0	\$0	\$0	\$0	\$0	0%	0%	0.51	0.78		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			Murrieta	McCall	Newport	\$0	\$0	\$0	\$0	\$0	14%	14%	0.53	0.92		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Menifee			Murrieta	Newport	Bundy Canyon	\$0	\$0	\$0	\$0	\$0	0%	0%	0.41	0.69		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Cactus	I-215	Heacock	\$2,022,000	\$0	\$20,000	\$20,000	\$0	0%	0%	0.61	1.06		\$0	\$0	\$0	\$2,022,000	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Cactus	I-215	interchange	\$37,060,000	\$37,060,000	\$0	\$0	\$0	0%	0%	0.90	1.21		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Day	Ironwood	SR-60	\$0	\$0	\$0	\$0	\$0	0%	0%	0.30	0.68		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Day	SR-60	interchange	\$17,897,000	\$17,897,000	\$0	\$0	\$0	0%	0%	0.90	1.13		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Day	SR-60	Eucalyptus	\$0	\$0	\$0	\$0	\$0	0%	0%	0.24	0.43		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Eucalyptus	I-215	Towngate	\$4,050,000	\$4,050,000	\$40,000	\$40,000	\$0	0%	0%	0.48	0.93		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Eucalyptus	Towngate	Frederick	\$0	\$0	\$0	\$0	\$0	0%	0%	0.30	0.70		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Eucalyptus	Frederick	Heacock	\$0	\$0	\$0	\$0	\$0	0%	0%	0.21	0.66		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Eucalyptus	Heacock	Kilching	\$0	\$0	\$0	\$0	\$0	0%	0%	0.52	0.90		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Eucalyptus	Kilching	Moreno Beach	\$339,000	\$0	\$3,000	\$3,000	\$0	0%	0%	0.13	0.29		\$0	\$0	\$0	\$339,000	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Eucalyptus	Moreno Beach	Theodore	\$16,882,000	\$16,882,000	\$167,000	\$167,000	\$0	0%	0%	0.02	0.07		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Frederick	SR-60	Alessandro	\$0	\$0	\$0	\$0	\$0	3%	3%	0.44	0.78		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Heacock	Cactus	San Michele	\$4,482,000	\$4,482,000	\$44,000	\$44,000	\$0	0%	0%	0.67	1.07		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Heacock	Reche Vista	Cactus	\$0	\$0	\$0	\$0	\$0	0%	0%	0.39	0.62		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Heacock	San Michele	Harley Knox	\$1,958,000	\$1,532,000	\$51,000	\$40,000	\$0	99%	99%	1.07	1.65	78%	\$426,000	\$0	\$426,000	\$0	\$426,000	\$11,000	\$11,000	\$0	\$437,000
Central	Moreno Valley			Ironwood	SR-60	Day	\$2,695,000	\$2,695,000	\$27,000	\$27,000	\$0	63%	63%	0.85	1.17		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Ironwood	Day	Heacock	\$0	\$0	\$0	\$0	\$0	0%	0%	0.36	0.75		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Lasselle	Alessandro	John F Kennedy	\$0	\$0	\$0	\$0	\$0	0%	0%	0.44	0.76		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Lasselle	John F Kennedy	Oleander	\$0	\$0	\$0	\$0	\$0	0%	0%	0.55	0.89		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Moreno Beach	Reche Canyon	SR-60	\$9,548,000	\$9,548,000	\$95,000	\$95,000	\$0	0%	0%	0.61	1.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Moreno Beach	SR-60 overcrossing	bridge	\$2,306,000	\$2,306,000	\$80,000	\$80,000	\$0	0%	0%	0.72	1.23		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Nason	SR-60	Alessandro	\$0	\$0	\$0	\$0	\$0	0%	0%	0.38	0.62		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Pigeon Pass	Ironwood	SR-60	\$0	\$0	\$0	\$0	\$0	0%	0%	0.63	0.93		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Pigeon Pass/CETAP Corridor	Cantarini	Ironwood	\$0	\$0	\$0	\$0	\$0	0%	0%	0.32	0.80		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Reche Canyon	Moreno Valley City Limit	Locust	\$0	\$0	\$0	\$0	\$0	0%	0%	0.15	0.28		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Redlands	Locust	Alessandro	\$18,721,000	\$18,013,000	\$185,000	\$178,000	\$0	71%	71%	0.91	1.17	95%	\$708,000	\$0	\$708,000	\$200,000	\$508,000	\$7,000	\$7,000	\$0	\$515,000
Central	Moreno Valley			SR-60	interchange		\$37,060,000	\$37,060,000	\$0	\$0	\$0	0%	0%	0.39	0.36		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Theodore	SR-60	Eucalyptus	\$1,817,000	\$1,817,000	\$18,000	\$18,000	\$0	0%	0%	0.45	0.92		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Moreno Valley			Theodore	SR-60	interchange	\$37,060,000	\$19,096,000	\$0	\$0	\$0	0%	0%	0.39	0.81		\$0	\$0	\$0	\$17,964,000	\$0	\$0	\$0	\$0	\$0
Central	Perris			Evans	Oleander	Ramona	\$0	\$0	\$0	\$0	\$0	101%	101%	1.21	1.87	67%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Evans	Ramona	Morgan	\$1,562,000	\$1,562,000	\$41,000	\$41,000	\$0	0%	0%	0.79	1.27		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Evans	Morgan	Rider	\$0	\$0	\$0	\$0	\$0	0%	0%	0.34	0.80		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Evans	Rider	Placentia	\$0	\$0	\$0	\$0	\$0	0%	0%	0.34	0.83		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Evans	Placentia	Nuevo	\$1,347,000	\$1,347,000	\$35,000	\$35,000	\$0	0%	0%	0.50	1.08		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Evans	Nuevo	I-215	\$10,521,000	\$10,521,000	\$276,000	\$276,000	\$0	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Evans	San Jacinto River	bridge	\$7,378,000	\$7,378,000	\$254,000	\$254,000	\$0	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Goetz	Lesser	Ethanac	\$2,745,000	\$1,238,000	\$72,000	\$32,000	\$0	101%	101%	1.19	1.44	46%	\$1,507,000	\$0	\$1,507,000	\$0	\$1,507,000	\$40,000	\$40,000	\$0	\$1,547,000
Central	Perris			Harley Knox	I-215	Indian	\$0	\$0	\$0	\$0	\$0	0%	0%	0.15	0.54		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Harley Knox	I-215	interchange	\$17,897,000	\$7,110,000	\$0	\$0	\$0	0%	0%	1.34	1.63	40%	\$0	\$10,787,000	\$10,787,000	\$0	\$10,787,000	\$0	\$0	\$0	\$10,787,000
Central	Perris			Harley Knox	Indian	Perris	\$0	\$0	\$0	\$0	\$0	0%	0%	0.06	0.53		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Harley Knox	Redlands	Perris	\$0	\$0	\$0	\$0	\$0	0%	0%	0.08	0.16		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Nuevo	I-215	Murrieta	\$9,480,000	\$9,480,000	\$94,000	\$94,000	\$0	0%	0%	0.57	1.02		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Nuevo	I-215	interchange	\$17,897,000	\$17,897,000	\$0	\$0	\$0	0%	0%	0.88	1.14		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Nuevo	Murrieta	Dunlap	\$2,035,000	\$2,035,000	\$53,000	\$53,000	\$0	0%	0%	0.65	1.36		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			Nuevo	bridge	Perris Valley Storm Channel	\$2,767,000	\$2,767,000	\$95,000	\$95,000	\$0	0%	0%	0.63	1.26		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			SR-74 (Matthews)	I-215	Ethanac	\$0	\$0	\$0	\$0	\$0	40%	40%	0.85	1.15		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Perris			SR-74 (Matthews)	I-215	interchange	\$17,897,000	\$8,815,000	\$0	\$0	\$0	0%	0%	1.24	1.57	49%	\$0	\$9,082,000	\$9,082,000	\$0	\$9,082,000	\$0	\$0	\$0	\$9,082,000
Central	Unincorporated			Briggs	SR-74 (Pinacate)	Simpson	\$6,596,000	\$6,596,000	\$173,000	\$173,000	\$0	0%	0%	0.28	0.96		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Unincorporated			Briggs	Simpson	Newport	\$0	\$0	\$0	\$0	\$0	27%	27%	0.50	0.90		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Unincorporated			Briggs	Salt Creek	Bridge	\$0	\$0	\$0	\$0	\$0	0%	0%	0.48	0.87		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Unincorporated			Center (Main)	I-215	Mt Vernon	\$0	\$0	\$0	\$0	\$0	0%	0%	0.16	0.47		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Unincorporated			Center (Main)	I-215	interchange	\$17,897,000	\$17,897,000	\$0	\$0	\$0	0%	0%	0.41	0.77		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Unincorporated			Center (Main)	BNSF	railroad crossing	\$7,927,000	\$7,927,000	\$273,000	\$273,000	\$0	0%	0%	0.21	0.55		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Unincorporated			Ellis	Post	SR-74	\$6,989,000	\$6,989,000	\$183,000	\$183,000	\$0	15%	15%	0.71	1.12		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Central	Unincorporated			Mount Vernon/CETAP Corridor	Center	Pigeon Pass	\$2,252,000	\$2,																	

EXHIBIT H-2 WRCOG TUMF 2016 Nexus Update - TUMF Network Cost Adjustments

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE MSHCP	MAX TUMF MSHCP SHARE	% EXIST NEED	>2 LANE ADJUST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST SEGMENT	EXIST SPOT NEED	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Northwest	Corona	6th	SR-91	Corona	Magnolia	\$0	\$0	\$0	17%	17%	0.69	0.91			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Auto Center	Railroad	Corona	SR-91	\$0	\$0	\$0	34%	34%	0.64	0.92			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Cajalco	Bedford Canyon	Corona	I-15	\$1,049,000	\$1,049,000	\$10,000	47%	47%	0.79	1.70			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Hidden Valley	Narco Hills	Corona	McKinley	\$0	\$0	\$0	0%	0%	0.44	0.68			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Lincoln	Parkridge	Corona	Ontario	\$0	\$0	\$0	2%	2%	0.43	0.55			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Magnolia	6th	Corona	Sherborn Bridge	\$3,283,000	\$3,283,000	\$33,000	0%	0%	0.59	0.92			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Magnolia	Temescal Creek bridge	Corona	Magnolia	\$2,767,000	\$2,767,000	\$95,000	0%	0%	0.61	0.92			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Magnolia	Sherborn Bridge	Corona	Rimpau	\$0	\$0	\$0	31%	31%	0.76	1.08			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Magnolia	Rimpau	Corona	Ontario	\$0	\$0	\$0	0%	0%	0.36	0.47			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Main	Grand	Corona	Ontario	\$2,325,000	\$575,000	\$61,000	92%	92%	1.05	1.09	18%	\$1,750,000	\$0	\$1,750,000	\$0	\$1,750,000	\$46,000	\$46,000	\$1,796,000
Northwest	Corona	Main	Ontario	Corona	Foothill	\$0	\$0	\$0	0%	0%	0.51	0.63			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Main	Hidden Valley	Corona	Parkridge	\$2,427,000	\$1,912,000	\$24,000	49%	49%	1.13	1.42	56%	\$515,000	\$0	\$515,000	\$0	\$515,000	\$5,000	\$5,000	\$520,000
Northwest	Corona	Main	Parkridge	Corona	SR-91	\$0	\$0	\$0	0%	0%	0.47	0.75			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Main	SR-91	Corona	S. Grand	\$0	\$0	\$0	0%	0%	0.44	0.54			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	McKinley	Hidden Valley	Corona	Promenade	\$0	\$0	\$0	0%	0%	0.51	0.90			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	McKinley	Promenade	Corona	SR-91	\$0	\$0	\$0	0%	0%	0.40	0.71			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	McKinley	SR-91	Corona	Magnolia	\$2,346,000	\$2,346,000	\$22,000	0%	0%	0.55	1.07			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	McKinley	Arlington Channel	Corona	bridge	\$923,000	\$923,000	\$32,000	0%	0%	0.43	0.83			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	McKinley	BNSF	Corona	railroad crossing	\$55,472,000	\$0	\$1,913,000	0%	0%	0.43	0.83			\$0	\$0	\$55,472,000	\$0	\$0	\$0	\$0
Northwest	Corona	Ontario	I-15	Corona	El Carrilo	\$6,217,000	\$4,924,000	\$62,000	81%	81%	1.05	1.48	74%	\$1,293,000	\$0	\$1,293,000	\$0	\$1,293,000	\$13,000	\$13,000	\$1,306,000
Northwest	Corona	Ontario	Lincoln	Corona	Buena Vista	\$2,242,000	\$1,883,000	\$22,000	100%	100%	0.94	1.15	84%	\$359,000	\$0	\$359,000	\$0	\$359,000	\$4,000	\$4,000	\$363,000
Northwest	Corona	Ontario	Buena Vista	Corona	Main	\$0	\$0	\$0	0%	0%	0.55	0.77			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Ontario	Main	Corona	Kellogg	\$0	\$0	\$0	0%	0%	0.67	0.83			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Ontario	Kellogg	Corona	Fullerton	\$2,410,000	\$1,785,000	\$22,000	100%	100%	1.04	1.44	74%	\$625,000	\$0	\$625,000	\$0	\$625,000	\$6,000	\$6,000	\$631,000
Northwest	Corona	Ontario	Fullerton	Corona	Rimpau	\$0	\$0	\$0	0%	0%	0.69	0.85			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Ontario	Rimpau	Corona	I-15	\$0	\$0	\$0	39%	39%	0.83	1.18			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Railroad	Auto Club	Corona	Buena Vista	\$0	\$0	\$0	0%	0%	0.57	0.84			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Railroad	BNSF	Corona	railroad crossing	\$15,851,000	\$15,851,000	\$547,000	0%	0%	0.52	0.79			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Railroad	Buena Vista	Corona	Main (at Grand)	\$4,052,000	\$3,203,000	\$40,000	64%	64%	1.03	1.30	67%	\$849,000	\$0	\$849,000	\$0	\$849,000	\$8,000	\$8,000	\$857,000
Northwest	Corona	River	Corydon	Corona	Main	\$0	\$0	\$0	0%	0%	0.53	0.99			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Corona	Serfas Club	SR-91	Corona	Green River	\$0	\$0	\$0	0%	0%	0.42	0.52			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Archibald	San Bernardino County	Eastvale	River	\$1,725,000	\$1,725,000	\$45,000	20%	20%	0.53	0.85			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Hamner	Mission	Eastvale	Bellegrave	\$2,158,000	\$2,158,000	\$57,000	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Hamner	Bellegrave	Eastvale	Amberhill	\$528,000	\$528,000	\$14,000	0%	0%	0.46	0.64			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Hamner	Amberhill	Eastvale	Limonite	\$3,222,000	\$3,222,000	\$85,000	69%	35%	0.73	0.97			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Hamner	Limonite	Eastvale	Schleisman	\$0	\$0	\$0	0%	0%	0.20	0.27			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Hamner	Schleisman	Eastvale	Santa Ana River	\$2,638,000	\$2,638,000	\$69,000	36%	18%	0.69	1.26			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	I-15	Eastvale	East Center	\$0	\$0	\$0	100%	100%	0.91	1.38	98%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	I-15	Eastvale	interchange	\$17,897,000	\$0	\$0	0%	0%	1.14	1.42	54%	\$0	\$8,260,000	\$8,260,000	\$17,897,000	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	East Center	Eastvale	Hamner	\$0	\$0	\$0	100%	100%	1.00	1.38	79%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	Hamner	Eastvale	Sumner	\$1,319,000	\$1,319,000	\$35,000	0%	0%	0.49	0.75			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	Sumner	Eastvale	Harrison	\$0	\$0	\$0	0%	0%	0.29	0.47			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	Harrison	Eastvale	Archibald	\$1,293,000	\$1,293,000	\$34,000	0%	0%	0.52	0.52			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	Archibald	Eastvale	Hellman (Keller SBD Co.)	\$5,910,000	\$5,910,000	\$155,000	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Eastvale	Limonite	Cucamonga Creek	Eastvale	bridge	\$3,688,000	\$3,688,000	\$127,000	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Armstrong	San Bernardino County	Jurupa Valley	Valley	\$1,601,000	\$1,601,000	\$44,000	44%	44%	0.80	1.23			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Bellegrave	Cantu-Galleano Ranch	Jurupa Valley	Van Buren	\$759,000	\$759,000	\$20,000	0%	0%	0.87	1.19			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Wineville	Bellegrave	Jurupa Valley	Wineville	\$2,400,000	\$2,400,000	\$63,000	0%	0%	0.23	0.39			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Etiwanda	San Bernardino County	Jurupa Valley	SR-60	\$0	\$0	\$0	0%	0%	0.76	0.96			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Etiwanda	Limonite	Jurupa Valley	Limonite	\$0	\$0	\$0	14%	14%	0.48	0.77			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Limonite	I-15	Jurupa Valley	Wineville	\$0	\$0	\$0	0%	0%	0.79	1.02			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Limonite	Wineville	Jurupa Valley	Etiwanda	\$0	\$0	\$0	91%	91%	1.11	1.32	48%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Limonite	Etiwanda	Jurupa Valley	Van Buren	\$14,345,000	\$12,319,000	\$376,000	64%	32%	1.07	1.29	56%	\$2,026,000	\$0	\$2,026,000	\$0	\$2,026,000	\$53,000	\$53,000	\$2,079,000
Northwest	Jurupa Valley	Limonite	Van Buren	Jurupa Valley	Clay	\$1,672,000	\$1,672,000	\$44,000	0%	0%	0.57	0.98			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Limonite	Clay	Jurupa Valley	Riverview	\$0	\$0	\$0	0%	0%	0.55	0.82			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Market	Rubidoux	Jurupa Valley	Santa Ana River	\$4,605,000	\$4,314,000	\$121,000	78%	78%	0.93	1.31	92%	\$291,000	\$0	\$291,000	\$0	\$291,000	\$8,000	\$8,000	\$299,000
Northwest	Jurupa Valley	Market	Santa Ana River	Jurupa Valley	bridge	\$9,222,000	\$7,849,000	\$318,000	0%	0%	0.97	1.37	85%	\$0	\$1,373,000	\$1,373,000	\$0	\$1,373,000	\$0	\$0	\$1,373,000
Northwest	Jurupa Valley	Mission	Milliken	Jurupa Valley	SR-60	\$0	\$0	\$0	0%	0%	0.55	0.89			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Mission	SR-60	Jurupa Valley	Santa Ana River	\$0	\$0	\$0	11%	11%	0.59	0.96			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Riverview	Limonite	Jurupa Valley	Mission	\$0	\$0	\$0	0%	0%	0.56	0.81			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Rubidoux	San Bernardino County	Jurupa Valley	Mission	\$0	\$0	\$0	0%	0%	0.37	0.77			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Jurupa Valley	Rubidoux	SR-60	Jurupa Valley	interchange	\$17,897,000	\$8,948,000	\$0	0%	0%	1.09	1.28	50%	\$0	\$8,949,000	\$8,949,000	\$0	\$8,949,000	\$0	\$0	\$8,949,000
Northwest	Jurupa Valley	Valley	Armstrong	Jurupa Valley	Mission	\$0	\$0	\$0	23%	23%	1.12	1.58	68%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	1st	Parkridge	Norco	Mountain	\$677,000	\$677,000	\$18,000	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	1st	Mountain	Norco	Hamner	\$0	\$0	\$0	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	2nd	River	Norco	I-15	\$3,789,000	\$3,789,000	\$99,000	26%	26%	0.83	1.21			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	6th	Hamner	Norco	California	\$0	\$0	\$0	4%	4%	0.29	0.42			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	6th	interchange	Norco	I-15	\$17,897,000	\$5,593,000	\$0	0%	0%	1.23	1.38	31%	\$0	\$12,304,000	\$12,304,000	\$0	\$12,304,000	\$0	\$0	\$12,304,000
Northwest	Norco	Arlington	North	Norco	Arlington	\$2,570,000	\$2,570,000	\$67,000	0%	0%	0.32	1.01			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	California	Arlington	Norco	6th	\$6,848,000	\$6,848,000	\$68,000	0%	0%	0.31	0.95			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	Corydon	River	Norco	5th	\$0	\$0	\$0	0%	0%	0.29	0.79			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	Hamner	Santa Ana River	Norco	bridge	\$22,132,000	\$0	\$763,000	0%	0%	1.14	1.93	77%	\$0	\$5,157,000	\$5,157,000	\$22,132,000	\$0	\$0	\$0	\$0
Northwest	Norco	Hamner	Santa Ana River	Norco	Hidden Valley	\$21,325,000	\$21,325,000	\$211,000	34%	34%	0.75	1.24			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Norco	Hidden Valley	I-15	Norco	Norco Hills	\$0	\$0	\$0	0%	0%	0.49	0.64									

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Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE MSHCP	MAX TUMF MSHCP SHARE	% EXIST NEED	>2 LANE ADJUST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST SEGMENT	EXIST SPOT NEED	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Northwest	Riverside		14th	Market	Martin Luther King	\$0	\$0	\$0	11%	11%	0.68	0.90			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		1st	Market	Main	\$0	\$0	\$0	0%	0%	0.46	0.89			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		3rd	SR-91	I-215	\$0	\$0	\$0	0%	0%	0.51	0.77			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		3rd	BNSF	railroad crossing	\$36,980,000	\$36,980,000	\$1,275,000	0%	0%	0.51	0.77			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Adams	Arlington	SR-91	\$0	\$0	\$0	0%	0%	0.47	0.70			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Adams	SR-91	Lincoln	\$0	\$0	\$0	0%	0%	0.40	0.62			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Adams	SR-91	interchange	\$17,897,000	\$17,897,000	\$0	0%	0%	0.83	1.03			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Buena Vista	Santa Ana River	Redwood	\$0	\$0	\$0	60%	60%	0.89	1.56			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Canyon Crest	Martin Luther King	Central	\$0	\$0	\$0	29%	29%	0.84	1.40			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Canyon Crest	Central	Country Club	\$0	\$0	\$0	0%	0%	0.56	1.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Canyon Crest	Country Club	Via Vista	\$2,990,000	\$1,855,000	\$83,000	100%	100%	1.22	1.73	62%	\$1,135,000	\$0	\$1,135,000	\$0	\$1,135,000	\$31,000	\$31,000	\$1,166,000
Northwest	Riverside		Canyon Crest	Via Vista	Alessandro	\$0	\$0	\$0	0%	0%	0.65	0.79			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Central	Chicago	I-215/SR-60	\$0	\$0	\$0	54%	54%	0.87	1.27			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Central	SR-91	Magnolia	\$0	\$0	\$0	0%	0%	0.49	0.65			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Central	Alessandro	SR-91	\$0	\$0	\$0	92%	92%	1.04	1.55	78%		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Central	Van Buren	Magnolia	\$0	\$0	\$0	0%	0%	0.33	0.50			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Chicago	Alessandro	Spruce	\$0	\$0	\$0	45%	45%	0.87	1.29			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Chicago	Spruce	Columbia	\$0	\$0	\$0	0%	0%	0.68	0.94			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Columbia	Main	Iowa	\$0	\$0	\$0	0%	0%	0.49	0.65			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Columbia	I-215	interchange	\$17,897,000	\$17,897,000	\$0	0%	0%	0.83	1.16			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Iowa	Center	3rd	\$13,815,000	\$13,815,000	\$137,000	0%	0%	0.74	1.07			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Iowa	3rd	University	\$0	\$0	\$0	0%	0%	0.68	0.88			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Iowa	University	Martin Luther King	\$3,530,000	\$3,265,000	\$35,000	59%	59%	0.96	1.37	87%	\$265,000	\$0	\$265,000	\$0	\$265,000	\$3,000	\$3,000	\$268,000
Northwest	Riverside		JFK	Trautwein	Wood	\$0	\$0	\$0	0%	0%	0.72	1.22			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		La Sierra	Arlington	SR-91	\$0	\$0	\$0	0%	0%	0.30	0.48			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		La Sierra	SR-91	Indiana	\$0	\$0	\$0	0%	0%	0.83	1.14			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		La Sierra	Indiana	Victoria	\$0	\$0	\$0	0%	0%	0.68	1.05			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Lemon (NB One way)	Mission Inn	University	\$0	\$0	\$0	0%	0%	0.11	0.43			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Lincoln	Van Buren	Jefferson	\$0	\$0	\$0	0%	0%	0.23	0.45			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Lincoln	Jefferson	Washington	\$4,331,000	\$4,331,000	\$43,000	0%	0%	0.40	0.71			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Lincoln	Washington	Victoria	\$8,193,000	\$8,193,000	\$81,000	0%	0%	0.55	0.98			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Madison	SR-91	Victoria	\$0	\$0	\$0	0%	0%	0.46	0.64			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Madison	BNSF	railroad crossing	\$15,851,000	\$10,851,000	\$547,000	0%	0%	0.86	1.26			\$0	\$0	\$5,000,000	\$0	\$0	\$0	\$0
Northwest	Riverside		Madison	BNSF Railroad	Magnolia	\$0	\$0	\$0	19%	19%	0.65	1.02			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Madison	BNSF	railroad crossing	\$15,851,000	\$15,851,000	\$547,000	0%	0%	0.77	1.97			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Madison	BNSF	Tyler	\$0	\$0	\$0	0%	0%	0.40	0.58			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Madison	Harrison	Tyler	\$0	\$0	\$0	0%	0%	0.40	0.58			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Madison	Harrison	14th	\$0	\$0	\$0	6%	6%	0.48	0.97			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Main	1st	San Bernardino County	\$0	\$0	\$0	40%	40%	0.72	1.07			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Market	14th	Santa Ana River	\$0	\$0	\$0	11%	11%	0.59	1.01			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Market	14th	I-215/SR-60	\$6,340,000	\$6,340,000	\$63,000	32%	32%	0.87	1.24			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Mission Inn	Redwood	Lemon	\$0	\$0	\$0	0%	0%	0.50	0.82			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Mission Inn	Redwood (SB One way)	University	\$0	\$0	\$0	0%	0%	0.53	0.86			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Trautwein	Alessandro	Van Buren	\$0	\$0	\$0	46%	46%	0.89	1.29			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Tyler	SR-91	Magnolia	\$0	\$0	\$0	0%	0%	0.36	0.57			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Tyler	SR-91	interchange	\$37,060,000	\$3,089,000	\$0	0%	0%	1.12	1.14	8%		\$33,971,000	\$33,971,000	\$0	\$33,971,000	\$0	\$0	\$33,971,000
Northwest	Riverside		Tyler	Magnolia	Hole	\$0	\$0	\$0	0%	0%	0.28	0.49			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Tyler	Hole	Wells	\$0	\$0	\$0	0%	0%	0.27	0.43			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Tyler	Wells	Arlington	\$9,443,000	\$9,443,000	\$94,000	0%	0%	0.45	0.62			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		University	Redwood	SR-91	\$0	\$0	\$0	0%	0%	0.51	0.66			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		University	SR-91	I-215/SR-60	\$0	\$0	\$0	0%	0%	0.68	0.97			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Victoria	Lincoln	Arlington	\$0	\$0	\$0	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Victoria	Madison	Washington	\$0	\$0	\$0	0%	0%	0.31	0.71			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Washington	Victoria	Hermosa	\$14,352,000	\$14,352,000	\$142,000	34%	34%	0.89	1.20			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Wood	JFK	Van Buren	\$923,000	\$923,000	\$24,000	0%	0%	0.64	1.06			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Wood	Van Buren	Bergamont	\$0	\$0	\$0	0%	0%	0.24	0.49			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Riverside		Wood	Bergamont	Krameria	\$0	\$0	\$0	0%	0%	0.23	0.47			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Cantu-Galleano Ranch	Hamner	Wineville	\$0	\$0	\$0	0%	0%	0.15	0.25			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Dos Lagos (Weirick)	Temescal Canyon	I-15	\$0	\$0	\$0	38%	38%	0.61	0.97			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		El Cerrito	I-15	Ontario	\$0	\$0	\$0	0%	0%	0.52	1.25			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		El Sobrante	Mockingbird Canyon	Cajalco	\$3,337,000	\$3,226,000	\$92,000	100%	100%	0.91	1.30	97%	\$111,000	\$0	\$111,000	\$0	\$111,000	\$3,000	\$3,000	\$114,000
Northwest	Unincorporated		Harley John	Washington	Scottsdale	\$0	\$0	\$0	0%	0%	0.43	0.73			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Harley John	Scottsdale	Cajalco	\$3,134,000	\$3,134,000	\$82,000	0%	0%	0.72	1.26			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		La Sierra	Victoria	El Sobrante	\$0	\$0	\$0	12%	12%	0.76	1.25			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		La Sierra	El Sobrante	Cajalco	\$0	\$0	\$0	0%	0%	0.66	1.44			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Mockingbird Canyon	Van Buren	El Sobrante	\$10,454,000	\$9,003,000	\$289,000	73%	73%	1.01	1.49	81%	\$1,451,000	\$0	\$1,451,000	\$0	\$1,451,000	\$40,000	\$40,000	\$1,491,000
Northwest	Unincorporated		Temescal Canyon	Ontario	Tuscany	\$1,644,000	\$740,000	\$45,000	100%	100%	1.23	1.50	45%	\$904,000	\$0	\$904,000	\$0	\$904,000	\$25,000	\$25,000	\$929,000
Northwest	Unincorporated		Temescal Canyon	Tuscany	Dos Lagos	\$0	\$0	\$0	28%	28%	0.88	1.53			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Temescal Canyon	Dos Lagos	Leroy	\$3,507,000	\$3,507,000	\$97,000	0%	0%	0.40	0.82			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Temescal Canyon	Leroy	Dawson Canyon	\$5,994,000	\$5,994,000	\$166,000	0%	0%	0.40	0.82			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Temescal Canyon	Dawson Canyon	I-15	\$0	\$0	\$0	15%	15%	0.81	1.65			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Temescal Canyon	I-15	interchange	\$17,897,000	\$17,897,000	\$0	0%	0%	0.75	1.11			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Temescal Canyon	I-15	Park Canyon	\$12,661,000	\$12,661,000	\$362,000	60%	60%	0.82	1.54			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Temescal Canyon	Park Canyon	Indian Truck Trail	\$8,094,000	\$8,094,000	\$224,000	0%	0%	0.04	0.38			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Washington	Hermosa	Harley John	\$7,840,000	\$7,840,000	\$206,000	44%	44%	0.87	1.31			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Northwest	Unincorporated		Wood	Krameria	Cajalco	\$7,880,000	\$7,880,000	\$207,000	0%	0%	0.48	1.02			\$0	\$0	\$0	\$0	\$0	\$0	\$0

EXHIBIT H-2 WRCOG TUMF 2016 Nexus Update - TUMF Network Cost Adjustments

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE MSHCP	MAX TUMF MSHCP SHARE	% EXIST NEED	>2 LANE ADJST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST SEGMENT	EXIST SPOT NEED	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Pass	Banning		8th	Wilson	I-10		\$0	\$0	0%	0%	0.23	0.40			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Highland Springs	Wilson (8th)	Sun Lakes	\$2,661,000	\$2,661,000	\$26,000	\$26,000	0%	0%	0.24	0.53		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Highland Springs	I-10	interchange	\$17,897,000	\$17,897,000	\$0	\$0	0%	0%	0.85	1.33		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Highland Springs	Oak Valley (14th)	Wilson (8th)	\$5,128,000	\$5,128,000	\$51,000	\$51,000	0%	0%	0.42	1.05		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Cherry Valley	Oak Valley (14th)	Oak Valley (14th)	\$0	\$0	\$0	\$0	0%	0%	0.15	0.28		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		I-10 Bypass South	I-10	Morongo Trail (Apache Trail)	\$22,952,000	\$22,952,000	\$227,000	\$227,000	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		I-10 Bypass South	I-10	interchange	\$17,897,000	\$17,897,000	\$0	\$0	0%	0%	0.74	0.86		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		I-10 Bypass South	San Gorgonio	bridge	\$2,767,000	\$2,767,000	\$95,000	\$95,000	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		I-10 Bypass South	UP	railroad crossing	\$18,490,000	\$18,490,000	\$638,000	\$638,000	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Lincoln	Sunset	SR-243	\$0	\$0	\$0	\$0	0%	0%	0.30	0.84		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Ramsey	8th	8th	\$0	\$0	\$0	\$0	0%	0%	0.33	0.80		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Ramsey	8th	Highland Springs	\$0	\$0	\$0	\$0	0%	0%	0.18	0.74		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		SR-243	I-10	Wesley	\$0	\$0	\$0	\$0	0%	0%	0.60	0.92		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Sun Lakes	Highland Home	Sunset	\$13,971,000	\$13,971,000	\$138,000	\$138,000	0%	0%	0.15	0.74		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Sun Lakes	Smith Creek	bridge	\$3,688,000	\$3,688,000	\$127,000	\$127,000	0%	0%	0.17	0.83		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Sun Lakes	Highland Springs	Highland Home	\$0	\$0	\$0	\$0	0%	0%	0.11	0.43		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Sunset	Ramsey	Lincoln	\$0	\$0	\$0	\$0	0%	0%	0.26	0.77		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Sunset	I-10	interchange	\$17,897,000	\$17,897,000	\$0	\$0	0%	0%	0.39	0.94		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Wilson	Highland Home	8th	\$0	\$0	\$0	\$0	0%	0%	0.26	0.70		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Banning		Wilson	Highland Springs	Highland Home	\$0	\$0	\$0	\$0	0%	0%	0.26	0.87		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		1st	Viele	Pennsylvania	\$0	\$0	\$0	\$0	50%	50%	0.51	0.75		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		1st	Pennsylvania	Highland Springs	\$0	\$0	\$0	\$0	0%	0%	0.19	0.60		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		6th	I-10	Highland Springs	\$0	\$0	\$0	\$0	12%	12%	0.45	0.90		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Desert Lawn	Champions	Oak Valley (STC)	\$912,000	\$912,000	\$24,000	\$24,000	0%	0%	0.03	0.34		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Oak Valley (14th)	Highland Springs	Pennsylvania	\$0	\$0	\$0	\$0	0%	0%	0.13	0.34		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Oak Valley (14th)	Oak Valley (14th)	Pennsylvania	\$0	\$0	\$0	\$0	0%	0%	0.26	0.66		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Oak Valley (14th)	Oak View	I-10	\$2,270,000	\$2,270,000	\$23,000	\$23,000	0%	0%	0.50	1.16		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Oak Valley (14th)	I-10	interchange	\$37,060,000	\$11,660,000	\$0	\$0	0%	0%	0.68	1.15		\$0	\$0	\$25,400,000	\$0	\$0	\$0	\$0
Pass	Beaumont		Oak Valley (STC)	Beaumont City Limits	Cherry Valley (J St / Central Overlc	\$0	\$0	\$0	\$0	0%	0%	0.10	0.55		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Oak Valley (STC)	Cherry Valley (J St / Central Overlc	I-10	\$0	\$0	\$0	\$0	0%	0%	0.33	0.59		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Pennsylvania	6th	1st	\$3,018,000	\$3,018,000	\$30,000	\$30,000	21%	21%	0.80	1.06		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Beaumont		Pennsylvania	I-10	interchange	\$8,949,000	\$0	\$0	\$0	0%	0%	1.08	1.03	0%	\$0	\$8,949,000	\$8,949,000	\$4,474,500	\$4,474,500	\$0	\$4,474,500
Pass	Calimesa		Bryant	County Line	Avenue L	\$0	\$0	\$0	\$0	0%	0%	0.16	0.24		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		Calimesa	County Line	I-10	\$0	\$0	\$0	\$0	0%	0%	0.08	0.29		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		Calimesa	I-10	interchange	\$37,060,000	\$37,060,000	\$0	\$0	0%	0%	0.59	0.91		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		Tukwet Canyon	Roberts	Palmer	\$0	\$0	\$0	\$0	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		County Line	Roberts	Bryant	\$6,497,000	\$6,497,000	\$64,000	\$64,000	23%	23%	0.47	0.41		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		County Line	I-10	interchange	\$17,897,000	\$17,897,000	\$0	\$0	0%	0%	0.20	0.36		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		Desert Lawn	Palmer	Champions	\$0	\$0	\$0	\$0	0%	0%	0.01	0.27		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		Singleton	Avenue L	Condit	\$11,834,000	\$11,834,000	\$327,000	\$327,000	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		Singleton	Condit	Roberts	\$0	\$0	\$0	\$0	0%	0%	0.29	0.80		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Calimesa		Singleton	I-10	interchange	\$37,060,000	\$37,060,000	\$0	\$0	0%	0%	0.19	0.42		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Unincorporated		Cherry Valley	Noble	Desert Lawn	\$0	\$0	\$0	\$0	0%	0%	0.39	0.73		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Unincorporated		Cherry Valley	I-10	interchange	\$37,060,000	\$36,617,000	\$0	\$0	0%	0%	0.79	1.25		\$0	\$0	\$443,000	\$0	\$0	\$0	\$0
Pass	Unincorporated		Cherry Valley	San Timoteo Wash	bridge	\$0	\$0	\$0	\$0	0%	0%	0.31	0.50		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Unincorporated		Live Oak Canyon	Oak Valley (STC)	San Bernardino County	\$0	\$0	\$0	\$0	0%	0%	0.43	0.90		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Unincorporated		Oak Valley (STC)	San Bernardino County	Beaumont City Limits	\$0	\$0	\$0	\$0	17%	17%	0.36	0.67		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Unincorporated		Oak Valley (STC)	UP	railroad crossing	\$18,490,000	\$18,490,000	\$638,000	\$638,000	0%	0%	0.08	0.36		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Unincorporated		Cherry Valley	Bellflower	Noble	\$7,757,000	\$7,757,000	\$203,000	\$203,000	0%	0%	0.00	0.02		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pass	Unincorporated		Cherry Valley	Highland Springs	Bellflower	\$0	\$0	\$0	\$0	0%	0%	0.16	0.27		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Sanderson	Acacia	Menlo	\$0	\$0	\$0	\$0	0%	0%	0.67	1.06		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Sanderson	Domenigoni	Stetson	\$0	\$0	\$0	\$0	26%	26%	0.73	1.05		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Sanderson	RR Crossing	Acacia	\$0	\$0	\$0	\$0	0%	0%	0.70	0.98		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Sanderson	Stetson	RR Crossing	\$0	\$0	\$0	\$0	0%	0%	0.68	1.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Sanderson	Menlo	Esplanade	\$0	\$0	\$0	\$0	0%	0%	0.66	0.98		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		SR-74 (Florida)	Warren	Cawston	\$0	\$0	\$0	\$0	0%	0%	0.58	1.17		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		SR-74 (Florida)	Columbia	Ramona	\$0	\$0	\$0	\$0	0%	0%	0.34	0.64		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		SR-74/SR-79 (Florida)	Cawston	Columbia	\$0	\$0	\$0	\$0	0%	0%	0.45	0.83		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		State	Domenigoni	Chambers	\$0	\$0	\$0	\$0	0%	0%	0.24	0.78		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		State	Chambers	Stetson	\$0	\$0	\$0	\$0	0%	0%	0.26	0.61		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		State	Florida	Esplanade	\$0	\$0	\$0	\$0	0%	0%	0.27	0.51		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		State	Stetson	Florida	\$9,377,000	\$9,377,000	\$86,000	\$86,000	0%	0%	0.47	0.89		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		State	Cawston	State	\$0	\$0	\$0	\$0	0%	0%	0.49	0.81		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		State	Warren	Cawston	\$2,635,000	\$2,635,000	\$69,000	\$69,000	0%	0%	0.72	1.20		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Warren	Esplanade	Domenigoni	\$13,163,000	\$13,163,000	\$345,000	\$345,000	52%	52%	0.85	1.24		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	Hemet		Warren	Salt Creek	bridge	\$2,767,000	\$2,490,000	\$95,000	\$95,000	0%	0%	0.94	1.30	90%	\$0	\$277,000	\$277,000	\$0	\$277,000	\$0	\$277,000
San Jacinto	San Jacinto		Esplanade	Ramona	Mountain	\$2,794,000	\$2,794,000	\$28,000	\$28,000	0%	0%	0.00	0.00		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Esplanade	Mountain	State	\$0	\$0	\$0	\$0	0%	0%	0.23	0.43		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Esplanade	State	Warren	\$9,320,000	\$9,320,000	\$244,000	\$244,000	0%	0%	0.33	0.68		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		Sanderson	Ramona	Esplanade	\$0	\$0	\$0	\$0	11%	11%	0.64	0.87		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		SR-79 (North Ramona)	State	San Jacinto	\$0	\$0	\$0	\$0	47%	47%	0.95	1.15	81%	\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		SR-79 (San Jacinto)	North Ramona Blvd	7th	\$1,722,000	\$1,722,000	\$17,000	\$17,000	48%	48%	0.84	1.08		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		SR-79 (San Jacinto)	7th	SR-74	\$0	\$0	\$0	\$0	0%	0%	0.39	0.58		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		State	Ramona	Esplanade	\$0	\$0	\$0	\$0	0%	0%	0.49	0.73		\$0	\$0	\$0	\$0	\$0	\$0	\$0
San Jacinto	San Jacinto		State	Gilman Springs	Quandt Ranch	\$2,007,000	\$1,138,000	\$53,000	\$30,000	100%	100%	1.05	1.24	57%	\$869,000	\$0	\$869,000	\$0	\$869,000	\$23,000	\$892,000
San Jacinto	San Jacinto		State	San Jacinto River	bridge	\$4,611,000	\$3,162,000	\$159,000	\$159,000	0%	0%	1.01	1.25	69%	\$0	\$1,449,000	\$1,449,000	\$0	\$1,449,000	\$0	\$1,449,000
San Jacinto	San Jacinto		State	Quandt Ranch	Ramona	\$0	\$0	\$0													

EXHIBIT H-2 WRCOG TUMF 2016 Nexus Update - TUMF Network Cost Adjustments

Updated: May 1, 2017

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MSHCP	MAX TUMF SHARE	MSHCP	% EXIST NEED	>2 LANE ADJUST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST SEGMENT	EXIST SPOT NEED	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Southwest	Lake Elsinore	Corydon	Mission	Grand	Corydon	\$2,019,000	\$2,019,000	\$53,000	\$53,000	0%	0%	0.55	0.86				\$0	\$0	\$0	\$0	\$0	\$0	\$0
Southwest	Lake Elsinore	Diamond	Mission	I-15		\$0	\$0	\$0	\$0	79%	79%	1.03	1.48		77%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Franklin (Integral to Railroad C	I-15	interchange		\$37,060,000	\$14,629,000	\$0	\$0	0%	0%	1.59	2.04		39%	\$0	\$22,431,000	\$22,431,000	\$0	\$0	\$22,431,000	\$0	
Southwest	Lake Elsinore	Grand	Lincoln	Toft		\$0	\$0	\$0	\$0	0%	0%	0.27	0.40			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Grand	Toft	SR-74 (Riverside)		\$1,357,000	\$1,357,000	\$36,000	\$36,000	0%	0%	0.46	0.71			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Lake	I-15	Lincoln		\$14,794,000	\$13,592,000	\$409,000	\$376,000	66%	33%	1.02	1.38		75%	\$1,202,000	\$0	\$1,202,000	\$0	\$1,202,000	\$33,000	\$33,000	
Southwest	Lake Elsinore	Lake	I-15	interchange		\$17,897,000	\$7,291,000	\$0	\$0	0%	0%	1.06	1.17		41%	\$0	\$10,606,000	\$10,606,000	\$0	\$10,606,000	\$0	\$0	
Southwest	Lake Elsinore	Lake	Temescal Wash	bridge		\$1,973,000	\$822,000	\$68,000	\$68,000	0%	0%	1.32	1.62		42%	\$0	\$1,151,000	\$1,151,000	\$0	\$1,151,000	\$0	\$0	
Southwest	Lake Elsinore	Mission	Railroad Canyon	Bundy Canyon		\$0	\$0	\$0	\$0	0%	0%	0.40	0.88			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Nichols	I-15	Lake		\$3,324,000	\$3,324,000	\$87,000	\$87,000	0%	0%	0.62	1.20			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Nichols	I-15	interchange		\$37,060,000	\$37,060,000	\$0	\$0	0%	0%	0.53	1.24			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	SR-74 (Collier/Riverside)	I-15	Lakeshore		\$29,357,000	\$28,315,000	\$291,000	\$281,000	55%	27%	0.96	1.36		87%	\$1,042,000	\$0	\$1,042,000	\$0	\$1,042,000	\$10,000	\$10,000	
Southwest	Lake Elsinore	SR-74 (Grand)	Riverside	SR-74 (Ortega)		\$8,892,000	\$7,495,000	\$88,000	\$74,000	100%	50%	1.11	1.55		69%	\$1,397,000	\$0	\$1,397,000	\$0	\$1,397,000	\$14,000	\$14,000	
Southwest	Lake Elsinore	SR-74 (Riverside)	Lakeshore	Grand		\$21,830,000	\$21,830,000	\$216,000	\$216,000	61%	30%	0.88	1.17			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Temescal Canyon	I-15	Lake		\$3,846,000	\$3,846,000	\$106,000	\$106,000	19%	19%	0.83	1.41			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Lake Elsinore	Temescal Canyon	Temescal Wash	bridge		\$2,270,000	\$2,270,000	\$78,000	\$78,000	0%	0%	0.80	1.34			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	California Oaks	I-15	Jefferson		\$555,000	\$555,000	\$6,000	\$6,000	0%	0%	0.63	0.99			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	California Oaks	I-15	Jackson		\$0	\$0	\$0	\$0	0%	0%	0.36	0.47			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	California Oaks	Jackson	Clinton Keith		\$0	\$0	\$0	\$0	0%	0%	0.30	0.48			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Jackson	Whitewood	Ynez		\$0	\$0	\$0	\$0	0%	0%	0.33	0.70			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Jefferson	Palomar	Nutmeg		\$2,691,000	\$2,691,000	\$71,000	\$71,000	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Jefferson	Nutmeg	Murrieta Hot Springs		\$21,520,000	\$21,520,000	\$213,000	\$213,000	75%	37%	0.84	1.11			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Jefferson	Murrieta Hot Springs	Cherry		\$0	\$0	\$0	\$0	18%	18%	0.67	1.10			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Keller	I-215	Whitewood		\$1,571,000	\$1,571,000	\$16,000	\$16,000	0%	0%	0.37	0.67			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Keller	I-215	interchange		\$17,897,000	\$17,897,000	\$0	\$0	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Los Alamos	Jefferson	I-215		\$0	\$0	\$0	\$0	0%	0%	0.48	0.78			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Murrieta Hot Springs	Jefferson	I-215		\$0	\$0	\$0	\$0	4%	4%	0.66	0.97			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Murrieta Hot Springs	I-215	Margarita		\$0	\$0	\$0	\$0	0%	0%	0.63	0.92			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Murrieta Hot Springs	Margarita	SR-79 (Winchester)		\$2,660,000	\$2,660,000	\$70,000	\$70,000	52%	52%	0.85	1.19			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Nutmeg	Jefferson	Clinton Keith		\$0	\$0	\$0	\$0	0%	0%	0.45	0.72			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Whitewood	Clinton Keith	Los Alamos		\$0	\$0	\$0	\$0	0%	0%	0.15	0.57			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Whitewood	Los Alamos	Murrieta Hot Springs		\$0	\$0	\$0	\$0	0%	0%	0.34	0.75			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Whitewood	Murrieta Hot Springs	Jackson		\$8,066,000	\$8,066,000	\$94,000	\$94,000	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Murrieta	Ynez	Jackson	SR-79 (Winchester)		\$0	\$0	\$0	\$0	0%	0%	0.41	0.85			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Jefferson	Cherry	Rancho California		\$0	\$0	\$0	\$0	26%	26%	0.63	1.11			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Margarita	Murrieta Hot Springs	SR-79 (Temecula Pkwy)		\$0	\$0	\$0	\$0	0%	0%	0.40	0.83			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Old Town Front	Rancho California	I-15/SR-79 (Temecula Pkwy)		\$0	\$0	\$0	\$0	47%	47%	0.96	1.50		89%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Pechanga Pkwy	Pechanga Pkwy	Via Gilberto		\$0	\$0	\$0	\$0	0%	0%	0.49	0.69			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Pechanga Pkwy	Via Gilberto	Pechanga Pkwy		\$0	\$0	\$0	\$0	0%	0%	0.51	0.80			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Rancho California	Jefferson	Margarita		\$6,824,000	\$6,824,000	\$63,000	\$63,000	11%	11%	0.74	1.04			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Rancho California	I-15	interchange		\$17,897,000	\$12,009,000	\$0	\$0	0%	0%	1.91	3.97		67%	\$0	\$5,888,000	\$5,888,000	\$0	\$5,888,000	\$0	\$0	
Southwest	Temecula	Rancho California	Margarita	Butterfield Stage		\$0	\$0	\$0	\$0	0%	0%	0.48	0.66			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	Rancho California	Butterfield Stage	Glen Oaks		\$32,064,000	\$32,064,000	\$295,000	\$295,000	0%	0%	0.61	0.99			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Temecula	SR-79 (Temecula Pkwy)	I-15	Pechanga Pkwy		\$1,692,000	\$1,576,000	\$44,000	\$41,000	75%	75%	0.96	1.59		91%	\$116,000	\$0	\$116,000	\$0	\$116,000	\$3,000	\$3,000	
Southwest	Temecula	SR-79 (Temecula Pkwy)	Pechanga Pkwy	Butterfield Stage		\$0	\$0	\$0	\$0	0%	0%	0.54	0.90			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Briggs	Scott	SR-79 (Winchester)		\$8,950,000	\$8,950,000	\$235,000	\$235,000	0%	0%	0.57	1.03			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Murrieta Hot Springs	Calle Chapos		\$0	\$0	\$0	\$0	0%	0%	0.35	0.83			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Calle Chapos	La Serena		\$0	\$0	\$0	\$0	0%	0%	0.03	0.20			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	La Serena	Rancho California		\$2,860,000	\$2,860,000	\$79,000	\$79,000	0%	0%	0.59	1.02			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Rancho California	Pauba		\$0	\$0	\$0	\$0	0%	0%	0.54	0.92			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Pauba	SR-79 (Temecula Pkwy)		\$269,000	\$269,000	\$7,000	\$7,000	0%	0%	0.26	0.61			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	SR-79 (Winchester)	Auld		\$7,245,000	\$7,245,000	\$200,000	\$200,000	0%	0%	0.24	0.56			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Auld	Murrieta Hot Springs		\$14,172,000	\$14,172,000	\$392,000	\$392,000	0%	0%	0.40	0.99			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Butterfield Stage	Tucalota Creek	bridge		\$3,688,000	\$3,688,000	\$127,000	\$127,000	0%	0%	0.68	1.62			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Horsethief Canyon	Temescal Canyon	I-15		\$0	\$0	\$0	\$0	0%	0%	0.67	0.88			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Indian Truck Trail	Temescal Canyon	I-15		\$0	\$0	\$0	\$0	0%	0%	0.23	0.27			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Murrieta Hot Springs	SR-79 (Winchester)	Pourroy		\$0	\$0	\$0	\$0	0%	0%	0.36	0.61			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Pala	Pechanga	San Diego County		\$0	\$0	\$0	\$0	0%	0%	0.55	1.56			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Temescal Canyon	Horsethief Canyon Wash	bridge		\$2,214,000	\$2,214,000	\$76,000	\$76,000	0%	0%	0.81	1.14			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Temescal Canyon	Indian Truck Trail	I-15		\$8,166,000	\$8,166,000	\$226,000	\$226,000	0%	0%	0.81	1.14			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Unincorporated	Temescal Canyon	Indian Wash	bridge		\$941,000	\$941,000	\$32,000	\$32,000	0%	0%	0.00	0.00			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Wildomar	Baxter	I-15	Palomar		\$974,000	\$921,000	\$26,000	\$25,000	57%	57%	0.94	1.29		90%	\$53,000	\$0	\$53,000	\$0	\$53,000	\$1,000	\$1,000	
Southwest	Wildomar	Baxter	I-15	interchange		\$17,897,000	\$7,159,000	\$0	\$0	0%	0%	1.20	1.40		40%	\$0	\$10,738,000	\$10,738,000	\$0	\$10,738,000	\$0	\$0	
Southwest	Wildomar	Bundy Canyon	Mission	I-15		\$6,537,000	\$6,537,000	\$65,000	\$65,000	0%	0%	0.40	0.95			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Wildomar	Central	Baxter	Palomar		\$5,143,000	\$5,143,000	\$51,000	\$51,000	0%	0%	0.84	1.22			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Wildomar	Central	Grand	Palomar		\$3,570,000	\$3,570,000	\$35,000	\$35,000	0%	0%	0.46	0.66			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Wildomar	Grand	Ortega	Corydon		\$34,648,000	\$25,011,000	\$343,000	\$248,000	100%	100%	1.09	1.58		72%	\$9,637,000	\$0	\$9,637,000	\$0	\$9,637,000	\$95,000	\$95,000	
Southwest	Wildomar	Grand	Corydon	Central		\$0	\$0	\$0	\$0	37%	37%	0.84	1.28			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Wildomar	Mission	Bundy Canyon	Palomar		\$0	\$0	\$0	\$0	0%	0%	0.17	0.43			\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Southwest	Wildomar	Palomar	Jefferson	Clinton Keith		\$1,941,000	\$1,691,000	\$51,000	\$44,000	100%	100%	0.94	1.22		87%	\$250,000	\$0	\$250,000	\$0	\$250,000	\$7,000	\$7,000	
Southwest	Wild																						

EXHIBIT H-3 Regional Transit Existing Need Share

Summary of Transit Trip Change

Year	Western Riverside Daily Transit Trips (1)
2012	26,773
2015	31,016
2025	46,572
2040	67,785
Growth 2015-2025	15,556
Annual Growth	1,414
Growth 2012-2040	41,011
Existing Need Share:	39.5%
Future Growth Share:	60.5%

Notes: 2012 and 2040 weekday system ridership interpolated based on RTA
2015 and 2025 Weekday Projected System Ridership

(1) RTA, Comprehensive Operational Analysis Executive Summary
(January 2015), Table 7

Maximum TUMF Transit Component Value

RTA Future Transit Cost	Existing Need Cost	MAX TUMF TRANSIT VALUE
\$153,120,000	\$60,481,000	\$92,639,000
Total MAX TUMF VALUE		\$3,139,124,240
Transit Share of MAX TUMF VALUE		3.0%

Appendix I - Western Riverside County Regional Trip Distribution

In order to ensure an equitable regional/zonal distribution of potential TUMF revenues, the distribution of trips in the WRCOG region was analyzed to determine the distribution between local (intra-zonal) and regional (inter-zonal) trips. This analysis was completed using the Year 2040 No-Build scenario Origin-Destination (O-D) vehicle trip tables from the Riverside County Travel Demand Model (RivTAM). The analysis of vehicle trips based on the respective trip ends as stratified by zone is considered sufficient to establish the rough proportionality between local (intra-zonal) and regional (inter-zonal) trips because this measure is intended to only serve as a guide in the distribution of potential TUMF revenues between regional and local projects, and is not intended to serve as the basis for quantifying the relative magnitude of the impacts of different types of new development on the TUMF network (as described in **Appendix J**)

The first step in the analysis was to create a correspondence table between the traffic analysis zones (TAZ's) in the RivTAM model and the five WRCOG TUMF zones: Northwest, Central, Pass Area, Hemet/San Jacinto, and Southwest. A table detailing the TAZ correspondence for each WRCOG TUMF zone is included as **Exhibit I-1** in this Appendix. The vehicle trip tables by TAZ were aggregated to obtain the trip summary between six districts (five WRCOG TUMF Zones and one for the rest of Southern California region included in the model analysis area)

Table 5.1 and **5.2** of the Nexus Study produce a matrix of total combined AM and PM peak period vehicle trips between the six districts. This information is subsequently weighted by TUMF future network lane miles in **Table 5.3** to determine the relative share of trips that can be allocated between the backbone network and secondary network. **Exhibits I-2** through **I-11** provide the corresponding peak period vehicle trip matrices for each of the four time periods analyzed by the RivTAM model (AM peak, midday, PM peak and overnight) as well as total daily trips between the six districts.

EXHIBIT I-1 TUMF ZONE/RivTAM TAZ CORRESPONDENCE

TUMF ZONE	Central		Hemet/San Jacinto	Northwest		Pass	Southwest	
RivTAM TAZ								
	3578	4002	4028	3120	3348	3927	3296	4037
	3584	4004	4030	3121	3349	4047	3330	4038
	3611	4005	4039	3122	3350	4090	3340	4040
	3620	4006	4065	3123	3351	4108	3371	4041
	3630	4007	4070	3124	3352	4120	3372	4046
	3648	4008	4071	3125	3353	4141	3373	4048
	3650	4010	4076	3126	3354	4145	3389	4049
	3651	4011	4081	3127	3355	4147	3404	4050
	3654	4014	4083	3128	3356	4149	3411	4051
	3656	4016	4084	3129	3357	4155	3419	4053
	3658	4023	4085	3130	3358	4161	3422	4054
	3659	4026	4086	3131	3359	4163	3425	4058
	3660	4029	4088	3132	3360	4172	3428	4059
	3661	4031	4092	3133	3361	4179	3429	4061
	3662	4042	4094	3134	3362	4180	3433	4062
	3663	4043	4112	3135	3363	4181	3437	4063
	3664	4044	4114	3136	3364	4185	3440	4064
	3666	4045	4115	3137	3365	4193	3441	4067
	3669	4052	4116	3138	3366	4194	3443	4068
	3670	4055	4118	3139	3367	4195	3449	4069
	3672	4056	4121	3140	3368	4205	3455	4072
	3673	4057	4123	3141	3369	4211	3458	4073
	3680	4060	4127	3142	3370	4220	3460	4074
	3682	4066	4133	3143	3374	4222	3463	4077
	3683	4075	4134	3144	3375	4225	3465	4078
	3685	4089	4136	3145	3376	4228	3469	4079
	3686	4099	4137	3146	3377	4230	3471	4080
	3687	4103	4139	3147	3378	4239	3475	4082
	3689	4926	4142	3148	3379	4243	3481	4087
	3690		4143	3149	3380	4244	3492	4091
	3691		4144	3150	3381	4245	3493	4093
	3692		4148	3151	3382	4246	3494	4095
	3693		4151	3152	3383	4247	3502	4096
	3694		4153	3153	3384	4249	3507	4097
	3696		4154	3154	3385	4251	3511	4098
	3697		4156	3155	3386	4252	3513	4100
	3698		4159	3156	3387	4253	3519	4101
	3699		4162	3157	3388	4267	3521	4102
	3700		4164	3158	3390	4268	3522	4104
	3702		4165	3159	3391	4269	3526	4105
	3705		4166	3160	3392	4270	3529	4106
	3707		4167	3161	3393	4272	3533	4107
	3708		4169	3162	3394	4273	3536	4109
	3709		4170	3163	3395	4274	3543	4110
	3711		4173	3164	3396	4276	3546	4111
	3712		4174	3165	3397	4281	3555	4113
	3713		4175	3166	3398	4293	3557	4117
	3714		4176	3167	3399	4302	3562	4119
	3716		4177	3168	3400	4303	3570	4122
	3717		4178	3169	3401	4305	3571	4124
	3718		4183	3170	3402	4306	3576	4125
	3720		4184	3171	3403	4312	3579	4126
	3721		4186	3172	3405	4315	3583	4128
	3722		4187	3173	3406	4325	3586	4129
	3724		4188	3174	3407	4333	3587	4130
	3725		4189	3175	3408	4340	3592	4131
	3726		4190	3176	3409	4342	3593	4132
	3727		4191	3177	3410	4343	3596	4135
	3729		4192	3178	3412	4344	3598	4138
	3730		4196	3179	3413	4350	3599	4140
	3731		4197	3180	3414	4351	3604	4146
	3732		4198	3181	3415	4354	3605	4150
	3733		4199	3182	3416	4357	3607	4152
	3734		4200	3183	3417	4362	3610	4157
	3736		4201	3184	3418	4365	3612	4158
	3738		4202	3185	3420	4367	3621	4160

TUMF ZONE	Central	Hemet/San Jacinto	Northwest		Pass	Southwest	
RivTAM TAZ							
	3741	4208	3186	3421	4368	3622	4168
	3742	4209	3187	3423	4370	3624	4171
	3743	4210	3188	3424	4373	3625	4182
	3744	4212	3189	3426	4376	3626	4203
	3745	4213	3190	3427	4382	3631	4204
	3746	4214	3191	3430	4383	3634	4206
	3747	4215	3192	3431	4388	3635	4207
	3750	4216	3193	3432	4390	3636	4223
	3751	4217	3194	3434	4394	3644	4235
	3753	4218	3195	3435	4396	3645	4294
	3754	4219	3196	3436	4397	3647	4348
	3755	4221	3197	3438	4398	3652	4375
	3756	4224	3198	3439	4399	3653	4908
	3757	4226	3199	3442	4400	3665	
	3758	4227	3200	3444	4401	3667	
	3759	4229	3201	3445	4402	3668	
	3760	4231	3202	3446	4408	3671	
	3761	4232	3203	3447	4409	3674	
	3762	4233	3204	3448	4411	3676	
	3763	4234	3205	3450	4412	3677	
	3764	4236	3206	3451	4413	3678	
	3765	4237	3207	3452	4414	3679	
	3767	4238	3208	3453	4415	3681	
	3769	4240	3209	3454	4416	3684	
	3770	4241	3210	3456	4417	3688	
	3771	4242	3211	3457	4420	3695	
	3773	4248	3212	3459	4421	3701	
	3775	4250	3213	3461	4423	3703	
	3777	4254	3214	3462	4424	3704	
	3779	4255	3215	3464	4425	3706	
	3780	4256	3216	3466	4426	3710	
	3781	4257	3217	3467	4427	3715	
	3782	4258	3218	3468	4428	3719	
	3783	4259	3219	3470	4429	3723	
	3784	4260	3220	3472	4431	3728	
	3785	4261	3221	3473	4432	3735	
	3786	4262	3222	3474	4435	3737	
	3788	4263	3223	3476	4437	3739	
	3789	4264	3224	3477	4438	3740	
	3790	4265	3225	3478	4440	3748	
	3791	4266	3226	3479	4441	3749	
	3792	4271	3227	3480	4443	3752	
	3796	4275	3228	3482		3766	
	3799	4277	3229	3483		3768	
	3800	4278	3230	3484		3772	
	3801	4279	3231	3485		3774	
	3802	4280	3232	3486		3776	
	3803	4282	3233	3487		3778	
	3804	4283	3234	3488		3787	
	3805	4284	3235	3489		3793	
	3806	4285	3236	3490		3794	
	3807	4286	3237	3491		3795	
	3808	4287	3238	3495		3797	
	3809	4288	3239	3496		3798	
	3810	4289	3240	3497		3813	
	3811	4290	3241	3498		3815	
	3812	4291	3242	3499		3817	
	3814	4292	3243	3500		3818	
	3816	4295	3244	3501		3822	
	3819	4296	3245	3503		3824	
	3820	4297	3246	3504		3835	
	3821	4298	3247	3505		3837	
	3823	4299	3248	3506		3838	
	3825	4300	3249	3508		3839	
	3826	4301	3250	3509		3840	
	3827	4304	3251	3510		3841	
	3828	4307	3252	3512		3843	

TUMF ZONE	Central	Hemet/San Jacinto	Northwest		Pass	Southwest
RivTAM TAZ						
	3829	4308	3253	3514		3845
	3830	4309	3254	3515		3847
	3831	4310	3255	3516		3848
	3832	4311	3256	3517		3852
	3833	4313	3257	3518		3854
	3834	4314	3258	3520		3856
	3836	4316	3259	3523		3865
	3842	4317	3260	3524		3866
	3844	4318	3261	3525		3867
	3846	4319	3262	3527		3873
	3849	4320	3263	3528		3874
	3850	4321	3264	3530		3880
	3851	4322	3265	3531		3884
	3853	4323	3266	3532		3889
	3855	4324	3267	3534		3890
	3857	4326	3268	3535		3891
	3858	4327	3269	3537		3892
	3859	4328	3270	3538		3894
	3860	4329	3271	3539		3896
	3861	4330	3272	3540		3897
	3862	4331	3273	3541		3898
	3863	4332	3274	3542		3905
	3864	4334	3275	3544		3907
	3868	4335	3276	3545		3908
	3869	4336	3277	3547		3913
	3870	4337	3278	3548		3915
	3871	4338	3279	3549		3916
	3872	4339	3280	3550		3923
	3875	4341	3281	3551		3925
	3876	4345	3282	3552		3928
	3877	4346	3283	3553		3932
	3878	4347	3284	3554		3935
	3879	4349	3285	3556		3936
	3881	4352	3286	3558		3937
	3882	4353	3287	3559		3938
	3883	4355	3288	3560		3939
	3885	4356	3289	3561		3940
	3886	4358	3290	3563		3941
	3887	4359	3291	3564		3942
	3888	4360	3292	3565		3943
	3893	4361	3293	3566		3944
	3895	4363	3294	3567		3946
	3899	4364	3295	3568		3947
	3900	4366	3297	3569		3951
	3901	4369	3298	3572		3952
	3902	4371	3299	3573		3958
	3903	4372	3300	3574		3959
	3904	4374	3301	3575		3961
	3906	4377	3302	3577		3962
	3909	4378	3303	3580		3963
	3910	4379	3304	3581		3964
	3911	4380	3305	3582		3968
	3912	4381	3306	3585		3969
	3914	4384	3307	3588		3971
	3917	4385	3308	3589		3972
	3918	4386	3309	3590		3973
	3919	4387	3310	3591		3974
	3920	4389	3311	3594		3975
	3921	4391	3312	3595		3976
	3922	4392	3313	3597		3977
	3924	4393	3314	3600		3980
	3926	4403	3315	3601		3981
	3929	4404	3316	3602		3983
	3930	4405	3317	3603		3984
	3931	4407	3318	3606		3985
	3933	4410	3319	3608		3987
	3934	4418	3320	3609		3991

TUMF ZONE	Central	Hemet/San Jacinto	Northwest		Pass	Southwest
RivTAM TAZ	3945 3948 3949 3950 3953 3954 3955 3956 3957 3960 3965 3966 3967 3970 3978 3979 3982 3986 3988 3989 3990 3993 3997 3999 4000	4419	3321 3322 3323 3324 3325 3326 3327 3328 3329 3331 3332 3333 3334 3335 3336 3337 3338 3339 3341 3342 3343 3344 3345 3346 3347	3613 3614 3615 3616 3617 3618 3619 3623 3627 3628 3629 3632 3633 3637 3638 3639 3640 3641 3642 3643 3646 3649 3655 3657 3675		3992 3994 3995 3996 3998 4001 4003 4009 4012 4013 4015 4017 4018 4019 4020 4021 4022 4024 4025 4027 4032 4033 4034 4035 4036

EXHIBIT I-2 - 2040 AM Peak Period Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		106,346	4,379	33,568	1,890	14,235	21,717	182,136
Hemet/San Jacinto		6,969	69,680	5,128	2,436	8,706	8,055	100,974
Northwest		13,298	956	274,186	952	4,529	75,995	369,917
Pass Area		3,261	1,439	4,369	37,804	697	15,736	63,307
Southwest		11,630	4,522	14,657	606	163,886	15,260	210,560
Outside WRCOG		9,525	2,747	73,922	7,753	6,498		100,445
TOTAL		151,029	83,725	405,830	51,442	198,551	136,762	1,027,339

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT I-3 - 2040 AM Peak Period Percent Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		58.4%	2.4%	18.4%	1.0%	7.8%	11.9%	100%
Hemet/San Jacinto		6.9%	69.0%	5.1%	2.4%	8.6%	8.0%	100%
Northwest		3.6%	0.3%	74.1%	0.3%	1.2%	20.5%	100%
Pass Area		5.2%	2.3%	6.9%	59.7%	1.1%	24.9%	100%
Southwest		5.5%	2.1%	7.0%	0.3%	77.8%	7.2%	100%

* Based on RIVTAM Year 2040 Base Scenario, September 2016

EXHIBIT I-4 - 2040 PM Peak Period Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		179,210	10,723	26,578	4,384	20,586	20,082	261,563
Hemet/San Jacinto		7,907	121,112	2,268	2,820	8,432	5,796	148,336
Northwest		50,768	7,126	468,112	5,617	21,119	135,691	688,433
Pass Area		3,460	4,123	2,167	66,097	1,093	17,094	94,034
Southwest		23,155	12,992	9,479	1,180	288,458	13,164	348,428
Outside WRCOG		33,827	11,942	138,777	25,584	22,744		232,874
TOTAL		298,328	168,018	647,380	105,682	362,433	191,828	1,773,669

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT I-5 - 2040 PM Peak Period Percent Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		68.5%	4.1%	10.2%	1.7%	7.9%	7.7%	100%
Hemet/San Jacinto		5.3%	81.6%	1.5%	1.9%	5.7%	3.9%	100%
Northwest		7.4%	1.0%	68.0%	0.8%	3.1%	19.7%	100%
Pass Area		3.7%	4.4%	2.3%	70.3%	1.2%	18.2%	100%
Southwest		6.6%	3.7%	2.7%	0.3%	82.8%	3.8%	100%

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT I-6 - 2040 Midday Period Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		184,436	6,992	32,793	3,015	17,669	25,803	270,708
Hemet/San Jacinto		7,033	124,899	4,208	2,926	7,643	9,232	155,942
Northwest		30,886	3,863	485,398	3,174	13,033	114,878	651,230
Pass Area		2,762	2,743	3,206	68,540	1,114	18,457	96,822
Southwest		17,997	7,713	13,990	1,186	293,587	21,902	356,374
Outside WRCOG		24,656	8,506	117,618	18,597	20,271		189,648
TOTAL		267,771	154,716	657,212	97,437	353,317	190,272	1,720,725

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

Table I-7 - 2040 Midday Period Percent Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		68.1%	2.6%	12.1%	1.1%	6.5%	9.5%	100%
Hemet/San Jacinto		4.5%	80.1%	2.7%	1.9%	4.9%	5.9%	100%
Northwest		4.7%	0.6%	74.5%	0.5%	2.0%	17.6%	100%
Pass Area		2.9%	2.8%	3.3%	70.8%	1.2%	19.1%	100%
Southwest		5.1%	2.2%	3.9%	0.3%	82.4%	6.1%	100%

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT I-8 - 2040 Nighttime Period Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		91,558	4,166	15,554	1,574	9,756	13,323	135,931
Hemet/San Jacinto		3,778	60,774	2,142	1,555	4,201	4,729	77,179
Northwest		19,356	2,843	226,645	2,031	8,819	64,067	323,761
Pass Area		1,510	1,744	1,596	33,754	636	9,769	49,009
Southwest		9,502	4,385	6,574	597	137,781	10,912	169,751
Outside WRCOG		15,145	5,751	57,195	10,007	13,350		101,447
TOTAL		140,850	79,662	309,706	49,517	174,543	102,800	857,079

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT I-9 - 2040 Nighttime Period Percent Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		67.4%	3.1%	11.4%	1.2%	7.2%	9.8%	100%
Hemet/San Jacinto		4.9%	78.7%	2.8%	2.0%	5.4%	6.1%	100%
Northwest		6.0%	0.9%	70.0%	0.6%	2.7%	19.8%	100%
Pass Area		3.1%	3.6%	3.3%	68.9%	1.3%	19.9%	100%
Southwest		5.6%	2.6%	3.9%	0.4%	81.2%	6.4%	100%

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT I-10 - 2040 Daily Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		561,551	26,261	108,492	10,863	62,245	80,925	850,338
Hemet/San Jacinto		25,688	376,465	13,746	9,737	28,982	27,812	482,430
Northwest		114,308	14,788	1,454,341	11,774	47,500	390,631	2,033,342
Pass Area		10,994	10,050	11,337	206,194	3,541	61,056	303,173
Southwest		62,284	29,611	44,699	3,568	883,713	61,238	1,085,114
Outside WRCOG		83,152	28,947	387,512	61,941	62,862		624,415
TOTAL		857,977	486,122	2,020,128	304,078	1,088,844	621,662	5,378,811

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT I-11 - 2040 Percent Daily Vehicle Trips by WRCOG Zone*

FROM	TO	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		66.0%	3.1%	12.8%	1.3%	7.3%	9.5%	100%
Hemet/San Jacinto		5.3%	78.0%	2.8%	2.0%	6.0%	5.8%	100%
Northwest		5.6%	0.7%	71.5%	0.6%	2.3%	19.2%	100%
Pass Area		3.6%	3.3%	3.7%	68.0%	1.2%	20.1%	100%
Southwest		5.7%	2.7%	4.1%	0.3%	81.4%	5.6%	100%

* Based on RIVTAM Year 2040 No-Build Scenario, September 2016

Appendix J - Western Riverside County Regional Trip Purpose

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law, fundamentally changing the way that transportation impacts are to be assessed pursuant to the California Environmental Quality Act (CEQA). The new law requires CEQA guidelines to be amended to provide an alternative to Level of Service for evaluating transportation impacts. The intent of the change is to introduce alternate criteria that “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” (New Public Resources Code Section 21099(b)(1).) The primary effect of the new law is to establish the use of vehicle miles of travel (VMT) as the preferred basis for measuring traffic impacts, in recognition of the fact that VMT more accurately reflects traffic impacts as it takes into account both the number of trips being made and the distance of those trips. Although CEQA and the specific provision of SB 743 do not generally apply directly to impact fee programs (which are governed by the provision of the Mitigation Fee Act), the reasoning behind SB 743 establishing VMT as the preferred basis for CEQA traffic impact measurement is sound and equally applicable for impact fee nexus determination.

Linking the TUMF to VMT does enable developers to continue to use TUMF participation as demonstration of partial mitigation for their cumulative regional transportation impacts under the new SB 743 requirements. Furthermore, consistent with SB 743, consideration of travel impacts in terms of peak period VMT more accurately reflects the realities of travel behavior as the basis for determining impacts on the regional transportation system by reflecting the peak demands on the system based on the number of trips and the cumulative distance these trips occupy facilities in the system. Variation in trip length for different trip purposes is important to quantify since the impact associated with a trip is not limited to whether a trip occurs or not. A longer distance trip occupies more roadways over a longer period of time (all else being equal), and therefore goes through more intersections and consumes more capacity, thus requiring greater levels of mitigation. As the purpose of the TUMF is to mitigate the cumulative regional traffic impacts of future growth, a VMT based approach to defining the rough proportionality of impacts resulting from various differing types of new development better aligns with this purpose.

The Riverside County Travel Demand Model (RivTAM) is the primary analytical tool used to forecast VMT in Riverside County. RivTAM was developed based on the SCAG regional travel demand model, whose underlying model travel characteristics were developed based on national and regional travel behavior surveys, including the 2010 U.S. Census and the 2010 California Household Travel Survey. The methodology for using travel demand models, including RivTAM, as the basis for calculating and measuring VMT is consistent with NEPA and CEQA guidance, and accepted transportation planning practice.

The RivTAM model produces person-trips (irrespective of mode choice) on the basis of five trip purposes including home-based-work (HBW), home-based-other (HBO), home-based-school (HBSC), work-based-other (WBO), and other-based-other (OBO). Peak period, off-peak period and daily vehicle trips and VMT are derived from the person-trip

productions based on mode choice assignments and differing trip length characteristics embedded on the model parameters. The peak period VMT results were aggregated into home-based VMT (combining the first three trip purposes) and non-home-based VMT (combining the last two trip purposes) for each scenario, with peak period conditions being considered to be most representative of the greatest level of travel demand and impact on the transportation system, and therefore serving as the basis for assessing impacts and determining necessary mitigation.

The attribution of VMT associated with home-based trip purposes to residential land uses and non-home-based trips to non-residential land uses is consistent with the provisions of NCHRP Report #187 Quick Response Urban Travel Estimation Techniques and Transferable Parameters User's Guide (Transportation Research Board, 1978), a widely-referenced source for travel estimation techniques used for travel demand modeling. Chapter 2 of this report, which details trip generation estimation, states that "HBW (Home Based Work) and HBNW (Home Based Non Work) trips are generated at the households, whereas the NHB (Non-Home Based) trips are generated elsewhere." Consistent with NCHRP Report #187, aggregating person trip productions and associated VMT into home-based (combining home-based-work, home-based-other and home-based-school) and non-home-based (combining work-based-other, and other-based-other) represents an appropriate way to allocate trip generation and associated impacts between residential and non-residential land uses for the purpose of estimating the rough proportionality of the TUMF fee.

Exhibits J-1 through **J-36** of this Appendix include the RivTAM model data aggregated for peak period, off-peak period and daily person VMT for each trip purpose between the respective TUMF zones, and for both model year scenarios. The growth in peak period VMT for each trip purpose was calculated as the difference between the peak period VMT in the 2012 Existing scenario and the peak period VMT in the 2040 No Build scenario. The growth in home-based peak period VMT represents 71.0% of the total growth in peak period VMT, and the growth in non-home-based peak period VMT represents 29.0% of the total growth in peak period VMT, as shown in **Table 5.4**. The relative share of the growth in peak period VMT summarized in **Table 5.4** provides the basis for estimating the rough proportionality of the TUMF network impacts and related mitigation costs (and associated fees) attributable to new residential and non-residential development, respectively.

EXHIBIT J-1
VMT BY WRCOG TUMF ZONE
TOTAL PEAK PERIOD TRIPS FOR ALL PURPOSES - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		389,530	58,658	515,709	76,790	247,838	762,084	2,050,608
Hemet/San Jacinto		103,467	193,415	158,793	65,818	161,492	313,734	996,718
Northwest		195,841	28,787	1,304,058	53,200	166,564	1,771,076	3,519,526
Pass Area		40,482	18,375	80,876	141,211	21,128	241,176	543,249
Southwest		195,853	74,630	493,892	40,530	874,017	948,814	2,627,737
Outside WRCOG		171,168	46,123	915,609	153,604	170,517	0	1,457,021
TOTAL		1,096,339	419,988	3,468,937	531,154	1,641,556	4,036,885	11,194,859

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-2
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-WORK TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		152,050	26,114	365,618	43,009	121,640	510,743	1,219,175
Hemet/San Jacinto		58,445	65,551	116,605	42,187	91,502	208,836	583,127
Northwest		71,941	8,699	637,505	21,530	51,353	1,061,010	1,852,039
Pass Area		15,095	5,503	47,484	63,083	6,664	123,946	261,775
Southwest		102,298	38,437	362,678	21,884	369,866	640,519	1,535,684
Outside WRCOG		29,675	6,927	291,804	46,830	22,861	0	398,096
TOTAL		429,505	151,232	1,821,694	238,522	663,887	2,545,054	5,849,895

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-3
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		86,863	10,000	58,380	12,111	34,441	150,279	352,074
Hemet/San Jacinto		18,719	49,026	22,572	11,321	22,381	69,406	193,426
Northwest		34,888	5,446	218,902	10,316	25,217	325,236	620,004
Pass Area		6,959	3,035	11,406	25,736	4,209	49,652	100,998
Southwest		40,366	14,014	65,761	11,511	177,514	233,782	542,947
Outside WRCOG		56,514	15,179	236,498	42,808	53,654	0	404,653
TOTAL		244,309	96,701	613,519	113,803	317,416	828,355	2,214,102

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-4
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-SCHOOL TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		38,530	5,235	20,514	3,940	27,330	2,365	97,913
Hemet/San Jacinto		6,347	15,348	3,256	1,504	11,491	1,597	39,544
Northwest		16,017	2,330	87,041	2,763	21,804	3,215	133,171
Pass Area		3,966	1,952	4,209	7,977	2,057	3,380	23,543
Southwest		10,278	3,906	11,625	788	74,572	980	102,149
Outside WRCOG		2,108	1,340	7,301	1,943	4,291	0	16,984
TOTAL		77,246	30,112	133,946	18,916	141,546	11,537	413,303

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-5
VMT BY WRCOG TUMF ZONE
PEAK PERIOD WORK-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		26,024	6,144	25,731	6,702	30,051	38,816	133,467
Hemet/San Jacinto		8,226	13,796	6,757	4,495	19,885	14,161	67,319
Northwest		25,419	4,311	97,903	6,485	31,255	149,105	314,476
Pass Area		6,095	3,271	7,125	12,062	4,236	26,110	58,898
Southwest		10,856	4,578	14,809	1,489	66,907	21,329	119,969
Outside WRCOG		31,206	8,023	147,489	23,056	41,637	0	251,410
TOTAL		107,825	40,122	299,814	54,288	193,970	249,520	945,539

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-6
VMT BY WRCOG TUMF ZONE
PEAK PERIOD OTHER-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		86,063	11,165	45,466	11,028	34,377	59,881	247,979
Hemet/San Jacinto		11,729	49,693	9,602	6,311	16,233	19,735	113,302
Northwest		47,576	8,001	262,708	12,107	36,935	232,510	599,836
Pass Area		8,366	4,614	10,652	32,353	3,962	38,088	98,036
Southwest		32,054	13,694	39,019	4,858	185,158	52,205	326,989
Outside WRCOG		51,666	14,654	232,517	38,967	48,073	0	385,877
TOTAL		237,453	101,821	599,964	105,625	324,738	402,419	1,772,020

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-7
VMT BY WRCOG TUMF ZONE
TOTAL OFF PEAK TRIPS FOR ALL PURPOSES - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		360,762	37,532	347,261	47,657	171,179	634,388	1,598,779
Hemet/San Jacinto		71,493	190,556	113,705	48,421	105,583	267,180	796,938
Northwest		150,653	24,059	1,127,358	40,621	134,169	1,481,820	2,958,681
Pass Area		27,905	13,295	58,046	129,423	19,743	204,566	452,978
Southwest		144,598	45,952	341,011	34,598	762,886	892,950	2,221,995
Outside WRCOG		201,370	59,617	867,904	150,167	240,357	0	1,519,415
TOTAL		956,780	371,011	2,855,285	450,888	1,433,917	3,480,904	9,548,785

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-8
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-WORK TRIPS ONLY - BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		77,708	12,816	185,465	20,216	66,029	300,093	662,326
Hemet/San Jacinto		27,708	33,336	62,383	21,040	46,455	122,121	313,041
Northwest		38,304	5,679	326,444	12,050	33,895	606,993	1,023,366
Pass Area		7,199	2,968	24,963	32,122	4,556	69,197	141,004
Southwest		49,714	17,359	189,745	11,593	195,859	411,224	875,495
Outside WRCOG		18,990	4,702	167,062	26,395	17,946	0	235,095
TOTAL		219,623	76,859	956,062	123,416	364,740	1,509,628	3,250,328

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-9
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		127,947	11,484	85,053	15,392	44,597	202,203	486,675
Hemet/San Jacinto		26,426	70,440	33,471	18,312	30,624	92,026	271,299
Northwest		41,840	6,111	323,547	12,319	30,981	453,850	868,647
Pass Area		9,196	3,847	15,640	38,760	5,756	63,349	136,549
Southwest		53,016	15,582	95,867	15,756	253,975	333,979	768,175
Outside WRCOG		66,327	16,304	285,844	51,123	64,174	0	483,771
TOTAL		324,752	123,768	839,421	151,661	430,106	1,145,408	3,015,116

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-10
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-SCHOOL TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		10,227	1,141	5,614	802	7,274	463	25,521
Hemet/San Jacinto		1,683	4,145	781	430	2,732	326	10,098
Northwest		3,929	514	23,143	589	5,946	893	35,014
Pass Area		936	514	937	2,244	523	751	5,905
Southwest		2,445	760	2,950	152	20,399	204	26,910
Outside WRCOG		364	281	1,032	333	1,063	0	3,073
TOTAL		19,584	7,355	34,457	4,550	37,938	2,637	106,520

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-11
VMT BY WRCOG TUMF ZONE
OFF PEAK WORK-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		18,526	2,978	17,319	3,375	19,418	23,123	84,739
Hemet/San Jacinto		5,094	10,083	4,286	3,046	11,958	8,017	42,485
Northwest		14,922	2,235	67,020	3,636	22,580	91,969	202,361
Pass Area		3,540	1,843	4,507	9,076	2,636	14,601	36,202
Southwest		6,076	1,836	9,687	662	43,594	12,245	74,100
Outside WRCOG		18,727	3,948	89,331	12,521	28,548	0	153,075
TOTAL		66,885	22,922	192,149	32,317	128,735	149,954	592,962

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-12
VMT BY WRCOG TUMF ZONE
OFF PEAK OTHER-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		126,354	9,114	53,811	7,872	33,862	108,506	339,518
Hemet/San Jacinto		10,582	72,551	12,784	5,592	13,814	44,691	160,015
Northwest		51,659	9,521	387,205	12,028	40,767	328,115	829,293
Pass Area		7,034	4,123	12,000	47,221	6,273	56,667	133,318
Southwest		33,347	10,414	42,762	6,436	249,058	135,298	477,315
Outside WRCOG		96,962	34,382	324,635	59,796	128,626	0	644,400
TOTAL		325,937	140,106	833,196	138,944	472,399	673,277	2,583,860

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-13
VMT BY WRCOG TUMF ZONE
TOTAL DAILY TRIPS FOR ALL PURPOSES - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		750,291	96,190	862,970	124,447	419,017	1,396,472	3,649,387
Hemet/San Jacinto		174,960	383,970	272,497	114,239	267,075	580,915	1,793,656
Northwest		346,494	52,847	2,431,416	93,821	300,733	3,252,896	6,478,207
Pass Area		68,386	31,670	138,923	270,635	40,871	445,742	996,227
Southwest		340,450	120,582	834,903	75,129	1,636,903	1,841,765	4,849,732
Outside WRCOG		372,538	105,740	1,783,513	303,771	410,874	0	2,976,436
TOTAL		2,053,119	790,999	6,324,222	982,041	3,075,473	7,517,789	20,743,644

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-14
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-WORK TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		229,758	38,930	551,083	63,226	187,669	810,836	1,881,501
Hemet/San Jacinto		86,153	98,887	178,988	63,226	137,957	330,957	896,168
Northwest		110,246	14,378	963,949	33,580	85,248	1,668,004	2,875,405
Pass Area		22,294	8,471	72,447	95,205	11,220	193,142	402,779
Southwest		152,013	55,796	552,423	33,477	565,726	1,051,743	2,411,178
Outside WRCOG		48,664	11,629	458,866	73,225	40,807	0	633,191
TOTAL		649,128	228,091	2,777,756	361,939	1,028,626	4,054,682	9,100,222

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-15
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		214,810	21,484	143,433	27,502	79,037	352,482	838,748
Hemet/San Jacinto		45,145	119,467	56,043	29,633	53,005	161,432	464,725
Northwest		76,728	11,557	542,448	22,635	56,198	779,085	1,488,651
Pass Area		16,156	6,882	27,046	64,496	9,965	113,002	237,547
Southwest		93,382	29,596	161,628	27,267	431,489	567,761	1,311,122
Outside WRCOG		122,840	31,483	522,341	93,931	117,828	0	888,424
TOTAL		569,061	220,469	1,452,940	265,464	747,522	1,973,762	5,229,218

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-16
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-SCHOOL TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		48,757	6,376	26,128	4,742	34,604	2,828	123,434
Hemet/San Jacinto		8,030	19,493	4,037	1,935	14,224	1,923	49,642
Northwest		19,946	2,845	110,184	3,352	27,750	4,108	168,184
Pass Area		4,902	2,466	5,146	10,222	2,580	4,131	29,447
Southwest		12,723	4,666	14,575	940	94,971	1,184	129,059
Outside WRCOG		2,472	1,621	8,334	2,276	5,354	0	20,057
TOTAL		96,830	37,467	168,403	23,466	179,483	14,174	519,823

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-17
VMT BY WRCOG TUMF ZONE
DAILY WORK-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		44,550	9,121	43,050	10,077	49,468	61,939	218,206
Hemet/San Jacinto		13,320	23,879	11,044	7,541	31,843	22,177	109,804
Northwest		40,340	6,545	164,922	10,121	53,835	241,073	516,837
Pass Area		9,634	5,113	11,632	21,138	6,872	40,711	95,100
Southwest		16,932	6,415	24,496	2,151	110,501	33,573	194,068
Outside WRCOG		49,933	11,970	236,819	35,577	70,185	0	404,485
TOTAL		174,710	63,044	491,963	86,604	322,705	399,474	1,538,500

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-18
VMT BY WRCOG TUMF ZONE
DAILY OTHER-BASED-OTHER TRIPS ONLY - 2012 BASELINE

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		212,416	20,279	99,276	18,900	68,239	168,387	587,497
Hemet/San Jacinto		22,311	122,244	22,386	11,903	30,047	64,426	273,317
Northwest		99,235	17,522	649,913	24,134	77,701	560,625	1,429,130
Pass Area		15,400	8,738	22,652	79,574	10,235	94,756	231,354
Southwest		65,400	24,109	81,781	11,294	434,216	187,503	804,304
Outside WRCOG		148,627	49,036	557,152	98,763	176,699	0	1,030,277
TOTAL		563,390	241,927	1,433,160	244,569	797,137	1,075,696	4,355,880

Based on RivTAM Year 2012 Baseline Scenario, September 2016

EXHIBIT J-19
VMT BY WRCOG TUMF ZONE
TOTAL PEAK PERIOD TRIPS FOR ALL PURPOSES - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		699,459	94,446	958,071	76,199	396,880	701,881	2,926,936
Hemet/San Jacinto		223,819	409,242	352,179	81,376	392,808	373,466	1,832,890
Northwest		267,711	29,237	2,229,009	42,905	170,566	1,618,050	4,357,479
Pass Area		122,864	28,418	271,719	272,145	39,260	454,696	1,189,103
Southwest		286,335	115,417	737,831	32,644	1,476,921	691,889	3,341,037
Outside WRCOG		219,154	51,085	1,607,954	184,085	174,741	0	2,237,019
TOTAL		1,819,342	727,846	6,156,763	689,354	2,651,177	3,839,982	15,884,463

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-20
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-WORK TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		304,409	42,432	735,094	36,734	228,563	443,120	1,790,352
Hemet/San Jacinto		141,554	160,422	287,097	52,783	258,193	253,730	1,153,779
Northwest		90,271	6,883	1,094,065	11,405	55,257	780,112	2,037,994
Pass Area		55,857	10,736	185,867	131,187	18,597	282,741	684,985
Southwest		139,725	46,800	549,590	12,681	663,897	421,639	1,834,332
Outside WRCOG		50,555	9,361	690,110	37,959	42,495	0	830,480
TOTAL		782,371	276,634	3,541,822	282,749	1,267,002	2,181,342	8,331,921

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-21
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		147,646	18,035	92,100	16,224	55,687	167,337	497,029
Hemet/San Jacinto		29,805	95,364	36,227	15,294	39,767	91,148	307,604
Northwest		42,856	6,077	310,784	10,047	28,146	302,482	700,393
Pass Area		14,527	5,310	25,804	53,394	7,490	86,157	192,682
Southwest		57,946	23,534	95,266	12,577	265,165	210,528	665,016
Outside WRCOG		71,890	18,254	364,953	53,003	62,105	0	570,204
TOTAL		364,671	166,575	925,133	160,540	458,360	857,650	2,932,929

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-22
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-SCHOOL TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		42,342	1,415	21,056	405	25,231	804	91,253
Hemet/San Jacinto		17,185	20,005	9,624	557	38,227	2,228	87,827
Northwest		11,042	242	96,503	185	8,022	1,279	117,273
Pass Area		27,487	1,508	31,969	10,781	5,341	12,455	89,541
Southwest		11,714	1,392	17,973	99	93,277	428	124,882
Outside WRCOG		4,507	1,108	15,900	994	9,624	0	32,134
TOTAL		114,277	25,672	193,025	13,021	179,723	17,194	542,911

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-23
VMT BY WRCOG TUMF ZONE
PEAK PERIOD WORK-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		56,497	13,736	41,709	9,766	38,195	38,235	198,137
Hemet/San Jacinto		14,618	35,295	8,124	5,311	27,152	11,258	101,758
Northwest		55,421	8,092	246,605	10,012	40,130	241,383	601,643
Pass Area		10,693	4,976	11,127	21,574	3,754	29,788	81,913
Southwest		28,942	17,803	28,233	2,804	149,270	23,311	250,363
Outside WRCOG		42,068	9,958	230,543	37,795	28,855	0	349,219
TOTAL		208,238	89,861	566,341	87,263	287,356	343,976	1,583,034

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-24
VMT BY WRCOG TUMF ZONE
PEAK PERIOD OTHER-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		148,566	18,828	68,112	13,070	49,204	52,385	350,165
Hemet/San Jacinto		20,656	98,156	11,107	7,430	29,469	15,102	181,921
Northwest		68,121	7,942	481,052	11,256	39,010	292,794	900,176
Pass Area		14,300	5,887	16,953	55,209	4,078	43,555	139,981
Southwest		48,008	25,888	46,770	4,482	305,312	35,983	466,443
Outside WRCOG		50,134	12,403	306,449	54,334	31,662	0	454,982
TOTAL		349,784	169,105	930,442	145,781	458,736	439,819	2,493,667

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-25
VMT BY WRCOG TUMF ZONE
TOTAL OFF PEAK TRIPS FOR ALL PURPOSES - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		635,838	71,023	667,356	56,785	285,344	678,390	2,394,736
Hemet/San Jacinto		155,353	384,176	273,731	66,420	235,833	361,907	1,477,420
Northwest		225,723	36,754	1,907,599	44,447	189,282	1,485,421	3,889,226
Pass Area		77,429	26,736	184,677	235,802	42,324	376,813	943,781
Southwest		232,436	84,082	603,719	36,178	1,263,895	828,456	3,048,767
Outside WRCOG		290,914	85,773	1,480,275	196,997	296,327	0	2,350,286
TOTAL		1,617,694	688,543	5,117,357	636,629	2,313,004	3,730,987	14,104,215

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-26
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-WORK TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		154,796	23,123	389,276	18,815	127,983	282,010	996,003
Hemet/San Jacinto		71,209	80,235	172,928	27,193	127,293	163,497	642,355
Northwest		53,153	6,225	560,675	7,909	48,003	460,245	1,136,211
Pass Area		28,057	7,450	104,214	65,171	15,690	160,693	381,276
Southwest		73,576	23,969	328,803	7,971	354,338	318,087	1,106,744
Outside WRCOG		37,508	7,722	397,520	22,959	38,228	0	503,936
TOTAL		418,299	148,724	1,953,415	150,018	711,536	1,384,533	4,766,524

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-27
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		219,717	21,937	153,047	20,796	74,097	240,959	730,553
Hemet/San Jacinto		46,422	137,198	65,386	26,124	54,948	135,808	465,886
Northwest		53,443	8,475	467,895	12,728	39,952	422,577	1,005,069
Pass Area		20,899	8,272	39,989	78,119	12,148	116,900	276,327
Southwest		81,530	28,523	163,276	17,738	380,071	327,370	998,508
Outside WRCOG		101,791	26,947	484,907	68,976	93,284	0	775,905
TOTAL		523,802	231,352	1,374,500	224,480	654,500	1,243,615	4,252,248

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-28
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-SCHOOL TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		11,355	290	6,967	79	6,931	214	25,836
Hemet/San Jacinto		5,950	5,238	3,929	205	10,134	503	25,958
Northwest		2,925	66	26,406	43	2,874	428	32,741
Pass Area		8,115	472	9,127	2,849	2,091	3,108	25,761
Southwest		3,102	281	6,725	22	26,100	138	36,369
Outside WRCOG		1,000	310	2,442	147	2,816	0	6,715
TOTAL		32,447	6,658	55,596	3,345	50,945	4,390	153,381

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-29
VMT BY WRCOG TUMF ZONE
OFF PEAK WORK-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		38,340	7,634	29,531	5,400	23,126	23,924	127,954
Hemet/San Jacinto		9,375	23,759	6,054	3,849	14,673	6,833	64,543
Northwest		35,476	5,895	165,370	6,664	32,478	146,207	392,090
Pass Area		6,423	3,159	6,599	14,930	2,231	16,332	49,674
Southwest		19,060	8,703	23,573	1,480	95,255	17,386	165,456
Outside WRCOG		27,723	6,625	133,544	22,023	22,837	0	212,752
TOTAL		136,396	55,775	364,671	54,345	190,599	210,683	1,012,469

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-30
VMT BY WRCOG TUMF ZONE
OFF PEAK OTHER-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		211,631	18,038	88,535	11,695	53,208	131,283	514,390
Hemet/San Jacinto		22,398	137,746	25,434	9,048	28,785	55,266	278,677
Northwest		80,726	16,093	687,254	17,103	65,975	455,965	1,323,116
Pass Area		13,935	7,383	24,747	74,734	10,164	79,779	210,742
Southwest		55,168	22,606	81,343	8,968	408,131	165,474	741,690
Outside WRCOG		122,892	44,168	461,862	82,893	139,162	0	850,977
TOTAL		506,750	246,034	1,369,175	204,441	705,425	887,767	3,919,592

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-31
VMT BY WRCOG TUMF ZONE
TOTAL DAILY TRIPS FOR ALL PURPOSES - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		1,335,298	165,469	1,625,427	132,984	682,224	1,380,271	5,321,672
Hemet/San Jacinto		379,172	793,418	625,910	147,796	628,641	735,373	3,310,309
Northwest		493,434	65,991	4,136,608	87,352	359,848	3,103,471	8,246,705
Pass Area		200,293	55,154	456,396	507,947	81,584	831,509	2,132,884
Southwest		518,771	199,499	1,341,550	68,822	2,740,817	1,520,345	6,389,804
Outside WRCOG		510,068	136,858	3,088,229	381,082	471,068	0	4,587,305
TOTAL		3,437,036	1,416,389	11,274,120	1,325,983	4,964,181	7,570,969	29,988,678

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-32
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-WORK TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		459,204	65,555	1,124,370	55,548	356,546	725,130	2,786,355
Hemet/San Jacinto		212,763	240,657	460,025	79,976	385,486	417,227	1,796,134
Northwest		143,425	13,108	1,654,740	19,314	103,261	1,240,357	3,174,205
Pass Area		83,914	18,186	290,081	196,358	34,287	443,435	1,066,261
Southwest		213,300	70,768	878,393	20,653	1,018,235	739,726	2,941,075
Outside WRCOG		88,063	17,083	1,087,629	60,918	80,722	0	1,334,416
TOTAL		1,200,670	425,358	5,495,238	432,767	1,978,538	3,565,875	13,098,445

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-33
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		367,363	39,973	245,146	37,020	129,784	408,296	1,227,582
Hemet/San Jacinto		76,228	232,562	101,613	41,418	94,715	226,956	773,491
Northwest		96,299	14,552	778,679	22,775	68,098	725,058	1,705,461
Pass Area		35,426	13,582	65,793	131,513	19,638	203,056	469,009
Southwest		139,476	52,057	258,542	30,315	645,236	537,899	1,663,525
Outside WRCOG		173,681	45,202	849,860	121,979	155,389	0	1,346,110
TOTAL		888,473	397,928	2,299,633	385,020	1,112,860	2,101,265	7,185,178

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-34
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-SCHOOL TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		53,697	1,706	28,023	484	32,161	1,018	117,089
Hemet/San Jacinto		23,135	25,243	13,553	762	48,361	2,731	113,786
Northwest		13,967	308	122,909	228	10,896	1,707	150,014
Pass Area		35,602	1,980	41,096	13,629	7,432	15,563	115,303
Southwest		14,816	1,674	24,698	121	119,378	566	161,251
Outside WRCOG		5,507	1,419	18,343	1,141	12,440	0	38,849
TOTAL		146,724	32,330	248,621	16,366	230,668	21,585	696,292

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-35
VMT BY WRCOG TUMF ZONE
DAILY WORK-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		94,837	21,370	71,240	15,165	61,320	62,159	326,091
Hemet/San Jacinto		23,992	59,054	14,178	9,160	41,825	18,091	166,301
Northwest		90,897	13,987	411,975	16,676	72,608	387,590	993,733
Pass Area		17,115	8,136	17,727	36,504	5,985	46,121	131,588
Southwest		48,002	26,506	51,805	4,284	244,524	40,697	415,819
Outside WRCOG		69,792	16,582	364,087	59,818	51,692	0	561,971
TOTAL		344,635	145,635	931,013	141,608	477,955	554,658	2,595,503

Based on RivTAM Year 2040 No-Build Scenario, September 2016

EXHIBIT J-36
VMT BY WRCOG TUMF ZONE
DAILY OTHER-BASED-OTHER TRIPS ONLY - 2040 NO BUILD

From	To	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central		360,197	36,866	156,647	24,765	102,412	183,668	864,555
Hemet/San Jacinto		43,053	235,903	36,541	16,478	58,254	70,368	460,597
Northwest		148,847	24,035	1,168,306	28,359	104,985	748,759	2,223,291
Pass Area		28,235	13,270	41,700	129,943	14,242	123,334	350,724
Southwest		103,176	48,494	128,113	13,450	713,443	201,457	1,208,134
Outside WRCOG		173,026	56,572	768,311	137,226	170,824	0	1,305,959
TOTAL		856,535	415,139	2,299,617	350,222	1,164,161	1,327,587	6,413,259

Based on RivTAM Year 2040 No-Build Scenario, September 2016

Appendix K - Residential Fee Calculation

In general, the fee for the TUMF program is calculated based on the following formula:

$$\frac{\boxed{\text{Unit Cost Assumptions}} \times \boxed{\text{Recommended Network Improvements}}}{\boxed{\text{Change in Residential and Non-Residential Development}}} = \text{TUMF}$$

Applying this formula, Unit Cost Assumptions for the various eligible TUMF project types are used to estimate the overall cost to improve the TUMF Network as described in the TUMF Nexus Study. The resultant network improvement cost is then divided proportionally between various residential and non-residential development categories such that each new development type contributes its 'fair share' to the program. Any change in one formula variable has a related impact on the overall TUMF fee, although it is important to note that the resultant impact to the overall fee is not necessarily directly proportional to the formula variable change due to the intricacies of the fee calculation.

The residential fee was calculated by multiplying the estimated TUMF Network improvements cost attributable to mitigating the cumulative regional impacts of new development (**Section 4.0**) by the proportion of all regional trips that are generated by residential land uses (**Section 5.3**), and dividing this number by the projected increase in residential units between 2012 and 2040 (**Table 2.3**).

To account for the difference in trip generation rates between single-family residential units and multi-family residential units, the fee value was normalized for each of these housing types by first multiplying the proposed growth in households between 2012 and 2040 by the existing proportional share of each household type, and then multiplying the resultant values by the respective trip generation rate as published in the Institute of Traffic Engineers Trip Generation Manual, Ninth Edition, 2012. The respective fee values are presented in **Section 6.1. Exhibit K-1** details the calculation of the residential fee (and non-residential fee).

EXHIBIT K-1 Western Riverside County TUMF Estimate

by Percent of TUMF Share Weighted by Trip Generation Rate

Based on Needed Improvements to the Regional System of Highways and Arterials

Updated: May 1, 2017

Residential	Dwelling Units			Trip Generation Rate	Trip Change	Percentage of Trip Change	Fee/DU
	2012	2040	Change				
Single Family Residential	366,588	539,631	173,043	9.52	1,647,369	77.5%	\$9,418
Multi Family Residential	158,561	235,600	77,039	6.20	477,642	22.5%	\$6,134
Total	525,149	775,231	250,082		2,125,011	100.0%	
Non-Residential	Employees			Trip Generation Rate	Trip Change	Percentage of Trip Change	Fee/SF of GFA
	2012	2040	Change				
Industrial	120,736	201,328	80,592	3.8	302,220	13.4%	\$1.77
Retail	65,888	101,729	35,841	16.2	580,624	25.7%	\$12.31
Service	253,372	528,092	274,720	4.6	1,263,712	55.9%	\$4.56
Government/Public Sector	20,791	30,306	9,515	12.0	114,180	5.1%	\$16.08
Total	460,787	861,455	400,668		2,260,736	100.0%	

Notes:

- trip generation rates based on ITE Trip Generation 9th Edition (2012) rates for weekday vehicle trip ends
- residential formula: $[(TUMF \text{ cost share}) / (\text{residential share of VMT}) / (\text{change in housing units})] * (\text{percentage of trip change})$
- non-residential formula: $[(TUMF \text{ cost share}) / (\text{non-residential share of VMT}) / (\text{change in SF of GFA})] * (\text{percentage of trip change})$

Calculation Inputs:

residential share of peak hour VMT	71.0%
non-residential share of peak VMT	29.0%
total TUMF cost	\$3,756,761,400
existing improvement funding	\$303,534,270
unfunded existing need cost	\$492,188,500

MAX TUMF VALUE	\$2,961,038,400
MAX TUMF SHARE	78.8%

Residential Value	\$2,102,337,000
Non-Residential Value	\$858,701,000

Appendix L - Non-Residential Fee Calculation

The non-residential fee was calculated by multiplying the estimated Regional System of Highways and Arterials improvements cost attributable to new development (**Section 4.0**) by the proportion of all regional trips that are generated by non-residential land uses (**Section 5.3**), and dividing this number by the projected increase in non-residential land use between 2012 and 2040 (**Table 2.3, Section 2.0**) and the proportional share of new employees in each sector.

In preparation for the fee calculation, SCAG 2016 RTP/SCS employment data by sector was first converted to land use as square feet of gross floor area (SF GFA). Non-residential employee to gross floor area conversion factors were derived from four sources. These sources are:

- Cordoba Corporation/Parsons Brinckerhoff Quade and Douglas, Inc. (PBQD), Land Use Density Conversion Factors For The Long-Range Corridor Study San Bernardino and Riverside Counties, August 20, 1990. Table 8.
- Orange County Transportation Authority (OCTA), Orange County Subarea Modeling Guidelines Manual, June 2001. Appendix C.
- Southern California Association of Governments (SCAG), Employment Density Study, October 31, 2001, Table IIB
- County of Riverside, General Plan, As Amended December 15, 2015, Appendix E: Socioeconomic Build-Out Projections Assumptions & Methodology, Table E-5

The employment conversion factors developed for use in the calculation of the non-residential fee are tabulated in **Exhibits L-1** through **L-4**. The relevant sections of these respective publications are included in this Appendix as **Exhibits L-5** through **L-8**.

To account for the difference in trip generation rates between the various employment sectors, the non-residential fee value for each sector was normalized by multiplying by the respective median trip generation rate for the range of associated land use types as published in the Institute of Traffic Engineers Trip Generation Manual, Ninth Edition, 2012. The respective fee values are presented in **Section 6.2**. The table detailing the calculation of the non-residential fee (and residential fee) is included in **Appendix K** as **Exhibit K-1**.

EXHIBIT L-1 Employment Conversion Factors

Employment Sector	Business by Land Use Category (1)	Employees	Gross floor Area (TSF)	Conversion Rate (Employees/TSF)	Land Use Category (2)	Minimum Range Conversion Rate (Employees/TSF)	Land Use Category (3)	Sf per Employee based on Average Employees per Acre and Average FAR (Riverside County)	Employees/TSF	Land Use Category (4)	Sf per Employee	Employees/TSF	DWR Median Employees/TSF Conversion Factors (Employees/TSF)
Industrial	Heavy Manufacturing	6,379	5,117	1.25	R&D/LRP	2.50	R&D/Flex Space	867	0.84	Light Industrial	1,030	0.79	1.25
	Light Manufacturing	8,624	3,962	2.18	Heavy Industry	1.00	Light Manufacturing Warehouse	1,195		Heavy Industry	1,500		
	Manufacturing, Small Module	5,559	3,038	1.83	Warehouses								
	High Tech/Research	411	232	2.32									
	Wholesale Trade Industry	6,120	4,140	1.48									
	Warehousing	119	279	0.43									
	General Industry	1,023	917	1.12									
	Median			1.45	Median	2.00	Median	1,195.0	0.84	Median	1,265.0	0.79	1.25
	Regional Office	34,821	20,125	2.17									
	Regional Retail and Repair	3,452	1,593	2.17									
Retail	Equipment Rental	1,080	453	2.38									
	General Commercial	12,978	17,023	0.76									
Service	Median			1.95									2.00
	Trade/Insurance/Real Estate	7,738	1,895	4.08	Offices	3.00	Low-Rise Office	481	2.23	Median	500.0	2.00	2.00
	Software	3,946	546	7.20	Medical/PO/Bank	3.50	Hotel/Motel	3476		Commercial Office Business Park	300		
	Professional Services	5,470	1,529	3.58	Hospital	2.50							
	Business Services	6,680	1,966	3.40	Restaurant	3.00							
	General Offices	8,900	3,886	2.29									
	Medical Services	9,006	3,201	2.81									
	Restaurant	23,345	4,061	5.75									
	Median			3.58	Median	3.00	Median	1978.5	0.51	Median	450.0	2.22	2.61
	Government/Civic				Government/Civic	3.00	Government Offices	208					
Government/Public Sector					Library	1.50							
					Median	2.25	Median	208.0	4.81				3.53

Notes:

- Business by Land Use Categories Wholesale Trade, Commercial and Automotive Repair were excluded as there is inconsistencies between the Land Use Density Conversion Factors for Long Range Corridor Study San Bernardino and Riverside Counties categorization, and the NAICS Major Group categorization.

- OCTA Typical Employment Conversion Factors for Commercial excluded as it potentially covers uses in both Retail and Service categories; Hotel/Motel, Schools, Golf Course, Developed Park, Park and Agricultural were excluded as they are calculated from units other than TSF.

- DWR Median Employment Conversion Factor is the median of (1) through (4) Conversion Rate.

(1) County of Orange County Subarea Model Guidelines Manual, June 2001, Appendix C.

(2) OCTA, Orange County Subarea Model Guidelines Manual, June 2001, Appendix C.

(3) SCAG Employment Density Study, October 31, 2001, Table 1B.

(4) County of Riverside, General Plan, As Amended December 15, 2015, Appendix E: Socioeconomic Build-Out Projections Assumptions & Methodology, Page

EXHIBIT L-2 Population and Employment Estimates

Sector	2012	2040	Change	Employee Conversion Factor / TSF	Change in SF of GFA
Population	1,773,935	2,429,633	655,698		
Households					
Single-Family	366,588	539,631	173,043		
Multi-Family	158,561	235,600	77,039		
Totals	525,149	775,231	250,082		
Employees					
Industrial	120,736	201,328	80,592	1.25	64,710,138
Retail	65,888	101,729	35,841	2.00	17,920,500
Service	253,372	528,092	274,720	2.61	105,211,915
Government/Public Sector	20,791	30,306	9,515	3.53	2,696,349
Totals	460,787	861,455	400,668		190,538,901

Source:

- SCAG 2016 RTP/SCS: WSP, April 2016

EXHIBIT L-3 Trip Generation Rate Comparison

Non-Residential

	Employee Growth	SF Growth	ITE Median Trips Per Employee	ITE Median Trips per TSF	Trip Growth (SFGrowth * ITEMedian)	Calculated Trips per Employee	Weighted Median Trips Per Employee	Median Share Pass By Trips (Retail Uses)	Adjusted Trips Per Employee
Industrial	80,592	64,710,138	3.2	5.3	342,964	4.3	3.8		3.8
Retail	35,841	17,920,500	30.5	51.0	913,946	25.5	28.0	42%	16.2
Service	274,720	105,211,915	3.9	33.8	3,556,163	12.9	8.4	46%	4.6
Public/Non Profit	9,515	2,696,349	16.1	27.9	75,228	7.9	12.0		12.0
	400,668	190,538,901			4,888,300				

EXHIBIT L-4 Representative ITE Trip Generation Rates
RESIDENTIAL

Land Use Category	ITE Reference	Weekday Trips per DU
Single Family Residential		
Single Family Detached Housing	210	9.52
Multi Family		
Apartment	220	6.65
Low Rise Apartment	221	6.59
High Rise Apartment	222	4.20
Residential Condominium/Townhouse	230	5.81
Average		5.81
Median		6.20

NON-RESIDENTIAL

Land Use Category	ITE Reference	Weekday Trips per TSF*	Weekday Trips per Employee	PM Peak Pass by Trips**
Industrial				
Truck Terminal	30	9.89	6.99	
General Light Industry	110	6.97	3.02	
General Heavy Industry	120	1.50	0.82	
Industrial Park	130	6.83	3.34	
Manufacturing	140	3.82	2.13	
Warehousing	150	3.56	3.89	
Average		5.43	3.37	
Median		5.33	3.18	
Retail				
Building Materials and Lumber	812	45.16	32.12	
Discount Superstore	813	50.75		28%
Specialty Retail Center	814	64.03		
Discount Store	815	57.24	28.84	17%
Hardware/Paint Store	816	51.29	53.21	26%
Nursery (Garden Center)	817	68.10	21.83	
Shopping Center	820	42.70		34%
Factory Outlet Center	823	26.59		
New Car Sales	841	32.30	21.14	
Auto Parts Store	843	61.91		43%
Tire Store	848	24.87		28%
Tire Superstore	849	20.36		
Supermarket	850	102.24		36%
Convenience Market	851	737.99		61%
Convenience Market with Gasoline Pumps	853	845.60		66%
Discount Supermarket	854	90.86	40.36	23%
Discount Club	857	41.80	32.21	
Home Improvement Superstore	862	30.74		48%
Electronics Superstore	863	45.04		40%
Discount Home Furnishing Superstore	869	20.00		
Department Store	875	22.88		
Apparel Store	876	66.40		
Arts and Crafts Store	879	56.55		
Pharmacy/Drugstore without Drive Through Window	880	90.06		53%
Pharmacy/Drugstore with Drive Through Window	881	96.91		49%
Furniture Store	890	5.06	12.19	53%
Gasoline/Service Station	944			42%
Gasoline/Service Station with Convenience Market	945			56%
Average		107.59	30.24	41%
Median		51.02	30.48	42%
Service				
Day Care Center	565	74.06	26.73	
Hospital	610	13.22	4.50	
Nursing Home	620	7.60	3.26	
Clinic	630	31.45	8.01	
General Office	710	11.03	3.32	
Corporate Headquarters	714	7.98	2.33	
Single Tenant Office	715	11.65	3.70	
Medical-Dentist Office Building	720	36.13	8.91	
Office Park	750	11.42	3.50	
Research and Development Center	760	8.11	2.77	
Business Park	770	12.44	4.04	
Drive-in Bank	912	148.15	30.94	47%
Quality Restaurant	931	89.95		44%
High Turnover (Sit-Down) Restaurant	932	127.15		43%
Fast Food Restaurant without Drive Through	933	716.00		
Fast Food Restaurant with Drive Through	934	496.12		50%
Coffee/Donut Shop with Drive Through	937	818.58		
Coffee/Donut Shop Drive Through No Seating	938	1800.00		
Average		245.61	8.50	46%
Median		33.79	3.87	46%
Government/Public Sector				
Military Base	501		1.78	
Elementary School	520	15.43	15.71	
Middle/Junior High School	522	13.78	16.39	
High School	530	12.89	19.74	
Private School (K-12)	536		16.43	
Junior/Community College	540	27.49	15.55	
University/College	550		8.96	
Library	590	56.24	52.52	
Government Office Building	730	68.93	11.95	
State Motor Vehicles Department	731	166.02	44.54	
Post Office	732	108.19	25.37	
Government Office Complex	733	27.92	7.75	
Average		55.21	19.72	
Median		27.92	16.05	

Notes:

* - Average weekday daily trip generation data derived from ITE Trip Generation (9th Edition), 2012

** - Average weekday PM peak pass-by trip rates derived from ITE Trip Generation Handbook (2nd Edition), June 2004

EXHIBIT L-5

Land Use Density Conversion Factors for the Long-Range Corridor Study San Bernardino and Riverside Counties, Table 8

Cordoba Corporation/Parsons Brinckerhoff Quade and Douglas, Inc. (PBQD), August 20, 1990.

**TABLE 8
EMPLOYEES PER ACRE
RIVERSIDE COUNTY**

BUSINESS BY LAND USE	Employees *	Floor Space Sq. Ft.	Square Feet Per Employee	Average F.A.R.	Employees per Acre
Manufacturing/Industrial	40,383	23,968,000	594	0.25	18
Heavy Manufacturing	6,379	5,117,000	802	0.20	11
General Manufacturing	11,603	6,103,000	526	0.20	17
Light Manufacturing	8,624	3,962,000	459	0.25	24
Manufacturing, Small Module	5,559	3,038,000	547	0.25	20
High Tech Activity and Research	954	411,000	431	0.35	35
Wholesale Trade Industrial	6,120	4,140,000	676	0.25	16
Warehousing	119	279,000	2,345	0.25	5
General Industrial	1,023	917,000	896	0.20	10
Commercial	79,067	46,304,000	586	0.30	22
Retail Trade	34,821	20,125,000	578	0.30	23
Restaurants and Bars	23,345	4,061,000	174	0.30	75
Personnal, Rental and Repair Services	3,452	1,590,000	461	0.30	28
Automotive Repair Services	1,870	1,619,000	866	0.30	15
Equipment Rental	1,080	453,000	419	0.30	31
Wholesale, Trade Commercial	1,521	1,434,000	943	0.25	12
General Commercial	12,978	17,023,000	1,312	0.40	13
Office	41,740	12,226,000	293	0.50	74
Finance/Insurance/Real Estate	7,738	1,095,000	142	0.50	154
Finance/Insurance/RE/Small Office	3,945	548,000	139	0.50	157
Professional Services	5,470	1,529,000	280	0.50	78
Business Services	6,680	1,966,000	294	0.50	74
General Office	8,900	3,886,000	437	0.50	50
Medical Services	9,006	3,201,000	355	0.50	61

* Employment figures do not include government, military and sole proprietorships.

Source: Urban Decision Systems (1989), Census Zip Business Patterns (1986)

Filename: Trans rv

EXHIBIT L-6

Orange County Subarea Modeling Guidelines Manual, Appendix C

Orange County Transportation Authority (OCTA)

June 2001

TYPICAL EMPLOYMENT CONVERSION FACTORS
(June 2001)

Land Use Category	Conversion Rates Range	Employment Type (Percentate Ranges)		
		Retail	Service	Other
Commercial	2.25 – 2.75 employees/TSF ¹	60% - 90%	10% - 40%	0% – 5%
Office/Office Park	3.00 – 4.00 employees/TSF	0% – 5%	20% – 30%	65% - 80%
R&D/Light Industrial/Business Park	2.50 – 3.50 employees/TSF	0% – 5%	0% - 30%	60% - 100%
Heavy Industrial	2.00 – 2.50 employees/TSF	0%	0%	100%
Warehouse	1.00 – 2.00 employees/TSF	0%	0%	100%
Restaurant	3.00 – 5.00 employees/TSF	100%	0%	0%
Medical Office/Post-Office/Bank	3.50 – 4.50 employees/TSF	0% - 10%	70% - 100%	0% – 20%
Government Office/Civic Center	3.00 – 4.00 employees/TSF	0% – 5%	50% - 70%	25% – 50%
Hospital	2.50 – 3.00 employees/TSF	0%	70% - 80%	20% – 30%
Library/Museum	1.50 – 2.50 employees/TSF	0%	100%	0%
Hotel/Motel	0.75 – 1.25 employees/room	0% - 10%	70% - 80%	10% – 30%
Schools	0.08 – 0.12 employees/student	0%	0%	100%
Golf Course	0.50 – 0.70 employees/acre	0% - 10%	90% - 100%	0%
Developed Park/Athletic Fields	0.20 – 0.40 employees/acre	0%	80% - 100%	0% – 20%
Park	0.05 – 0.10 employees/acre	0%	80% - 100%	0% – 20%
Agricultural	0.01 – 0.05 employees/acre	0%	0%	100%

¹ Thousands of Square Feet

EXHIBIT L-7
Employment Density Study, Table IIB
Southern California, October 31, 2001

Table II-A
Derivation of Square Feet per Employee Based on:
--MEDIAN EMPLOYEES PER ACRE
--MEDIAN FAR

<u>Land Use Category</u>	<u>Los Angeles</u>	<u>Orange</u>	<u>Riverside</u>	<u>San Bernardino</u>	<u>Ventura</u>	<u>Imperial</u>	<u>Region</u>
<u>Square Feet per Employee</u>							
Regional Retail	--	2,322	165	1,392	990	--	1,023
Other Retail/Svc.	730	450	1,148	432	412	796	585
Low-Rise Office	471	352	598	1,014	659	415	466
High-Rise Office	377	235	--	--	--	--	300
Hotel/Motel	1,179	--	5,273	1,747	--	808	1,804
R & D/Flex Space	1,717	511	1,121	1,833	277	--	527
Light Manufacturing	1,214	786	2,221	1,538	202	2,230	924
Heavy Manufacturing	--	--	--	--	--	--	--
Warehouse	1,518	1,350	819	2,111	149	3,257	1,225
Government Offices	2,182	408	1,475	851	120	407	672

Table II-B
Derivation of Square Feet per Employee Based on:
--AVERAGE EMPLOYEES PER ACRE
--AVERAGE FAR

<u>Land Use Category</u>	<u>Los Angeles</u>	<u>Orange</u>	<u>Riverside</u>	<u>San Bernardino</u>	<u>Ventura</u>	<u>Imperial</u>	<u>Region</u>
<u>Square Feet per Employee</u>							
Regional Retail	--	704	268	1,009	1,165	--	857
Other Retail/Svc.	424	325	629	124	271	255	344
Low-Rise Office	319	287	481	697	389	632	288
High-Rise Office	440	218	--	--	--	--	311
Hotel/Motel	--	--	3,476	2,544	--	311	1,152
R & D/Flex Space	1,796	466	867	834	269	--	344
Light Manufacturing	829	558	1,548	705	189	994	439
Heavy Manufacturing	--	--	--	--	--	--	--
Warehouse	1,518	979	581	1,195	131	450	814
Government Offices	1,442	206	208	188	94	322	261

Notes:
"--" = Data not available.

EXHIBIT L-8

General Plan, As Amended December 15, 2015.

Appendix E: Socioeconomic Build-Out Projections Assumptions & Methodology,

Table E-5

County of Riverside, 2015



Table E-3: Net Parcel Acre Factors

Land Use Designation	Net Parcel Area
Commercial Retail (CR)	0.75
Commercial Tourist (CT)	0.75
Commercial Office (CO)	0.75
Light Industrial (LI)	0.80
Heavy Industrial (HI)	0.75
Business Park (BP)	0.75

Net Parcel Square Feet: To convert net acres to net square feet, net acres are multiplied by 43,560 feet per acre. For example, 50 net acres of Commercial Office (66.66 gross acres) equals 2,178,000 net square feet.

Floor Area Ratio (FAR): Floor Area Ratio, or FAR, indicates the ratio of gross building square footage permitted on a parcel to net square footage of the parcel. FAR's for Commercial, Industrial and Business Park land uses are identified, in Table E-4, below. See General Plan Glossary for full definition of FAR.

Table E-4: Development FAR Factors

Land Use Designation	FAR		
	Minimum	Probable*	Maximum
Commercial Retail (CR)	0.20	0.23	0.35
Commercial Tourist (CT)	0.20	0.25	0.35
Commercial Office (CO)	0.25	0.35	1.00
Light Industrial (LI)	0.25	0.38	0.60
Heavy Industrial (HI)	0.15	0.40	0.50
Business Park (BP)	0.25	0.30	0.60

*Factor used for theoretical planning estimates.

Building Square Footage: Building square footage for the land use designations listed in the table above are calculated by multiplying the Net Square Feet of each land use designation by the corresponding FAR. For instance, 20,000 square feet of Commercial Retail with an FAR of 0.23 would yield 4,600 square feet of building space.

Square Feet (SF)/Employee Factor: This factor indicates the number of employees typically associated with a given amount of square feet of building space per employee. It is used to estimate the number of jobs resulting for a given land use designation. These factors for the commercial land use designations are listed in Table E-5 below.

Table E-5: Commercial Employment Factors

Land Use Designation	SF/Employee
Commercial Retail (CR)*	500
Commercial Tourist (CT)	500
Commercial Office (CO)	300
Light Industrial (LI)	1,030
Heavy Industrial (HI)	1,500
Business Park (BP)	600

*It is assumed that CR designated lands will build out at 40% CR and 60% MDR.

Employment: Employment for commercial, industrial, and business park land uses is calculated by dividing the total number of building square feet by the SF/Employee factor. For example, 300,000 square feet of commercial office building space would yield 1,000 employees.