

TECHNICAL APPENDIX 7

TRANSPORTATION EVALUATION CRITERIA AND RANKINGS

This technical appendix describes the process for developing evaluation criteria for prioritizing highway, high occupancy vehicle (HOV) connectors, freeway connectors, and transit projects included in the 2030 San Diego Regional Transportation Plan: Pathways for the Future (RTP). This appendix also includes information on the creation of criteria to prioritize regional rail grade separation, regional ranking criteria for transit capital replacement and rehabilitation projects, and screening criteria for the regional arterial system. Criteria were also developed to evaluate Goods Movement Action Plan projects and are included in RTP Appendix B.

TRANSPORTATION PROJECT EVALUATION CRITERIA

SANDAG utilized criteria for evaluating and ranking highway, transit, freeway connector and high occupancy vehicle (HOV) connectors in the previous RTP, MOBILITY 2030. In order to review and update the criteria for use in the 2030 RTP, the Transportation Committee approved the formation of the Transportation Project Evaluation Criteria Ad Hoc Working Group (TPEC) at its December 9, 2005, meeting. Regional arterials were not included in the updated ranking criteria since it was not anticipated that regional dollars would be distributed as part of the 2030 RTP.

The TPEC was composed of representatives from a number of standing SANDAG working groups, including the Bicycle-Pedestrian Working Group (BPWG), Cities/County Transportation Advisory Committee (CTAC), Regional Freight Working Group (FWG), Regional Housing Working Group (RHWG), Regional Planning Stakeholders Working Group (SWG), Regional Planning Technical Working Group (TWG), as well as staff from Caltrans, MTS, and NCTD. The TPEC met on a regular basis beginning in January 2006 and created updated evaluation criteria for regional transit service, highway, freeway connector, and HOV connector projects.

The revisions to the RTP criteria were intended to support the vision of the Regional Comprehensive Plan (RCP) and address the updated goals of the 2030 RTP. Where appropriate, efforts also were taken to simplify and standardize the criteria across different modal categories. The revised criteria are structured with a standard 100-point scoring system.

The TPEC organized the updated criteria into three criteria major categories: *serves travel needs*, *develops network integration*, and *cost-effectiveness*; and determined that each of these three categories should receive roughly one third of the total points. The *serves travel needs* category contains criteria that focus on the movement of people and goods and awards points for projects that serve peak-period trips, goods movement, or congested corridors. The *network integration* criteria give credit for projects that provide connectivity between surrounding land uses and the transportation network. Criteria in this category include measures such as serving RCP Smart Growth Areas, incorporation of transit and/or Managed or HOV lanes, and minimizing negative residential and environmental impacts. The *cost-effectiveness* criteria provide for a comprehensive assessment of the annual capital, operation, and maintenance costs of the project in relation to the number of people moved or person hours saved.

The same three criteria categories are used for transit services, highway, freeway connector, and HOV connector criteria, with variations in the individual criteria. TPEC felt that each of the three major categories should receive about one-third of the total points. Within each of the three categories weighting for each of

the individual criteria also was determined. The full individual criteria descriptions, weighting, and score details are listed in Tables TA 7.1 to TA 7.15.

HIGHWAY CORRIDOR EVALUATION

SANDAG has used criteria for evaluating and ranking highway corridor projects since 1997. Using the MOBILITY 2030 criteria as a basis the TPEC created a set of revised highway corridor evaluation criteria which reflect SANDAG Board-adopted principles on smart growth and the Regional Transit Vision.

The ten highway evaluation criteria presented in Tables TA 7.1 and TA 7.2 quantify project traffic usage, travel time savings, cost, critical linkages, safety, goods movement, employment, smart growth, carpool lane integration, transit integration, habitat preservation, and residential impacts. SANDAG staff has worked with Caltrans, MTS, NCTD, the TPEC members and their respective working groups to revise and update the criteria. Table TA 7.3 describes the highway evaluation criteria weighting.

The highway network corridor evaluation has been used to develop the Reasonably Expected Revenue Network and Revenue Constrained Network alternatives and project phasing included in the 2030 RTP. The entire 52 unconstrained highway corridors originally evaluated for the 2030 RTP are listed in priority order in Table TA 7.4.

The prioritized list of highway projects is used as a tool in assembling logical networks of highway projects that complement transit and arterial projects. Priority order is not necessarily strictly followed. Rather, emphasis is placed upon developing meaningful networks in accordance with the 2030 RTP goals and objectives.

Table TA 7.1—Summary of Highway Project Evaluation Criteria

GOAL	CRITERIA	DESCRIPTION
SERVES TRAVEL NEEDS	Located in a High Crash Rate Area	Is the project located in an area with a high vehicular crash rate?
	Serves Goods Movement	Does the project provide for goods movement?
	Serves Peak-Period Trips *	What is the number of peak-period trips located within one mile of the highway corridor?
	Provides Mobility *	What is the increase in person capacity resulting from the project?
	Provides Congestion Relief *	What is the number of daily person-hours saved?
DEVELOPS NETWORK INTEGRATION	Serves RCP Smart Growth Areas	Does the project serve RCP Smart Growth Areas?
	Facilitates Carpool and Transit Mobility	Does the project contain carpool/managed lane facilities and/or regional or corridor transit service?
	Minimizes Habitat and Residential Impacts	Does the project minimize negative habitat and residential impacts?
	Critical Linkage	Is the project located in a high volume freeway corridor and/or lacking a continuous parallel arterial listed in the Regional Arterial System or completes a missing link?
COST-EFFECTIVENESS	Cost-Effectiveness *	What is the annual capital and operating project cost divided by person hours saved?

Table TA 7.2—Highway Corridor Evaluation Criteria

CRITERIA	DESCRIPTION														
1. Located in a High Crash Rate Area	<p>Is the project located in an area with a high vehicular crash rate?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td>Greater than 160 percent of the 3-year average statewide crash rate for a similar facility (i.e. 60% over the statewide average)</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Greater than 150% " "</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Greater than 140% " "</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Greater than 130% " "</td> </tr> <tr> <td style="text-align: center;">1</td> <td>Greater than 120% " "</td> </tr> </tbody> </table> <p>Analysis based on accident data provided by Caltrans.</p>	Score	Description	5	Greater than 160 percent of the 3-year average statewide crash rate for a similar facility (i.e. 60% over the statewide average)	4	Greater than 150% " "	3	Greater than 140% " "	2	Greater than 130% " "	1	Greater than 120% " "		
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3	Greater than 140% " "														
2	Greater than 130% " "														
1	Greater than 120% " "														
2. Serves Goods Movement	<p>Does the project provide for goods movement?</p> <p>A) Is the highway a major freight corridor as measured by truck AADT%</p> <table style="margin-left: 20px;"> <tr> <td style="padding-left: 20px;">2</td> <td>>7%</td> </tr> <tr> <td style="padding-left: 20px;">1</td> <td>4%-7%</td> </tr> <tr> <td style="padding-left: 20px;">0</td> <td>less than 3%</td> </tr> </table> <p>B) Is the highway part of a designated trade corridor as defined in the Regional Truck Network- as part of the RTP Freight Strategy?</p> <table style="margin-left: 20px;"> <tr> <td style="padding-left: 20px;">2</td> <td>Yes</td> </tr> <tr> <td style="padding-left: 20px;">0</td> <td>No</td> </tr> </table> <p>C) Does the highway serve a major freight center (within one mile of the corridor) such as a Port, International Airport, Port of Entry, Rail Intermodal/Transload Facility or Industrial Cluster/Distribution Center?</p> <table style="margin-left: 20px;"> <tr> <td style="padding-left: 20px;">1</td> <td>Yes</td> </tr> <tr> <td style="padding-left: 20px;">0</td> <td>No</td> </tr> </table>	2	>7%	1	4%-7%	0	less than 3%	2	Yes	0	No	1	Yes	0	No
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3. Serves Peak-Period Trips*	<p>What is the number of peak-period trips located within one mile of the highway corridor?</p> <p>Calculated as all peak-period origin and destinations within one mile of the highway corridor.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5 - 1</td> <td>Number of peak-period trips per mile</td> </tr> </tbody> </table>	Score	Description	5 - 1	Number of peak-period trips per mile										
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4. Provides Mobility*	<p>What is the increase in person capacity resulting from the project?</p> <p>Calculated as change in person miles traveled divided by project length (miles).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">10 - 1</td> <td>Change in persons per lane mile</td> </tr> </tbody> </table>	Score	Description	10 - 1	Change in persons per lane mile										
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Table TA 7.2—Highway Corridor Evaluation Criteria (cont'd)

CRITERIA	DESCRIPTION																		
5. Provides Congestion Relief *	<p>What is the number of daily person-hours saved?</p> <p>This criterion accounts for both current (2006) and 2030 congestion relief.</p> <p>Total daily travel time is computed for a baseline condition that includes all current (2006) fully funded and/or environmentally cleared projects. Travel time is again computed by adding each project, one by one, to the baseline condition. The resulting travel time is then compared to the baseline travel time. The difference is the travel time savings that can be attributed to each project. Higher ranking projects have the largest number of person-hours saved.</p> <p>To incorporate existing congestion the 2006 Congestions Mitigation Map was utilized to determine the level of service (LOS) on the existing network. The LOS were grouped into categories of F, E-D, and C-A. The 2030 hours were then divided by a factor assigned to these three groups. F = 1, E-D = 1.5 and C-A = 2.</p> <table border="1" data-bbox="500 779 1458 884"> <thead> <tr> <th>Score</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>15 -1</td> <td>Number of person hours saved (per lane mile)</td> </tr> </tbody> </table>	Score	Description	15 -1	Number of person hours saved (per lane mile)														
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15 -1	Number of person hours saved (per lane mile)																		
6. Serves RCP Smart Growth Centers	<p>Does the highway corridor serve existing/planned and/or potential RCP Smart Growth areas?</p> <p>Highway Corridors shall receive points for each place type they serve.</p> <table border="1" data-bbox="500 1066 1458 1213"> <thead> <tr> <th>Score</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Serves existing/planned Metropolitan Center or Urban Center</td> </tr> <tr> <td>3</td> <td>Serves existing/planned Special Use Center</td> </tr> <tr> <td>1</td> <td>Serves potential Urban Center or Special Use Center</td> </tr> </tbody> </table> <p>Scores are based on the total number of these points*</p> <table border="1" data-bbox="500 1276 760 1451"> <tbody> <tr> <td>5</td> <td>More than 7 points</td> </tr> <tr> <td>4</td> <td>6 to 7 points</td> </tr> <tr> <td>3</td> <td>5 points</td> </tr> <tr> <td>2</td> <td>3 to 4 points</td> </tr> <tr> <td>1</td> <td>1 to 2 points</td> </tr> </tbody> </table>	Score	Description	5	Serves existing/planned Metropolitan Center or Urban Center	3	Serves existing/planned Special Use Center	1	Serves potential Urban Center or Special Use Center	5	More than 7 points	4	6 to 7 points	3	5 points	2	3 to 4 points	1	1 to 2 points
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7. Facilitates Carpool and Transit Mobility	<p>Does the project contain carpool/managed lane facilities and/or regional or corridor transit service?</p> <table border="1" data-bbox="500 1591 1458 1751"> <thead> <tr> <th>Score</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Includes carpool/managed lane facility and Regional or Corridor transit services identified in the Regionally Significant Transportation Network</td> </tr> <tr> <td>3</td> <td>Includes carpool facility/managed lane or Regional or Corridor transit services identified in the Regionally Significant Transportation Network.</td> </tr> </tbody> </table>	Score	Description	5	Includes carpool/managed lane facility and Regional or Corridor transit services identified in the Regionally Significant Transportation Network	3	Includes carpool facility/managed lane or Regional or Corridor transit services identified in the Regionally Significant Transportation Network.												
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Table TA 7.2—Highway Corridor Evaluation Criteria (cont’d)

CRITERIA	DESCRIPTION								
8. Minimizes Habitat and Residential Impacts	<p>Does the project minimize negative habitat and residential impacts? Projects receive points for each of the descriptions they satisfy</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Points</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td> <td>Avoids preserve areas as defined by habitat preserve plans</td> </tr> <tr> <td style="text-align: center;">1</td> <td>Avoids natural areas as defined by habitat preserve plans</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Avoids existing residential development (defined as existing housing stock within 500-feet of the highway right of way is less than two dwelling-units per acre- this does not imply a taking and is used only as a measure of proximity)</td> </tr> </tbody> </table>	Points	Description	2	Avoids preserve areas as defined by habitat preserve plans	1	Avoids natural areas as defined by habitat preserve plans	2	Avoids existing residential development (defined as existing housing stock within 500-feet of the highway right of way is less than two dwelling-units per acre- this does not imply a taking and is used only as a measure of proximity)
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9. Critical Linkage	<p>Is the project located in a high volume freeway corridor and/or lacking a continuous parallel arterial or completes a missing link?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td>High volume freeway corridor and lacking a continuous parallel arterial listed in the Regional Arterial System (High volume is defined as greater than 250,000 ADT using the 2030 Smart Growth forecast)</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Completes a missing regional link</td> </tr> <tr> <td style="text-align: center;">1</td> <td>High volume freeway corridor or lacking a continuous parallel arterial listed in the Regional Arterial System</td> </tr> </tbody> </table>	Score	Description	5	High volume freeway corridor and lacking a continuous parallel arterial listed in the Regional Arterial System (High volume is defined as greater than 250,000 ADT using the 2030 Smart Growth forecast)	3	Completes a missing regional link	1	High volume freeway corridor or lacking a continuous parallel arterial listed in the Regional Arterial System
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10. Cost-Effectiveness*	<p>What is the annual capital and operating project cost per project mile divided by person hours saved?</p> <p>Calculated as: $\frac{[(\text{Capital project cost}/\text{project life}) + (\text{operating \& maintenance costs})/\text{project mile}]}{\text{Project life} / \text{annual weekday person hours saved}}$ </p> <p>Higher ranking projects have a lower cost per person hour saved.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">30 - 1</td> <td>Cost per person hour saved per lane mile</td> </tr> </tbody> </table>	Score	Description	30 - 1	Cost per person hour saved per lane mile				
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* Criterion denoted with an asterisk were calculated using a relative score quantitative method where the top scoring project received the full number of points for that criterion and the subsequent projects received points relative to the top project score.

Table TA 7.3—Highway Corridor Evaluation Criteria Weighting

CRITERIA CATEGORY	RTP GOALS	CRITERIA	DESCRIPTION	MAX SCORE	TOTAL PERCENT
SERVES TRAVEL NEEDS	Reliability	Located in a High Accident Rate Area	Is the project located in an area with a high vehicular crash rate?	5	45
	Mobility	Serves Goods Movement	Does the project provide for goods movement?	10	
	Accessibility, Mobility, Environmental Sustainability	Serves Peak-Period Trips	What is the number of peak-period trips located within one mile of the highway corridor?	5	
	Mobility	Provides Mobility	What is the increase in person capacity resulting from the project?	10	
	Livability, Mobility	Provides Congestion Relief	What is the number of daily person-hours saved?	15	
DEVELOPS NETWORK INTEGRATION	Livability, Accessibility	Serves RCP Smart Growth Areas	Does the project serve RCP Smart Growth Areas?	5	25
	Accessibility, Efficiency	Facilitates Carpool and Transit Mobility	Does the project contain carpool/managed lane facilities and/or regional or corridor transit service?	10	
	Environmental Sustainability	Minimizes Habitat and Residential Impacts	Does the project minimize negative habitat and residential impacts?	5	
	Reliability, Mobility	Critical Linkage	Is the project located in a high volume freeway corridor and/or lacking a continuous parallel arterial listed in the Regional Arterial System or completes a missing link?	5	
COST-EFFECTIVENESS	Efficiency	Cost-Effectiveness	What is the annual capital and operating project cost divided by person hours saved?	30	30

Table TA 7.4—Highway Corridor Evaluation Ranking

Initial Phase in RC	TransNet, EAP & Toll	No.	Cost (millions)	Freeway	From	To	Existing	Improvements
YES	TransNet	1	\$450	I-5	I-8	La Jolla Village Dr	8F	10F + 2HOV
-	TransNet	2	\$350	I-5	SR 54	I-15	8F	10F+2HOV
YES	EAP (Env)	3	\$1,290	I-5	SR 56	Palomar Airport Rd	8F/10F	10F+4ML
-	TransNet	4	\$202	I-5	SR 905	SR 54	8F	8F + 2HOV
YES	EAP (Env)	5	\$2,410	I-805	H St	I-8	8F/10F	10F+4ML
YES	EAP (Env)	6	\$579	I-805	I-8	SR 52	8F/10F	8F + 4ML
-	-	7	\$160	SR 125	SR 94	I-8	8F	10F+2HOV
-	Toll	8	\$2,060	I-15	SR 78	Riverside Co	8F	8F+4ML
YES	EAP	9	\$500	SR 52	I-15	SR 125	4F/6F	6F + 3ML-Rev
-	TransNet	10	\$870	I-5	I-15	I-8	8F	8F+2HOV
YES	EAP (Env)	11	\$610	I-805	Mission Valley Viaduct		8F	8F + 4ML
-	-	12	\$210	SR 52	I-5	I-805	4F	6F+2HOV
YES	EAP (Env)	13	\$291	I-5	La Jolla Village Dr	SR 56	8F/14F	8F/14F + 4ML
YES	EAP (Env)	14	\$202	I-805	La Jolla Village Dr	I-5	8F	8F + 4ML
-	-	15	\$184	I-8	SR 125	SR 67	8F	8F + 2HOV
YES	EAP (Env)	16	\$290	I-805	SR 52	La Jolla Village Dr	8F	10F+4ML
-	TransNet	17	\$400	SR 67	Mapleview St	Dye Rd	2C/4C	4C
YES	EAP (Env)	18	\$532	I-805	SR 905	H St	8F	8F+4ML
-	TransNet	19	\$650	SR 78	I-5	I-15	6F	6F + 2HOV
YES	EAP (Env)	20	\$1,200	I-5	Palomar Airport Rd	SR 76	8F	10F+4ML
YES	EAP (Transit)	21	\$200	SR 94	I-5	I-805	8F	8F+2HOV
-	-	22	\$48	I-8	SR 67	2nd Street	6F	6F + 2HOV
YES	EAP (Transit)	23	\$290	SR 52	I-805	I-15	6F	8F + 2HOV
YES	Toll	24	\$40	SR 125	San Miguel Rd.	SR 54	4F	8F
-	TransNet	25	\$128	SR 54	I-5	SR 125	6F	8F+2HOV
YES	EAP (Transit)	26	\$580	I-15	I-5	SR 163	6F/9F	8F+2HOV
-	-	27	\$1,330	I-8	I-5	I-15	8F	8F+2HOV
-	TransNet	28	\$520	SR 94	I-805	College Ave	8F/10F	10F+2HOV
-	-	29	\$980	I-8	College Ave	SR 125	8F	8F+2HOV
-	-	30	\$1,080	I-8	I-15	College Ave	10F	10F+2HOV
-	-	31	\$50	SR 52	SR 125	SR 67	4F	6F
-	TransNet	32	\$260	SR 94	College Ave	SR 125	8F	8F + 2HOV
-	-	33	\$200	SR 163	I-805	I-15	8F	8F+2HOV
-	-	34	\$270	SR 125	I-8	SR 52	8F	8F+2HOV
YES	EAP	35	\$260	SR 76	Melrose Drive	Mission Rd	2C	6C
YES	EAP	36	\$140	SR 76	Mission Rd	I-15	2C	4C
-	TransNet (GP Lanes)	37	\$190	I-8	2nd Street	Los Coches	4F	6F + 2HOV
-	-	38	\$270	SR 905	I-5	Mexico	4F/6F	8F
-	TransNet	39	\$170	SR 125	SR 54	SR 94	6F	8F+2HOV
-	-	40	\$160	SR 76	I-5	Melrose Drive	4E	6E
YES	Toll	41	\$300	SR 11	SR 905	Mexico	---	4T
-	-	42	\$143	I-8	Los Coches	Dunbar Rd.	4F/6F	6F
-	-	43	\$130	SR 67	I-8	Mapleview St	4F/6F	8F/6F
-	Toll	44	\$810	I-5	SR 76	Orange Co	8F	8F + 4ML
YES (PE only)	TransNet	45	\$460	SR 75/SR 282	Glorietta Blvd.	Alameda Blvd.	6C	6C + 4TU
-	TransNet	46	\$290	SR 56	I-5	I-15	4F/5F	6F + 2HOV
-	TransNet	47	\$260	SR 94	SR 125	Avocado Blvd	4F	6F+2HOV
-	TransNet	48	\$210	SR 94	Jamacha Rd	Otay Lakes Rd	2C	4C
-	TransNet (4 lanes)	49	\$30	SR 94	Avocado Blvd	Jamacha Rd	4C	6C
-	-	50	\$457	SR 54	SR 125	SR 94	---	6E
-	-	51	\$200	SR 76	I-15	Pala Mission Rd	2C	4C/6C
-	-	52	\$980	SR 76	Pala Mission Rd	La Jolla Indian Res	2C	4C

(continued)

Serves Travel Needs					Develops Network Integration				Cost-Effectiveness			
[1] Serves Goods Movement 10 %	[2] Serves Peak Period Trips 5%	[3] Provides Mobility 10%	[4] Provides Current and Future Congestion Relief 15%	[5] High Vehicular Crash Rate 5%	[6] Serves RCP Smart Growth Areas 5%	[7] Facilitates Carpool and Transit 10%	[8] Minimizes Habitat and Residential Impacts 5%	[9] Critical Linkage 5%	[10] Cost-Effectiveness 30%	Weighted Score 100%	Original Weighting Rank (1-52)	Project Rank (1-52)
2	1.11	7.52	12.64	0	5	10	0	5	30.00	73.27	1	1
2	1.78	7.44	15.00	0	3	10	0	0	16.63	55.84	5	2
8	0.54	6.28	9.33	0	1	10	0	5	13.93	54.08	8	3
2	1.30	7.59	9.47	0	3	10	0	1	19.67	54.04	6	4
8	1.59	6.75	11.00	0	3	10	0	5	8.25	53.59	3	5
8	1.94	6.59	9.31	0	4	10	0	1	12.50	53.34	1	6
6	1.44	5.60	5.34	0	3	10	2	0	19.45	52.83	6	7
10	0.27	4.87	10.38	0	0	10	2	1	14.24	52.77	3	8
6	0.34	6.71	12.16	0	0	10	0	1	15.99	52.21	15	9
4	2.75	9.35	10.60	0	5	10	3	0	6.37	51.07	9	10
6	5.00	6.47	11.63	0	3	10	0	5	1.81	48.92	24	11
2	0.90	4.16	11.12	0	0	6	0	1	23.58	48.75	21	12
6	1.46	5.77	7.47	0	4	10	0	0	12.07	46.76	12	13
10	1.71	5.07	6.15	0	3	6	2	1	11.08	46.01	12	14
10	2.05	10.00	4.76	0	3	6	3	0	5.82	44.63	18	15
8	1.50	6.48	6.15	0	3	10	0	1	8.08	44.21	14	16
4	0.27	3.56	12.14	3	0	0	2	0	19.20	44.16	28	17
8	1.03	5.80	7.33	0	0	10	0	1	9.91	43.07	9	18
4	1.14	7.29	6.79	0	5	6	0	0	11.56	41.78	11	19
8	1.15	5.50	8.43	0	0	6	0	1	11.08	41.16	21	20
6	3.82	9.42	3.75	0	3	10	2	0	2.75	40.74	28	21
10	3.86	7.56	3.17	0	0	6	3	0	6.66	40.25	18	22
2	1.29	5.64	7.41	0	0	10	2	0	11.24	39.58	16	23
8	0.59	2.86	1.20	0	0	6	2	1	17.17	38.82	27	24
6	1.11	4.28	3.84	0	3	6	0	0	14.17	38.40	17	25
6	1.18	6.56	5.14	0	0	10	0	0	8.83	37.70	23	26
0	2.31	8.75	10.06	0	5	6	2	0	3.41	37.53	24	27
4	1.64	7.38	7.79	0	0	10	0	0	6.33	37.13	20	28
2	2.52	8.60	9.39	0	5	6	0	0	2.47	35.98	34	29
0	1.62	7.77	10.06	0	2	6	2	1	3.29	33.73	34	30
6	1.47	5.48	3.88	0	0	0	2	0	12.56	31.39	33	31
4	1.23	8.01	5.19	0	0	10	0	0	2.70	31.13	34	32
4	1.29	7.78	3.50	0	1	6	2	0	4.39	29.95	28	33
8	1.35	4.52	0.59	0	4	10	0	0	1.18	29.65	41	34
4	0.56	3.35	5.96	0	0	0	0	1	14.74	29.61	31	35
4	0.48	3.87	4.64	3	0	0	2	1	10.04	29.03	24	36
6	1.47	4.96	3.17	0	0	6	0	1	5.22	27.82	39	37
10	0.69	2.09	2.50	0	0	6	0	0	6.13	27.42	43	38
6	0.99	5.17	1.16	0	0	10	0	0	3.42	26.73	34	39
4	1.58	2.99	4.28	0	0	0	0	0	13.87	26.71	31	40
10	0.51	2.94	3.18	0	0	0	2	3	4.05	25.68	45	41
8	0.28	4.53	2.60	0	0	0	2	0	6.84	24.24	39	42
6	1.34	4.63	2.65	0	0	0	0	0	7.92	22.53	41	43
8	0.08	4.52	0.60	0	0	6	0	1	1.75	21.96	48	44
0	2.17	2.15	8.09	3	0	0	3	0	3.33	21.74	44	45
4	0.62	4.47	1.13	0	0	6	0	0	4.64	20.86	38	46
4	1.07	4.19	0.29	0	0	6	3	1	0.33	19.88	47	47
4	0.24	1.88	1.50	3	0	0	2	1	4.35	17.98	51	48
2	2.25	3.53	1.50	3	0	0	0	1	4.24	17.52	50	49
4	1.36	1.77	3.08	0	0	0	0	0	6.23	16.43	46	50
4	0.26	2.19	0.69	2	0	0	2	1	2.20	14.33	49	51
4	0.11	1.67	0.61	1	0	0	2	1	0.40	10.79	52	52

High Occupancy Vehicle (HOV) Connectors

HOV connectors will facilitate direct HOV to HOV access and allow for continuous movement on the HOV network from freeway to freeway. In MOBILITY 2030, HOV connectors were prioritized based on average daily traffic data. For the 2030 RTP, the criteria were revised to evaluate traffic levels of the connector and the overall interchange, transit integration, habitat and residential impacts, and cost effectiveness. The HOV connector criteria and weighting are shown in Tables TA 7.5 through 7.7. The HOV Connectors are ranked by pair and shown in Table TA 7.8. A total of six HOV connectors are included in the Reasonably Expected Revenue Scenario and five are included in the Revenue Constrained Scenario.

Table TA 7.5—HOV Project Evaluation Criteria Summary

GOAL	CRITERIA	DESCRIPTION
SERVES TRAVEL NEEDS	Serves High Demand	What is the 2030 Person Average Daily Traffic on the HOV connections?
	Serves Congested Corridors	What is the 2030 Average Daily Traffic for the overall interchange?
DEVELOPS NETWORK INTEGRATION	Serves Regional and/or Corridor Transit Routes	Does the project serve regional and/or corridor transit?
	Minimizes Habitat and Residential Impacts	Does the project minimize negative habitat and residential impacts?
COST-EFFECTIVENESS	Cost-Effectiveness	What is the annual capital and operating project cost divided by Person Average Daily Traffic?

Table TA 7.6—HOV Connector Criteria

CRITERIA	DESCRIPTION
1. Serves High Demand	What is the 2030 Person Average Daily Traffic (PADT) on the HOV connections?
	Score Description
	5 More than 45,000 PADT (pair)
	4 30,000 to 45,000 PADT (pair)
	3 20,000 to 29,999 PADT (pair)
	2 10,000 to 19,999 PADT (pair)
	1 Less than 10,000 PADT (pair)
2. Serves Congested Corridors	What is the 2030 Average Daily Traffic (ADT) for the overall interchange?
	Score Description
	5 Over 450,000 ADT
	4 400,000 to 450,000 ADT
	3 375,000 to 399,999 ADT
	2 300,000 to 374,999 ADT
	1 Under 300,000 ADT
3. Serves Regional and/or Corridor Transit Routes	Does the project serve regional and/or corridor transit?
	Score Description
	5 Serves Regional or Corridor transit services identified in the Regionally Significant Transportation Network
	0 Does not serve the Regional or Corridor transit services identified in the Regionally Significant Transportation Network
4. Minimizes Habitat and Residential Impacts	Does the project minimize negative habitat and residential impacts?
	Projects receive points for each of the descriptions they satisfy.
	Points Description
	2 Avoids preserve areas as defined by habitat preserve plans
	1 Avoids natural areas as defined by habitat preserve plans
2 Avoids existing residential development (defined as existing housing stock within 500-feet of the highway right-of-way that is less than two dwelling-units per acre- this does not imply a taking and is used only as a measure of proximity).	

Table TA 7.6—HOV Connector Criteria (cont'd)

CRITERIA	DESCRIPTION												
5. Cost-Effectiveness	<p>What is the annual capital and operating project cost divided by Person Average Daily Traffic (by pair)</p> <p>Calculated as:</p> $\frac{[(\text{Capital project cost/project life}) + (\text{annual operating \& maintenance costs})]}{\text{Annual Weekday Person Average Daily Traffic?}}$ <p>Higher ranking projects have a lower cost per Annual Person Average Daily Traffic (PADT).</p>												
	<table border="1"> <thead> <tr> <th data-bbox="500 630 597 663">Score</th> <th data-bbox="613 630 760 663">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="516 663 537 697">5</td> <td data-bbox="602 663 894 697">Less than \$0.30 per PADT</td> </tr> <tr> <td data-bbox="516 697 537 730">4</td> <td data-bbox="602 697 889 730">\$0.30 to \$0.49 per PADT</td> </tr> <tr> <td data-bbox="516 730 537 764">3</td> <td data-bbox="602 730 889 764">\$0.50 to \$0.99 per PADT</td> </tr> <tr> <td data-bbox="516 764 537 798">2</td> <td data-bbox="602 764 889 798">\$1.00 to \$1.25 per PADT</td> </tr> <tr> <td data-bbox="516 798 537 831">1</td> <td data-bbox="602 798 846 831">Over \$1.25 per PADT</td> </tr> </tbody> </table>	Score	Description	5	Less than \$0.30 per PADT	4	\$0.30 to \$0.49 per PADT	3	\$0.50 to \$0.99 per PADT	2	\$1.00 to \$1.25 per PADT	1	Over \$1.25 per PADT
Score	Description												
5	Less than \$0.30 per PADT												
4	\$0.30 to \$0.49 per PADT												
3	\$0.50 to \$0.99 per PADT												
2	\$1.00 to \$1.25 per PADT												
1	Over \$1.25 per PADT												

Table TA 7.7—HOV Connector Evaluation Criteria Weighting

CRITERIA GOAL	RTP GOALS	CRITERIA	DESCRIPTION	MAX SCORE	PERCENT NEW
SERVES TRAVEL NEEDS	Mobility, Reliability	Serves High Demand	What is the 2030 Person Average Daily Traffic on the HOV connections?	20	40
	Mobility	Serves Congested Corridors	What is the 2030 Average Daily Traffic for the overall interchange?	20	
DEVELOPS NETWORK INTEGRATION	Livability, Accessibility, Mobility	Serves Regional and/or Corridor Transit Routes	Does the project serve regional and/or corridor transit routes?	20	30
	Environmental Sustainability	Minimizes Habitat and Residential Impacts	Does the project minimize negative habitat and residential impacts?	10	
COST-EFFECTIVENESS	Efficiency, Mobility	Cost-Effectiveness	What is the annual capital and operating project cost divided by Person average Daily Traffic (PADT)?	30	30

Table TA 7.8—HOV Connector Evaluation Ranking

Initial Phase in RC	TransNet, EAP	No.	Cost (\$M)	Intersecting Freeways		Direction	Serves Travel Needs		Develops Network Integration		Cost-Effectiveness	Weighted Score 100%	Project Rank (1-25)
							[1] Serves High Demand 20%	[2] Serves Congested Corridors 20%	[3] Serves Regional and/or Corridor Transit Routes 20%	[4] Habitat/Residential Impacts 10%	[5] Cost Effectiveness 30%		
YES		1	\$190	I-15	I-805	North to North South to South	20	16	20	0	30	86	1
		2	\$166	I-805	SR 94	East to South North to West	8	20	20	6	18	72	2
		2	\$200	I-5	SR 94	South to East West to North	20	16	0	6	30	72	2
		4	\$200	I-805	SR 94	South to East North to West	20	20	0	0	30	70	4
YES	TransNet	5	\$170	I-5	I-805	North to North South to South	20	12	0	4	30	66	5
	TransNet	5	\$213	I-15	SR 78	East to South North to West	20	12	0	10	24	66	5
YES	TransNet	5	\$190	I-805	SR 52	West to North South to East	8	16	20	4	18	66	5
		8	\$180	I-15	SR 52	West to North South to East	16	12	0	8	24	60	8
YES	TransNet	9	\$140	I-15	SR 94	South to West East to North	8	8	20	0	18	54	9
		9	\$190	I-805	SR 163	North to North South to South	16	8	0	6	24	54	9
		11	\$280	I-8	SR 125	West to South North to East	12	16	0	6	18	52	11
		12	\$180	I-15	SR 163	North to North South to South	12	12	0	8	18	50	12
		13	\$190	I-5	SR 56	North to East West to South	16	4	0	4	24	48	13
		14	\$200	I-5	SR 94	West to South North to East	8	20	0	6	12	46	14
		14	\$190	I-15	SR 56	East to North South to West	8	16	0	10	12	46	14
		16	\$180	SR 52	SR 125	North to West East to South	16	4	0	0	24	44	16
		18	\$185	I-5	SR 78	North to East West to South	12	8	0	0	18	38	18
		17	\$200	I-805	SR 54	South to East West to North	8	16	0	4	12	40	17
		19	\$166	I-805	SR 94	West to South North to East	4	20	0	4	6	34	19
		20	\$180	I-5	SR 54	South to East West to North	8	8	0	4	12	32	20
		21	\$190	I-5	SR 56	South to East West to North	4	20	0	0	6	30	21
		22	\$185	I-5	SR 78	South to East West to North	8	8	0	0	12	28	22
		23	\$180	I-5	SR 52	South to East West to North	8	8	0	4	6	26	23
		24	\$180	I-5	SR 52	West to South North to East	4	8	0	4	6	22	24
		25	\$180	I-5	SR 54	West to South North to East	4	4	0	0	6	14	25

FREEWAY-TO-FREEWAY CONNECTORS

The TPEC also updated the Freeway-to-Freeway Connector criteria. The TPEC elected to use a number of the same criteria that were used to evaluate highway projects. The six criteria shown in Tables TA 7.9 and 7.10 quantify project area accident rates, goods movement, mobility, congestion relief, transit integration, and cost effectiveness. The ranked projects are shown in Table TA 7.11.

Table TA 7.9—Freeway Connectors Study Evaluation Criteria

GOAL	CRITERIA	DESCRIPTION
SERVES TRAVEL NEEDS	Located in a High Crash Rate Area	Is the project located in an area with a vehicular high crash rate?
	Serves Goods Movement	Does the project provide for goods movement?
	Provides Mobility	What is the Person Average Daily Traffic?
	Provides Congestion Relief	What is the number of daily person-hours saved?
DEVELOPS NETWORK INTEGRATION	Serves Regional and/or Corridor Transit Routes	Does the project serve regional and/or corridor transit routes?
	Minimizes Habitat and Residential Impacts	Does the project minimize negative habitat and residential impacts?
COST-EFFECTIVENESS	Cost-Effectiveness	What is the annual capital and operating project cost divided by person-hours saved?

Table TA 7.10—Freeway-to-Freeway Connector Criteria

CRITERIA	DESCRIPTION
1. Located in a High Crash Rate Area	Is the project located in an area with a high vehicular crash rate?
	Score Description
	5 Greater than 160 percent of the 3-year average statewide crash rate for a similar facility (i.e., 60% over the statewide average)
	4 Greater than 150% " "
	3 Greater than 140% " "
	2 Greater than 130% " "
1 Greater than 120% " "	
2. Serves Goods Movement	Does the project provide for goods movement?
	A) Is the highway a major freight corridor as measured by truck AADT%
	2 >7%
	1 4%-7%
	0 less than 3%
	B) Is the highway part of a designated trade corridor as defined in the Regional Truck Network- as part of the RTP Freight Strategy?
	2 Yes
	0 No
	C) Does the highway serve a major freight center (within one mile of the corridor) such as a Port, International Airport, Port of Entry, Rail Intermodal/Transload Facility or Industrial Cluster/Distribution Center?
	1 Yes
0 No	
3. Provides Mobility	What is 2030 Person Average Daily Traffic (PADT)?
	Score Description
	5 Over 45,000 PADT
	4 30,000 to 45,000 PADT
	3 25,000 to 29,999 PADT
	2 20,000 to 24,999 PADT
1 Less than 20,000 PADT	

Table TA 7.10—Freeway-to-Freeway Connector Criteria (cont'd)

CRITERIA	DESCRIPTION												
4. Provides Congestion Relief	<p>What is the number of daily person-hours saved?</p> <p>Staff calculated the existing travel time using local roadways that provide the same movement that the proposed freeway connector would provide. The travel time savings has been equated to the existing travel time along the local roadways minus the travel time with the connector, which was then multiplied by the number of person trips.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Over 1,400 person hours saved</td> </tr> <tr> <td>4</td> <td>1,000 to 1,400 person hours saved</td> </tr> <tr> <td>3</td> <td>800 to 999 person hours saved</td> </tr> <tr> <td>2</td> <td>500 to 799 person hours saved</td> </tr> <tr> <td>1</td> <td>Under 500 person hours saved</td> </tr> </tbody> </table>	Score	Description	5	Over 1,400 person hours saved	4	1,000 to 1,400 person hours saved	3	800 to 999 person hours saved	2	500 to 799 person hours saved	1	Under 500 person hours saved
Score	Description												
5	Over 1,400 person hours saved												
4	1,000 to 1,400 person hours saved												
3	800 to 999 person hours saved												
2	500 to 799 person hours saved												
1	Under 500 person hours saved												
5. Serves Regional and/or Corridor Transit Routes	<p>Does the project serve regional and/or corridor transit?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Serves Regional or Corridor transit services identified in the Regionally Significant Transportation Network</td> </tr> <tr> <td>0</td> <td>Does <u>not</u> serve Regional or Corridor transit services identified in the Regionally Significant Transportation Network</td> </tr> </tbody> </table>	Score	Description	5	Serves Regional or Corridor transit services identified in the Regionally Significant Transportation Network	0	Does <u>not</u> serve Regional or Corridor transit services identified in the Regionally Significant Transportation Network						
Score	Description												
5	Serves Regional or Corridor transit services identified in the Regionally Significant Transportation Network												
0	Does <u>not</u> serve Regional or Corridor transit services identified in the Regionally Significant Transportation Network												
6. Minimizes Habitat and Residential Impacts	<p>Does the project minimize negative habitat and residential impacts?</p> <p>Projects receive points for each of the descriptions they satisfy (maximum of 5 points total)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Points</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Avoids preserve areas as defined by habitat preserve plans</td> </tr> <tr> <td>1</td> <td>Avoids natural areas as defined by habitat preserve plans</td> </tr> <tr> <td>2</td> <td>Avoids existing residential development (defined as existing housing stock within 500 feet of the highway right of way is less than two dwelling-units per acre- this does not imply a taking and is used only as a measure of proximity)</td> </tr> </tbody> </table>	Points	Description	2	Avoids preserve areas as defined by habitat preserve plans	1	Avoids natural areas as defined by habitat preserve plans	2	Avoids existing residential development (defined as existing housing stock within 500 feet of the highway right of way is less than two dwelling-units per acre- this does not imply a taking and is used only as a measure of proximity)				
Points	Description												
2	Avoids preserve areas as defined by habitat preserve plans												
1	Avoids natural areas as defined by habitat preserve plans												
2	Avoids existing residential development (defined as existing housing stock within 500 feet of the highway right of way is less than two dwelling-units per acre- this does not imply a taking and is used only as a measure of proximity)												

Table TA 7.10—Freeway-to-Freeway Connector Criteria (cont'd)

CRITERIA	DESCRIPTION												
7. Cost-Effectiveness	<p>What is the annual capital and operating/maintenance project cost divided by person-hours saved?</p> <p>Calculated as: $\frac{[(\text{Total capital costs/project life}) + (\text{annual operating \& maintenance costs})]}{\text{Annual Weekday Person Hours Saved}}$</p> <p>Higher ranking projects have a lower cost per person-hour saved.</p> <table border="1" style="margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Less than \$1.25 per person hour saved</td> </tr> <tr> <td>4</td> <td>\$1.25 to \$2.00 per person hour saved</td> </tr> <tr> <td>3</td> <td>\$2.01 to \$3.00 per person hour saved</td> </tr> <tr> <td>2</td> <td>\$3.01 to \$5.00 per person hour saved</td> </tr> <tr> <td>1</td> <td>Over \$5.00 per person hour saved</td> </tr> </tbody> </table>	Score	Description	5	Less than \$1.25 per person hour saved	4	\$1.25 to \$2.00 per person hour saved	3	\$2.01 to \$3.00 per person hour saved	2	\$3.01 to \$5.00 per person hour saved	1	Over \$5.00 per person hour saved
Score	Description												
5	Less than \$1.25 per person hour saved												
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3	\$2.01 to \$3.00 per person hour saved												
2	\$3.01 to \$5.00 per person hour saved												
1	Over \$5.00 per person hour saved												

Table TA 7.11—Freeway Connectors Project Rankings

						Serves Travel Needs				Develops Network Integration		Cost-Effectiveness		
Initial Phase in RC	TransNet and EAP	No.	Freeway	Intersecting Freeway	Movement	[1] Serves Goods Movement 10%	[2] Provides Mobility 10%	[3] Provides Congestion Relief 10%	[4] High Vehicular Accident Rate Area 10%	[5] Serves Regional and/or Corridor Transit Routes 15%	[6] Minimizes Habitat and Residential Impacts 15%	[7] Cost-Effectiveness 30%	Weighted Score 100%	Project Rank
YES	TransNet	1	SR 94	SR 125	West to North	6	10	10	0	0	9	30	65	1
YES	TransNet	2	SR 94	SR 125	South to East	6	10	8	0	0	9	30	63	2
YES	TransNet	3	I-5	SR 56	West to North	6	6	10	0	0	0	30	52	3
YES	TransNet	4	I-5	SR 78	West to South	6	10	6	0	0	0	24	46	4
		5	I-5	I-8	East to North	0	6	6	2	0	6	24	44	5
YES	TransNet	5	I-5	SR 78	South to East	6	10	6	4	0	0	18	44	5
YES	TransNet	7	I-5	SR 56	South to East	6	6	6	0	0	0	24	42	7
		8	I-5	SR 94	North to East	2	8	4	6	0	9	6	35	8
		8	I-15	SR 56	North to West	8	4	2	0	0	15	6	35	8
		10	I-5	I-8	South to West	0	2	2	0	0	6	12	22	10

TRANSIT SERVICES EVALUATION

The TPEC, with key input from MTS and NCTD staff, updated the Transit Services Evaluation criteria in order to prioritize new transit services. Building on the criteria developed for use in MOBILITY 2030, the TPEC recommended a number of modifications which integrate the Regional Comprehensive Plan and transit connectivity. This evaluation and prioritization of regional transit services was used to develop the transit network in the 2030 RTP.

The draft criteria were presented for comment to the NCTD Board on August 17, 2006 and to the MTS Board on September 14, 2006. Modifications to the criteria were made in response to comments received. The criteria were accepted by the SANDAG Board on October 13, 2006 and incorporated in the development of the RTP transit network. Tables TA 7.12 and 7.13 describe the transit services evaluation criteria and detailed scoring. Table TA 7.14 describes the transit services criteria weighting. All transit routes evaluated for the 2030 RTP are listed in priority order in Table TA 7.15.

Table TA 7.12—Transit Services Evaluation Criteria

GOAL	CRITERIA	DESCRIPTION
SERVES TRAVEL NEEDS	Serves Congested Areas	Does the route serve the more congested corridors in the region?
	Serves Peak-Period Trips	What are the number of trips within the capture areas of the transit stations and park and ride facilities?
	Provides Competitive/Reliable Transit	What is the percentage of the route located in priority treatment?
	Peak-Transit Utilization	What are the morning and afternoon passenger miles divided by seat miles?
	Off-Peak Transit Utilization	What are the midday and evening passenger miles divided by seat miles?
DEVELOPS NETWORK INTEGRATION	Links High-Frequency Transit Services	How many other high frequency (timed transfer service or 15-minute or higher frequency) transit routes does the route connect to?
	Serves RCP Smart Growth Areas	Does the route serve existing/planned and/or potential RCP Smart Growth areas?
COST-EFFECTIVENESS	Project Cost-Effectiveness	What is the annual capital and operating lifecycle project cost divided by passenger miles?

Table TA 7.13—Detailed Scoring for Transit Project Criteria

Criteria	Description									
1. Serves Congested Areas*	Does the route serve the more congested corridors in the region?									
	<table border="1"> <thead> <tr> <th style="text-align: center;">Score</th> <th style="text-align: center;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">10-0</td> <td>Percentage of route corridor with Level of Service E or F in 2030</td> </tr> </tbody> </table>	Score	Description	10-0	Percentage of route corridor with Level of Service E or F in 2030					
Score	Description									
10-0	Percentage of route corridor with Level of Service E or F in 2030									
2. Serves Peak-Period Travel Trips *	What are the number of peak-period trips within the capture areas of the transit stations and park and ride facilities?									
	<p>As calculated as:</p> <p>$a + 1/10b + \#c = \text{average peak trips.}$</p> <p>a = All trips within 1/3 mile of the transit station (captures walkable trips).</p> <p>b = All trips located between 1/3 to 1 mile of the transit station (captures trips served by shuttle/bicycles).</p> <p>c = number of trips to account for park and ride facilities (captures park-and ride-origin trips) multiplied by the number of park and ride facilities located on the route.</p> <table border="1"> <thead> <tr> <th style="text-align: center;">Score</th> <th style="text-align: center;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">10-0</td> <td>Total potential trips per station</td> </tr> </tbody> </table>	Score	Description	10-0	Total potential trips per station					
Score	Description									
10-0	Total potential trips per station									
3. Provides Competitive/ Reliable Transit *	What is the percentage of the route located in priority treatment?									
	<table border="1"> <thead> <tr> <th style="text-align: center;">Value</th> <th style="text-align: center;">Treatment</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td>Dedicated Transit Guideway or Dedicated Arterial Lane or Rail</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Managed Lane or HOV Lane or Arterial Spot Treatments (e.g., signal priority, queue jumpers)</td> </tr> </tbody> </table> <p>To calculate the score of a project the percentage of the route on dedicated treatment is multiplied by the value of the treatment to determine the total of points received. The point total is then associated with a project score.</p> <p>Example Route A is located in 50% Dedicated Arterial Lane and 50% on an arterial with spot treatments.</p> $(50 \times 5) + (50 \times 3) = 400$ <table border="1"> <thead> <tr> <th style="text-align: center;">Score</th> <th style="text-align: center;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5-0</td> <td>500 – 0 points</td> </tr> </tbody> </table>	Value	Treatment	5	Dedicated Transit Guideway or Dedicated Arterial Lane or Rail	3	Managed Lane or HOV Lane or Arterial Spot Treatments (e.g., signal priority, queue jumpers)	Score	Description	5-0
Value	Treatment									
5	Dedicated Transit Guideway or Dedicated Arterial Lane or Rail									
3	Managed Lane or HOV Lane or Arterial Spot Treatments (e.g., signal priority, queue jumpers)									
Score	Description									
5-0	500 – 0 points									

Table TA 7.13—Detailed Scoring for Transit Project Criteria (cont'd)

Criteria	Description
----------	-------------

4. Peak Transit Utilization*

What is the morning and afternoon peak-period transit utilization?

Transit utilization is calculated as passenger miles divided by seat miles.

Route Type	Seats Assumed
Heavy Rail	140/car (5 car trains)
Trolley	68/car (3 car trains)
SPRINTER	136/car (1 car trains)
Bus	47/vehicle

Score	Description
5-0	Percentage of highest-transit utilization of route during peak.

5. Off-Peak Transit Utilization *

What is the midday and evening transit utilization?

Transit utilization is calculated as passenger miles divided by seat miles.

Route Type	Seats Assumed
Heavy Rail	140/car (5 car trains)
Trolley	68/car (3 car trains)
SPRINTER	136/car (1 car trains)
Bus	47/vehicle

Score	Description
5-0	Percentage of highest utilization of route during off-peak-period.

6. Links High-Frequency Transit Services*

How many other high frequency (timed transfer service or 15 minute or higher frequency) transit routes does the route connect to?

Score	Description
20-0	Total number of route connections with high frequency transit routes

Table TA 7.13—Detailed Scoring for Transit Project Criteria (cont'd)

Criteria	Description																
7. Serves RCP Smart Growth Centers *	<p>Does the route serve existing/planned and/or potential RCP Smart Growth areas?</p> <p>Transit routes shall receive points for each place type they serve.</p> <table border="1"> <thead> <tr> <th style="text-align: left;">Points</th> <th style="text-align: left;">Place Type</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Serves existing/planned Metropolitan Center or Urban Center</td> </tr> <tr> <td>4</td> <td>Serves existing/planned Town Center or Special Use Center</td> </tr> <tr> <td>3</td> <td>Serves existing/planned Transit Corridor or Community Center</td> </tr> <tr> <td>2</td> <td>Serves existing/planned Rural Center</td> </tr> <tr> <td>1</td> <td>Serves potential RCP Smart Growth Area</td> </tr> </tbody> </table> <p>Scores are based on the total number of these points</p> <table border="1"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>15-0</td> <td>Total number of points</td> </tr> </tbody> </table>	Points	Place Type	5	Serves existing/planned Metropolitan Center or Urban Center	4	Serves existing/planned Town Center or Special Use Center	3	Serves existing/planned Transit Corridor or Community Center	2	Serves existing/planned Rural Center	1	Serves potential RCP Smart Growth Area	Score	Description	15-0	Total number of points
Points	Place Type																
5	Serves existing/planned Metropolitan Center or Urban Center																
4	Serves existing/planned Town Center or Special Use Center																
3	Serves existing/planned Transit Corridor or Community Center																
2	Serves existing/planned Rural Center																
1	Serves potential RCP Smart Growth Area																
Score	Description																
15-0	Total number of points																
8. Cost Effectiveness *	<p>What is the annual capital and operating project cost divided by passenger miles?</p> <p>Calculated as:</p> $\frac{((\text{Total annual operating/maintenance subsidy}) + (\text{capital project cost} / \text{Project life}))}{\text{Passenger miles traveled}}$ <p>Higher ranking projects have a lower cost per passenger-mile traveled.</p> <table border="1"> <thead> <tr> <th style="text-align: left;">Score</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>30-0</td> <td>Total dollar amount per passenger mile traveled</td> </tr> </tbody> </table>	Score	Description	30-0	Total dollar amount per passenger mile traveled												
Score	Description																
30-0	Total dollar amount per passenger mile traveled																

* Criterion denoted with an asterisk were calculated using a quantitative relative score method where the top scoring project received the full number of points for that criterion and the subsequent projects received points relative to the top project score.

Table TA 7.14—Transit Criteria Weighting

CRITERIA GOAL	RTP GOALS	CRITERIA	DESCRIPTION	MAX SCORE	PERCENT
SERVES TRAVEL NEEDS	Reliability, Livability	Serves Congested Areas	Does the route serve the more congested corridors in the region?	10	35
	Livability, Accessibility, Mobility, Environmental Sustainability	Serves Peak-period Trips	What are the number of trips within the capture areas of the transit stations and park and ride facilities?	10	
	Efficiency, Reliability, Mobility	Provides High Speed/Reliable Transit	What is the percentage of the route located in priority treatment?	5	
	Accessibility, Mobility, Environmental Sustainability	Peak-Transit Utilization	What are the morning and afternoon passenger miles divided by seat miles?	5	
	Accessibility, Mobility, Environmental Sustainability	Off-Peak Transit Utilization	What are the midday and evening passenger miles divided by seat miles?	5	
DEVELOPS NETWORK INTEGRATION	Reliability, Livability, Mobility	Links High-Frequency Transit Services	How many other high frequency (timed transfer service or 15 minute or higher frequency) transit routes does the route connect to?	20	35
	Livability, Accessibility, Environmental Sustainability	Serves RCP Smart Growth Areas	Does the route serve existing/planned and/or potential RCP Smart Growth areas?	15	
COST-EFFECTIVENESS	Efficiency	Cost Effectiveness	What is the annual project capital and operating cost divided by passenger miles?	30	30

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Table TA 7.15—Transit Services Evaluation Ranking

Initial Phase in RC	TransNet and EAP	Rank	Route	Mode	Description	Capital Costs (millions)
YES	EAP (Capital)	1	510	Light Rail	Blue Line San Ysidro to Santa Fe Depot via Park/C Street	265
YES	TransNet	2	15	BRT	Mid-City Rapid SDSU to Downtown San Diego via El Cajon Boulevard and Park Boulevard	100
YES	TransNet	3	530	Light Rail	Green Line Santee to 12th and Imperial via Bayside Alignment	80
YES	EAP	4	610	BRT	Escondido to Downtown San Diego via I-15 & SR-94	315
YES	TransNet	5	680	BRT	Otay Mesa to Sorrento Mesa via I-805/I-15/SR-52	820
YES	EAP	6	608	BRT	Escondido to Downtown San Diego via I-15 & 4th/5th/SR 163 corridor guideway	-
		7	120	Rapid Bus	Downtown San Diego to Kearny Mesa via 4th/5th/SR 163 corridor guideway	866
		8	640	BRT	San Ysidro to Downtown San Diego and Kearny Mesa via I-5 and 4th/5th/SR 163 corridor guideway	58
YES	EAP	9	628	BRT	Otay Mesa to Downtown San Diego via I-805/SR 94	420
YES	TransNet	10	398	Commuter Rail	COASTER Oceanside to Downtown San Diego	2,204
		11	10	Rapid Bus	La Mesa to Old Town via University Avenue	16
YES	EAP (Capital)	12	520	Light Rail	Orange Line El Cajon to American Plaza via Park/C Street	150
		13	90	Express Bus	El Cajon to Downtown San Diego via SR 125, SR 94, and Broadway	9
		14	11	Rapid Bus	SDSU to Downtown San Diego and Spring Valley via Adams, 1st Street, and National Avenue	61
		15	210	BRT	Mira Mesa to Downtown San Diego via I-15 and SR 94	15
YES	EAP	16	607	BRT	Rancho Bernardo to Downtown via I-15 & 4th/5th/SR 163 corridor guideway	-
		17	2	Rapid Bus	North Park to Downtown San Diego via 30th Street and Broadway	7
YES	EAP (Capital)	18	570	Light Rail	Mid-Coast Trolley from Downtown San Diego to Sorrento Mesa	1,072
		19	30	Rapid Bus	UTC to Downtown San Diego via La Jolla Village Drive, La Jolla Boulevard, Grand Avenue, and I-5	11
		20	955	Rapid Bus	SDSU to National City via 54th Street, Euclid Avenue, and Main Street	13
YES	TransNet	21	399	Light Rail	SPRINTER Oceanside to Westfield North County (Double tracking, Top 4 Grade Separations)	762
		22	41	Rapid Bus	Fashion Valley to UTC/UCSD via SR 163, Genesee Avenue, and La Jolla Village	12
	TransNet	23	472	Rapid Bus	Oceanside to UTC via El Camino Real and I-5	52
		24	150	BRT	Sorrento Mesa to Downtown San Diego via I-5	13
		25	13	Rapid Bus	National City to Allied Gardens via Euclid and Fairmount	15
YES	TransNet	26	470	BRT	Riverside County to UTC/UCSD via Carroll Canyon	80
		27	690	BRT	Otay Ranch to UTC/UCSD via Palomar Street and I-805	14
		28	929	Rapid Bus	San Ysidro to 8th Street Trolley via 3rd Avenue and Highland	16
		29	691	BRT	Otay Ranch to Sorrento Mesa via Palomar Street and I-805	15
		30	609	BRT	Escondido to Kearny Mesa via I-15	54
		31	27	Rapid Bus	Pacific Beach to Kearny Mesa via Garnet and Balboa Avenue	9
		32	660	BRT	El Cajon to Kearny Mesa via Cuyamaca and SR 52	18
		33	31	Rapid Bus	Mira Mesa to UTC/UCSD via Carroll Canyon, Camino Santa Fe, and Miramar Road	8
		34	709	Rapid Bus	H Street Trolley to Otay Mesa via H Street, Palomar Street, and SR 125	13
		35	50	Rapid Bus	Bay Park to Kearny Mesa via Clairemont Drive and Clairemont Mesa Boulevard	10
	TransNet	36	471	Rapid Bus	Oceanside to San Marcos via Highway 101 and Palomar Airport Road	13
		37	35	Rapid Bus	Old Town to Ocean Beach via Midway Drive, W. Point Loma Blvd., and Cable Street	6
		38	692	BRT	El Cajon to Otay Mesa via SR 125	15
		39	962	Rapid Bus	Spring Valley to National City via Jamacha, Paradise Valley Rd and Plaza Boulevard	15
		40	936	Rapid Bus	70th Street Trolley to Spring Valley via College Avenue and Skyline Drive	11
		41	479	Rapid Bus	Oceanside to Palomar Airport via College Avenue and Melrose Drive	13
		42	303	Rapid Bus	Oceanside to Vista via Mission, SR 76, and North Santa Fe	12
		43	620	BRT	Otay Border to Imperial Beach via Airway Road, SR 905, and Palm Avenue	157

(continued)

Operating Subsidy (millions)	Total Costs (millions)	Serves Travel Needs					Develops Network Integration		Cost Effectiveness	Total Score
		[1] Serves Congested Areas (10%)	[2] Serves Peak Period Trips (10%)	[3] Provides Competitive/Reliable Transit (5%)	[4] Peak Transit Utilization (5%)	[5] Off-Peak Transit Utilization (5%)	[6] Links High Frequency Transit Services (20%)	[7] Serves RCP Smart Growth Areas (15%)	[3] Project Cost-Effectiveness (30%)	
187	452	8.1	4.5	5.0	4.6	2.9	10.5	9.1	30.0	74.7
87	187	10.0	5.4	3.5	5.0	5.0	12	9.3	7.0	57.2
208	288	7.8	3.6	5.0	1.7	0.8	10.5	15.0	12.2	56.6
170	485	7.0	5.0	3.6	1.7	2.8	19	9.9	6.9	56.0
154	974	4.0	2.1	3.7	2.5	2.1	20	8.5	7.5	50.3
-	-	7.4	10.0	3.6	1.8	0.0	13	9.3	4.1	49.2
13	879	6.3	5.2	4.9	2.9	2.5	14.5	7.4	4.0	47.7
42	100	7.0	6.1	3.6	2.4	0.0	19	5.3	4.2	47.6
65	485	5.0	5.4	3.6	2.5	2.8	14	4.2	8.3	45.9
187	2,391	7.0	5.7	5.0	1.3	0.5	13.5	7.0	5.2	45.1
30	46	8.3	2.5	3.0	2.0	1.5	10.5	12.3	5.0	45.1
153	303	6.1	4.7	5.0	1.1	0.6	9.5	7.8	9.1	44.0
16	25	4.4	8.8	1.5	2.5	0.0	10.5	3.6	12.3	43.6
149	210	7.0	3.6	3.0	1.5	1.6	11.5	8.9	5.5	42.5
39	54	6.9	7.3	3.0	2.1	0.0	11	5.1	6.6	42.0
-	-	7.7	9.2	3.8	0.5	0.0	10	7.8	1.0	40.0
35	42	6.6	6.9	3.0	1.4	1.4	9.5	6.1	4.0	38.9
151	1,223	5.5	3.8	5.0	1.3	0.9	12.5	7.2	2.4	38.5
24	35	7.2	5.9	2.1	1.5	0.0	10	6.1	4.6	37.4
53	66	7.9	2.1	3.0	1.7	1.6	7	7.0	5.8	36.0
139	901	6.7	2.2	5.0	1.0	0.6	10.5	6.5	2.0	34.6
60	72	3.4	1.6	2.8	1.3	1.4	11.5	5.5	5.2	32.7
74	126	5.8	1.6	3.0	1.5	0.9	12.5	2.1	4.3	31.8
25	38	4.9	6.1	1.5	1.1	0.0	14.5	2.1	1.6	31.7
55	70	5.1	1.5	3.0	1.2	1.0	9	6.3	4.0	31.1
97	177	6.8	2.5	2.0	0.6	0.0	13.5	4.6	1.1	31.0
33	47	4.7	1.9	3.4	1.4	0.0	12.5	4.4	2.2	30.6
75	91	5.0	2.1	3.0	1.1	0.8	8	7.8	2.8	30.5
34	49	4.5	2.1	3.6	1.4	0.0	11	4.2	2.3	29.1
22	76	7.0	2.0	3.0	0.9	0.0	10	2.1	3.1	28.2
32	41	5.2	1.9	3.0	0.9	0.7	8	4.6	2.4	26.7
44	62	7.1	1.9	3.3	1.2	0.6	6.5	1.9	1.8	24.3
25	33	3.3	2.5	3.0	0.8	0.5	9	2.5	2.4	24.0
32	45	2.6	1.8	3.8	0.7	0.5	7.5	4.4	2.0	23.4
30	40	5.9	1.5	3.0	0.6	0.4	7	2.7	1.4	22.6
63	76	6.6	1.3	3.1	0.6	0.5	5.5	3.0	1.9	22.5
19	25	7.0	2.6	3.0	1.1	0.8	2.5	1.9	2.4	21.3
20	35	1.0	2.3	2.3	0.5	0.0	8.5	5.1	1.0	20.6
48	63	3.9	0.9	3.3	0.9	0.6	6	1.5	2.1	19.0
34	45	2.2	1.8	3.0	0.6	0.6	4	4.6	2.0	18.8
37	50	5.9	1.1	3.0	0.3	0.2	5.5	0.6	1.0	17.6
34	46	4.8	1.4	3.0	0.3	0.3	4.5	2.1	1.1	17.5
63	220	0.9	1.6	1.9	0.7	0.6	6	3.2	1.0	15.9

RAIL GRADE SEPARATION EVALUATION CRITERIA

The Cities/County Transportation Advisory Committee (CTAC) developed regional rail grade separation prioritization criteria that stress congestion relief, safety and funding needs as the primary elements, with additional consideration of other factors including impacts to pedestrian traffic, bus transit operations, emergency services, truck freight operations and noise.

In preparation for the development of the criteria staff conducted a literature search of other rail grade separation prioritization criteria. These included the California Public Utilities Commission criteria, other states' criteria, the federal government as well as articles published in research journals. The findings formed the basis for the initial discussions within CTAC.

The intent of the implementation of a regional rail grade separation program is to provide funding for construction of significant traffic congestion relief projects through the implementation of rail grade separations where other more economical alternatives are demonstrably not feasible or practical. Elimination of crossings is considered a potentially practical alternative. Program allocations will need to be considered in conjunction with other regional transportation funding priorities and needs, and will be dependent on the availability of funding from federal, state and local sources.

The rail grade separation prioritization criteria were accepted by the SANDAG Board of Directors for inclusion in the 2030 RTP on October 13, 2006. To date, a regional list of potential grade separations has not been created or prioritized.

Projects will be prioritized based on two criteria categories: Project Specific Criteria and Regional Housing Needs Assessment (RHNA) Housing Production. The Project Specific Criteria will be worth 75 percent and the RHNA Housing Production criteria will compose 25 percent of the total project score.

Project-Specific Criteria

These criteria take into account existing vehicular and train traffic, accident history, cost, noise, access to emergency services and other factors.

The following criteria and point system will be implemented, with a potential maximum of 100 points. The total Project Specific Criteria score will be multiplied by .75 to produce a scaled 75 point score for the total regional rail grade separation project score.

- 1. Peak-period Exposure Index (PPEI) factor, measured as the product of the existing high directional traffic and the total measured blocking delay during the same three hours of the day experiencing the highest congestion at the crossing. **MAXIMUM POINTS = 20****

$$\text{PPEI} = \text{VT3} \times \text{BD3} \times \text{C3}$$

Where the score is the product of the above formula, rounded to the next whole number, up to a maximum of 20; and, where

VT3 = Vehicular traffic in high direction during selected three hour period

BD3 = Total blocking delay during same three hour period selected

C3 = 1/1,350,000, a mathematical constant used for the three hour peak-period calculation

Notes:

- a. For crossings where two or more streets that are adjacent to each other that are impacted simultaneously by the operation of the train, the vehicular traffic volume on those streets is cumulative for purposes of the calculation of this congestion relief factor.
- b. Selected three hour period consists of three, one-hour periods which may be consecutive. However, the selected three-hour period shall be the same when counting vehicular and train traffic.
- c. Blocking delay shall be measured as the time period beginning when the warning devices are activated to the time when the warning devices are de-activated.

Example:

At a crossing, there are 5,400 total cars in the high direction counted between 6:30 am and 7:30 am, 8:00 am and 9:00 am and between 5:00 pm and 6:00 pm, with eight trains per hour during those same hours and 60 seconds delay time per train during those same hours.

$$VT3 = 5,400 \text{ cars in high direction selected three hour period}$$

$$BD3 = 8 \text{ trains} \times 2 \text{ directions} \times 3 \text{ hours} \times 60 \text{ second delay} = 2,880$$

$$PPEI = 5,400 \times 2,880 \times [1/1,350,000] = 11.52$$

Rounding up to next whole number: PPEI Score = 12

- 2. Peak Day Total Delay Exposure Index (PDEI) factor, measured as the product of the existing average daily traffic (ADT), the total number of trains, and an average train crossing delay time factor. **MAXIMUM POINTS = 20****

$$PDEI = PD-ADT \times PD-NT \times ATCDF \times PD-C$$

Where the score is the produce of the above formula, rounded to the next whole number, up to a maximum of 20; and, where

PD-ADT = Peak Day Average Daily Traffic

PD-NT = Peak Day Total Number of Trains

ATCDF = Average Train Crossing Delay Factor, corresponds to point scale as shown in table below.

PD-C = 1/1,000,000, a mathematical constant used for peak day period calculation

Average Train Crossing Delay Factor (ATCDF) Table

From (minutes)	To (minutes)	Points
0.00	0.75	1
0.75	1.00	2
1.00	1.25	3
1.25	1.50	4
1.50	2.00	5
2.00	3.00	6
3.00	4.00	7
4.00	6.00	8
6.00	8.00	9
8.00	10.00	10

Notes:

- a. For crossings where two or more streets that are adjacent to each other that are impacted simultaneously by the operation of the train, the vehicular traffic volume on those streets is cumulative for purposes of the calculation of this congestion relief factor.
- b. Average Annual Daily Traffic can be used for peak day, but ADT for weekday or week-end day may be used as appropriate if available. However, the selected day period shall be the same when counting vehicular and train traffic. As an example, if ADT for weekday is available, the highest train traffic of any day between Monday and Friday can be used for the calculations, and not the week-end day train traffic.
- c. Blocking delay shall be measured as the time period beginning when the warning devices are activated to the time when the warning devices are de-activated.

Example:

At a crossing, there is an arterial with an ADT of 30,000 vehicles on weekdays, 144 daily trains in both directions also on weekdays, averaging 55 seconds per crossing.

$$\begin{aligned}
 \text{PDEI} &= \text{PD-ADT} \times \text{PD-NT} \times \text{ATCDF} \times \text{PD-C} \\
 \text{PD-ADT} &= 30,000 \text{ vehicles on weekdays} \\
 \text{PD-NT} &= 144 \text{ trains in both directions, on weekdays} \\
 \text{ATCDF} &= 2 \text{ points} \\
 \text{PDEI} &= 30,000 \times 144 \times 2 \times [1/1,000,000] = 8.64
 \end{aligned}$$

3. Rounding up to the next whole number: PDEI Score = 9

4. **Accident History:** Accident History in the past five years involving vehicles, pedestrians and bicycles with trains, not including accidents involved in attempted suicides. **MAXIMUM POINTS = 20**

Assign points to according to the following schedule

Number of Qualifying Accidents	1	2	3	4	5+
Points	2	4	6	8	10

Increase the number of points for an accident or accidents by 100% when heavy rail is involved.

5. **Funding Request:** The funding request criterion awards points for amount of funds requested from the program as an equivalent cost benefit criterion by awarding a higher score for those projects that request a lower amount of funds score points are based on the total request for funds, with a cap of \$45 million. **MAXIMUM POINTS = 20**

Note: Minimum 10% participation is required.

Assign points according to the following schedule:

Funding Request (\$millions)	Points (Planning-Level Estimate)	Points (NEPA-Level Estimate)
\$0.0 – \$15.0	10.0	20.0
\$15.1 – \$20.0	8.5	17.0
\$20.1 – \$25.0	7.0	14.0
\$25.1 – \$30.0	5.5	11.0
\$30.1 – \$35.0	4.0	8.0
\$35.1 – \$40.0	2.5	5.0
\$40.1 – \$45.0	1.0	2.0

NEPA: National Environmental Protection Act

6. Pedestrian Benefits

MAXIMUM POINTS = 4

Assign points according to following criteria:

- a. Grade separation would serve 1-50 pedestrians during top 4 hours: 1 point
- b. Grade separation would serve 51-100 pedestrians during top 4 hours: 2 points
- c. Grade separation would serve 101-150 pedestrians during top 4 hours: 3 points
- d. Grade separation would serve more than 150 pedestrians during top 4 hours: 4 points

7. Bus Operations Impacts

MAXIMUM POINTS = 4

Assign points according to following criteria:

- e. Grade separation would serve up to four buses an hour: 1 point
- f. Grade separation would serve from four to eight buses an hour: 2 points
- g. Grade separation would serve from eight to sixteen buses an hour: 3 points
- a. Additional point if the grade crossing is adjacent to a transit center.

8. Noise Reduction

MAXIMUM POINTS = 4

Assign points according to following criteria:

- a. Rail crossing area located within 200 feet of sensitive receptors: 4 points
- b. Rail crossing area located between 200-500 feet of sensitive receptors: 2 points
- c. Rail crossing area located more than 500 feet away from sensitive receptors: 0 points
- d. Sensitive receptors include: Residential areas, hospital, school, house of worship.

Rail crossing area includes crossing plus 200 feet along track in either direction away from crossing.

9. Benefit to Emergency Services

MAXIMUM POINTS = 4

Assign points according to following criteria:

- | | |
|---|----------|
| a. Rail crossing located within ½ mile of emergency service provider and no alternate grade-separated crossing exists within ½ mile: | 4 points |
| b. Rail crossing located between ½ and 1 mile of emergency service provider and no alternate grade-separated crossing exists within ½ mile: | 2 points |
| c. Rail crossing located between 1 and 1½ miles of emergency service provider and no alternate grade-separated crossing exists within ½ mile: | 1 point |
| d. Rail crossing located further than 1½ miles of emergency service provider and no alternate grade-separated crossing exists within ½ mile: | 0 points |

Emergency service providers include services such as police, fire, paramedic, ambulance, and hospital services. Distance is measured as driven distance from crossing.

10. Impact to Truck Freight Operations

MAXIMUM POINTS = 4

Assign points according to the following criteria:

- | | |
|--|----------|
| a. Rail crossing located between freeway and major truck freight transfer point (200+ trucks per day): | 4 points |
| b. Rail crossing located between freeway and medium sized truck freight transfer point (100-200 trucks per day): | 2 points |
| c. Rail crossing located between freeway and medium sized truck freight transfer point (0-100 trucks per day): | 0 points |

Step 2: Once the projects have been prioritized according to the criteria above, consideration for funding would include the following project readiness elements:

- a. Project feasibility (e.g., physical constraints, reliability of cost estimate)
- b. Environmental document status
- c. Right-of-way acquisition status
- d. Permits (e.g., PUC, Coastal Commission, Dep't of Fish & Game, etc.)

Regional Housing Needs Assessment (RHNA) Criteria

As dictated in SANDAG Board Policy Number 033, rail grade separation projects must include incentive points (a minimum of 25 points out of 100 possible) to be given to projects in jurisdictions in which lower income housing units are being produced in accordance with the housing unit figures contained in Alternative 3 of the Board RHNA Memo.

A prioritized list of regional rail grade separation projects has not been created for the 2030 RTP. When a call for projects is made, local jurisdictions must satisfy the requirements of Board Policy Number 033 in order to be eligible for project funding. The Policy states that prior to January 1, 2007 jurisdictions shall have submitted a draft of its housing element to the state Department of Housing and Community Development

(HCD) or have self-certified its housing element in compliance with state law by the due date for the grant application. As of January 1, 2007, jurisdictions are required to have an adopted housing element (which has been found in compliance with state law by HCD or self-certified). Additionally, those jurisdictions that were not able to identify adequate sites to meet their RHNA goals and were required to include a program in their housing elements to identify additional sites by rezoning must be able to demonstrate that they are making progress toward implementing the rezoning program in conformance with the schedule contained in their housing elements. "Making progress" toward implementing the rezoning program is defined as having demonstrated a good faith effort in undertaking the rezoning program described in the housing element.

Incentive points shall be calculated as follows:

1. The jurisdiction has an adopted housing element (which has been found in compliance with state law by HCD or self-certified): **Pass/Fail**
2. Percentage of Alternative 3 low/very low income units produced to be calculated as follows:

$$\text{Percentage of allocated low/very low income units} \times 25 = \text{Incentive Points}$$

Example:

The score is the product of the above formula, rounded to the next whole number, up to a maximum of 25.

Example:

Jurisdiction	Alt. 3 – Low-/ Very-Low Income Units*	Annual Number Year 1	Number Produced Year 1**	Percentage of Alt. 3 Year 1**	Incentive Points**
A	4,322	864	300	35%	9

Jurisdiction	Alt. 3 – Low-/ Very-Low Income Units	Cum. Annual Number Year 2	Cum. Number Produced Year 2**	Percentage of Alt. 3 Cum. Year 2**	Incentive Points Year 2**
A	4,322	1,728	400	23%	6

* 7.5 year number in RHNA Alternative 3 may be modified based on 5-year number included in local housing elements.

** These percentages and numbers are hypothetical for the purpose of explaining the methodology.

REGIONAL RANKING CRITERIA FOR TRANSIT CAPITAL AND REHABILITATION PROJECTS

The regional ranking criteria for transit capital and rehabilitation projects were developed by a committee of staff members from MTS, NCTD, and SANDAG. The proposed criteria are in broad categories to ensure they cover any transit-related funding sources that may become available. The twelve criteria and points assigned to each are described in Tables TA 7.16 and 7.18.

The criteria will be used to evaluate and prioritize the unfunded transit capital and rehabilitation projects for the transit operators in the San Diego region when discretionary funding becomes available, such as through the federal and state legislative processes. The transit operators will provide a list of unfunded projects to SANDAG annually in conjunction with the Capital Improvement Program (CIP) process. When funding becomes available, there will be an opportunity for the agencies to update and revise the list of unfunded projects.

The unfunded project list will be submitted each November/December which would support the annual legislative update in January. The unfunded project list shall include all known transit capital needs that are unfunded for the region. It will comprise a ten-year horizon of capital needs and will identify the state of readiness of each project. When the unfunded list is submitted, the Regional Ranking Criteria for Capital Projects Committee will reconvene to review the project rankings for consensus and consistency among the agencies then provide the final list of unfunded projects to SANDAG.

Table TA 7.16—Regional Ranking Criteria for Transit Capital Replacement and Rehabilitation Projects Definitions

1. Core Transit Assets Beyond Useful Life (Per FTA Definition where available)

Projects replacing vehicles or equipment beyond its useful life will score points with the highest point value given to projects that exceed useful life by 50% or more. The useful life assumption will be provided with the project ranking.

2. Safety

Safety projects that address specific safety hazards within facilities, infrastructure, and the operation of vehicles and equipment identified through on-going system safety management programs, hazard analyses, or similar programs are considered “Major” and would score five points in these categories. Safety projects that enhance the existing safety and security measures are considered moderate and would score three points in these categories.

3. Security

Security projects that address specific, identified security deficiencies in the detection of, or response to, threats to persons, equipment, facilities, or infrastructure from planned acts of violence, life threatening emergencies, or natural disasters identified through formal Threat and Vulnerability Assessments, security audits, or security hazard analysis programs are considered “Major” and would score five points in these categories. Security projects that enhance the existing safety and security measures are considered moderate and would score three points in these categories.

Table TA 7.16—Regional Ranking Criteria for Transit Capital Replacement and Rehabilitation Projects Definitions (cont'd)

4. Ridership (number of people positively impacted)

Projects would score points based on the number of people positively impacted by the project with the highest point value given to projects that impact greater than 10 million passengers annually.

5. Type of Service Impacted

Projects would score points in accordance with Yellow, Red, Blue, and Green Route definitions with the highest point value given to projects that support regional services (Yellow Routes).

6. Regulatory Requirement

Projects that help transit properties meet regulatory requirements and legal mandates resulting from the passage of laws, such as the American's with Disabilities Act and state clean air regulations, would score points with the highest point value given to projects where service is subject to elimination.

7. Operating Cost Impact (Annual Savings/Total Cost)*

Operating cost impact would be calculated by dividing the annual savings by the total project cost with the highest point value given to projects with an operating cost impact of 25% or greater. The estimated cost savings will be provided with the project ranking.

8. Air Quality

Projects that help transit properties meet CARB Urban Bus and public transit support vehicle fleet rules would score points.

9. Contractual Commitment (i.e., shared-use agreements)

Projects that have contractual commitments would score points. Contractual commitments would be e.g., shared use agreements and FFGA's. Procurement contracts would not receive points for this category.

10. Supports Regional Transportation Plan (RTP)

Projects that support the Regional Transportation Plan would score points.

11. Travel Time Savings

Projects would score points based on the travel time savings enhancement provided by the project.

12. Project Readiness

Projects would score points based on how soon it would be ready to initiate the procurement process.

* Formula may be refined as the process progresses

Table TA 7.17—Regional Ranking Criteria for Transit Capital Replacement and Rehabilitation Project

1. Core Transit Assets Beyond Useful Life (per FTA definition where available)	Points	Weight	Total Score
50% beyond end of useful life	5	3	15
35 - 50% beyond the end of useful life	4		12
20 - 35% beyond the end of useful life	3		9
10 - 20% beyond the end of useful life	2		6
Less than 10% beyond end of useful life	1		3
None - new equip/expansion or does not support existing service	0		0

2. Safety	Points	Weight	Total Score
Major	5	3	15
Moderate	3		9
None	0		0

3. Security	Points	Weight	Total Score
Major	5	3	15
Moderate	3		9
None	0		0

4. Ridership (Number of people positively impacted)	Points	Weight	Total Score
Impacts greater than 10 million passengers annually	5	3	15
Impacts 5 to 10 million passengers annually	4		12
Impacts 3 to 5 million passengers annually	3		9
Impacts 1 to 3 million annually	2		6
Impacts less than 1 million annually	1		3
None	0		0

5. Type of Service Impacted	Points	Weight	Total Score
Regional Services (Yellow Routes) – Longer distance travel, highest speeds with few stops, and oriented around major regional centers	5	3	15
Corridor Services (Red Routes) – Arterial-based inter-around community travel, higher speeds with fewer stops, oriented both community and regional destinations	4		12
Local Services (Blue Routes) – Provides basic community mobility, community operating speeds with local stops, and provides community circulation and connections to the regional and corridor network	3		9
Neighborhood Services (Green Routes) – Provides neighborhood circulation, network connections, and needed service coverage, and neighborhood operating speeds with frequent stops.	2		6
None	0		0

Table TA 7.17—Regional Ranking Criteria for Transit Capital Replacement and Rehabilitation Project (cont'd)

6. Regulatory Requirement	Points	Weight	Total Score
Subject to service elimination	5	2	10
Subject to service decrease/interruption	4		8
Significant financial impact - fines/loss of funding/remediation costs	3		6
None	0		0

7. Operating Cost Impact (Annual Savings/Total Cost)	Points	Weight	Total Score
Operating Savings greater than 25%	5	2	10
Operating savings 20% - 25%	4		8
Operating savings 15% - 20%	3		6
Operating savings 10% - 15%	2		4
Operating savings less than 10%	1		2
No cost savings or cost increase	0		0

8. Air Quality	Points	Weight	Total Score
Project allows transit property to meet CARB Urban Bus and public transit support vehicle fleet rules	5	2	10
Contributes to overall air quality in region	3		6
None	0		0

9. Contractual Commitment (e.g., shared-use agreements)	Points	Weight	Total Score
Yes	5	1	5
No	0		0

10. Supports Regional Transportation Plan (RTP)**	Points	Weight	Total Score
Meets five or more RTP Goals	5	1	5
Meets four RTP Goals	4		4
Meets three RTP Goals	3		3
Meets two RTP Goals	2		2
Meets one RTP Goal	1		1
Does not meet any of the RTP goals	0		0

** Mobility, Accessibility, Reliability, Equity, Livability, Sustainability, Efficiency

11. Travel Time Savings	Points	Weight	Total Score
Travel time savings of 15% or greater	5	1	5
Travel time savings of less than 15%	3		3
None	0		0

12. Project Readiness	Points	Weight	Total Score
Ready to initiate procurement within 6 months or less	5	1	5
Ready to initiate procurement within 6 - 12 months	3		3
Ready to initiate procurement within 12 months or longer	0		0

Total Possible Score: 125

REGIONAL ARTERIAL SYSTEM

The Regional Arterial System constitutes that part of the local street and road network which, in conjunction with the system of highways and transit services, provides for a significant amount of mobility throughout the region. The Regional Arterial System defines roads eligible for SANDAG fund allocation and has been updated for the 2030 RTP. A Regional Arterial System has been included as part of the Regional Transportation Plan (RTP) since 1989.

A total of eight local jurisdictions requested additions and modifications to the Regional Arterial System for the 2030 RTP. Their requests were analyzed based upon revised screening criteria adopted by the Transportation Committee on October 20, 2006. The screening criteria are shown in detail below. Based upon the analysis, 86 arterials have been added or modified to the RAS for the 2030 RTP. These modifications increase the RAS mileage by 185 miles bringing the new Regional Arterial System total mileage to 1,038 miles.

Regional Arterial System Screening Criteria

Regional arterials are longer continuous routes that provide accessibility between communities within the region and which also may allow subregional trips to avoid freeway travel. In order to qualify for the updated RAS, arterials must meet at least one of four approved criteria shown below. The first criterion is that the arterial is already included in the existing RAS. Any additions to the network must meet one of the remaining three criteria:

- ▶ Provides parallel capacity in high-volume corridors to supplement freeways, state highways, and/or other regional arterials (*Corridor*).
- ▶ Provides capacity and a direct connection between freeways or other regional arterials, ensuring continuity of the freeway, state highways, and arterial network throughout the region without duplicating other regional facilities (*Cross-corridor*).
- ▶ Provides all or part of the route for existing or planned regional and/or corridor transit service that provides headways of 15 minutes or less during the peak-period.

There are certain design characteristics that can help facilitate regional trip movements on the Regional Arterial System. These characteristics can help to facilitate trip movement and include:

- ▶ Interconnection and systems management of traffic signals
- ▶ Raised or striped medians
- ▶ Limitation and separation of left-turn movements
- ▶ Limited driveway access and other access controls
- ▶ Grade separations at rail crossings
- ▶ Shoulders and bikeways to accommodate bicycle movement
- ▶ Pedestrian treatments at intersections
- ▶ Priority traffic signal systems for transit service
- ▶ Bypass or "queue-jumper" lanes for transit service at critical intersections
- ▶ Enhanced transit stops
- ▶ Pedestrian facilities designed according to the Regional Pedestrian Design Guidelines
- ▶ Modern roundabouts and alternate intersection design where appropriate
- ▶ Freeway interchange modifications in accordance with Caltrans standards

Regional Arterial System projects that have received regional funding programmed in the 2006 Regional Transportation Improvement Program (RTIP) are shown in Table TA 7.18. A complete listing of the Regional Arterial System is provided in Table TA 7.19 and shown in Figure TA 7.1. All freeway interchanges are considered part of the Regional Arterial System.

Table TA 7.18—Regionally Funded Arterial System Projects

SPONSOR	ARTERIAL	LIMITS/ DESCRIPTION	FUNDS (\$1,000s)
City of El Cajon	Jamacha Road	E. Main Street to South City Limit/Widen from four to six lanes	\$490
City of Encinitas	Manchester Avenue/ I-5	Lomas Santa Fe Drive to Manchester Avenue/Modify interchange, widen arterial, and add auxiliary lanes	\$2,125
City of Escondido	Bear Valley/ East Valley Parkway	Orleans Avenue to North City Limit/Widen from two to six lanes	\$7,969
City of Escondido	Nordahl Road/SR 78	Mission Avenue to Montiel Road/Widen arterial and modify interchange	\$300
City of National City	Plaza Boulevard	Highland Avenue to Euclid Avenue/Widen from four to six lanes	\$2,000
City of Poway	Espola Road	Twin Peaks Road to Titan Way/Widen from two to four lanes	\$290
City of San Diego	Friars Road/SR 163	Fashion Valley Road to Frazee Road/Widen arterial and modify interchange	\$2,252
City of San Diego	I-5/Genesee	Replace Genesee Avenue Overcrossing	\$963
City of San Diego	El Camino Real	Via de la Valle to San Dieguito Road/Widen arterial	\$2,680
City of Solana Beach	Lomas Santa Fe Drive/ I-5	Via De La Valle to Lomas Santa Fe Drive/Modify interchange, widen arterial, and add auxiliary lanes	\$2,525
City of Vista	West Vista Way	Thunder Drive to Melrose Drive/Widen from two to four lanes	\$990
County of SD	South Santa Fe Avenue	Montgomery Lane to Smilax Road/Widen from two to four lanes	\$9,200
County of SD	SR 67/ Bradley Avenue	Magnolia Avenue to Graves Avenue/Widen arterial and modify interchange	\$750
TOTAL:			\$32,534

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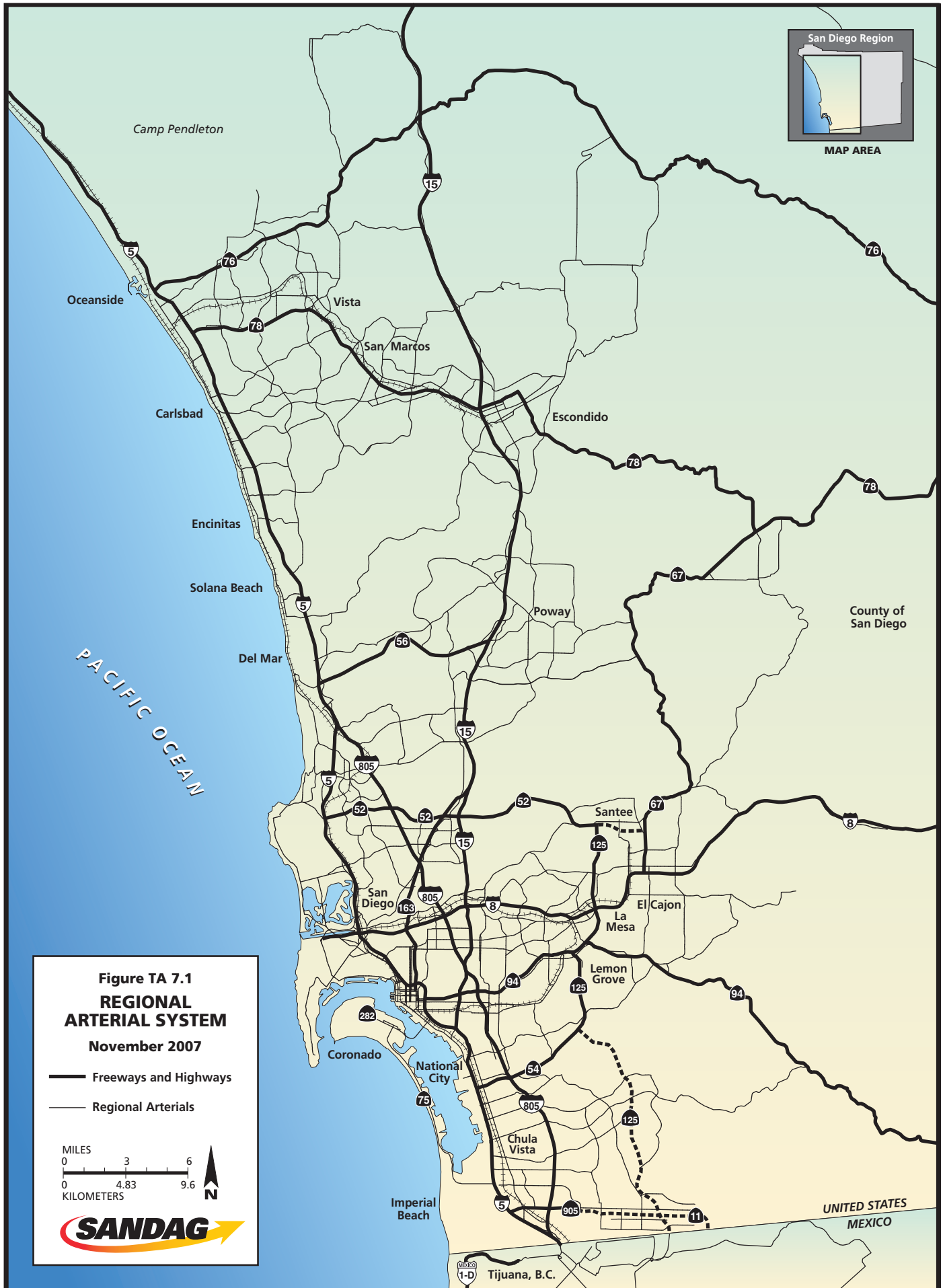


Figure TA 7.1
REGIONAL
ARTERIAL SYSTEM
 November 2007

— Freeways and Highways
 — Regional Arterials

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SANDAG

Table TA 7.19—Regional Arterials by Jurisdiction

Arterial	Limits	Jurisdiction
1 Cannon Road	Carlsbad Boulevard to Buena Vista Drive	Carlsbad
2 Carlsbad Boulevard	Eaton Street to La Costa Avenue	Carlsbad
3 Carlsbad Village Drive	Interstate 5 to Coast Boulevard/Coast Highway	Carlsbad
4 College Boulevard	City of Oceanside to Palomar Airport Road	Carlsbad
5 El Camino Real (S-11)	State Route 78 to Olivenhain	Carlsbad
6 Faraday Avenue	Melrose Drive to College Boulevard	Carlsbad
7 La Costa Avenue	Interstate 5 to El Camino Real	Carlsbad
8 Melrose Drive	City of Vista to Rancho Santa Fe Road	Carlsbad
9 Olivenhain Road	Los Pinos Circle to Rancho Santa Fe Road	Carlsbad
10 Palomar Airport Road	Carlsbad Boulevard to Business Park Drive	Carlsbad
11 Poinsettia Lane	Carlsbad Boulevard to Melrose Drive	Carlsbad
12 Rancho Santa Fe Road	Melrose Drive to Olivenhain Road	Carlsbad
13 Bonita Road	1st Avenue to Interstate 805	Chula Vista
14 Broadway	C Street to Main Street	Chula Vista
15 E Street	Interstate 5 to Bonita Road	Chula Vista
16 East H Street	Hilltop Drive to Mount Miguel Road	Chula Vista
17 H Street	Interstate 5 to Hilltop Drive	Chula Vista
18 Hunte Parkway	Proctor Valley Road to State Route 125	Chula Vista
19 L Street	Interstate 5 to Interstate 805	Chula Vista
20 La Media Road	Telegraph Canyon Road to City of San Diego	Chula Vista
21 Main Street	Interstate 5 to Interstate 805	Chula Vista
22 Olympic Parkway	Interstate 805 to State Route 125	Chula Vista
23 Orange Avenue	Palomar Street to Interstate 805	Chula Vista
24 Otay Lakes Road	Bonita Road to Wueste Road	Chula Vista
25 Otay Valley Road (Main Street)	Interstate 805 to Heritage Road	Chula Vista
26 Palomar Street	Interstate 5 to Orange Avenue	Chula Vista
27 Paseo Ranchero (Heritage Road)	East H Street to City of San Diego	Chula Vista
28 Proctor Valley Road	Mt. Miguel Road to Hunte Parkway	Chula Vista
29 Telegraph Canyon Road	Interstate 805 to Otay Lakes Road	Chula Vista
30 Willow Street	Sweetwater Road to Bonita Road	Chula Vista
31 State Route 75	City of San Diego to City of Imperial Beach	Coronado
32 Via de la Valle	Highway 101 to Jimmy Durante Boulevard	Del Mar
33 2nd Street	Greenfield Drive to Main Street	El Cajon
34 Avocado Avenue	Main Street to Chase Avenue	El Cajon
35 Avocado Boulevard	Chase Avenue to Dewitt Court	El Cajon
36 Ballantyne Street	Broadway to Main Street	El Cajon
37 Bradley Avenue	Marshall Avenue to County of San Diego	El Cajon
38 Broadway	State Route 67 to East Main Street	El Cajon
39 Cuyamaca Street	City of Santee to Marshall Avenue	El Cajon
40 E Main Street	Broadway to Greenfield Drive	El Cajon

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

41	El Cajon Boulevard	Chase Avenue to Washington Avenue	El Cajon
42	Fletcher Parkway	City of La Mesa to State Route 67	El Cajon
43	Greenfield Drive	East Main Street to Interstate 8	El Cajon
44	Jamacha Road	Main Street to Grove Road	El Cajon
45	Marshall Avenue	Cuyamaca to Fletcher Parkway	El Cajon
46	Marshall Avenue	Fletcher Parkway to West Main Street	El Cajon
47	Marshall Avenue	West Main Street to Washington Avenue	El Cajon
48	Navajo Road	Fanita Drive to Fletcher Parkway	El Cajon
49	Washington Avenue	El Cajon Boulevard to Jamacha Road	El Cajon
50	West Main Street	Interstate 8 to Marshall Avenue	El Cajon
51	Coast Highway	City of Carlsbad to City of Solana Beach	Encinitas
52	El Camino Real	Olivenhain to Manchester Avenue	Encinitas
53	Encinitas Boulevard	Coast Highway 101 to El Camino Real	Encinitas
54	La Costa Avenue	Coast Highway 101 to Interstate 5	Encinitas
55	Leucadia Boulevard	Coast Highway 101 to El Camino Real	Encinitas
56	Manchester Avenue	El Camino Real to Interstate 5	Encinitas
57	Olivenhain Road	El Camino Real to Los Pinos Circle	Encinitas
58	Barham Drive	Los Amigos to Mission Road	Escondido
59	Centre City Parkway	Country Club Lane (Interstate 15) to South Escondido Boulevard/South Centre City Parkway (Interstate 15)	Escondido
60	Citracado Parkway	Centre City Parkway to State Route 78	Escondido
61	East Valley Parkway	Broadway to Valley Center Grade Road	Escondido
62	East Via Rancho Parkway	Broadway to Sunset Drive	Escondido
63	El Norte Parkway	Nordahl Road to Washington Avenue	Escondido
64	El Norte Parkway	Woodland Parkway to Rees Road	Escondido
65	Felicita/17th Avenue	Interstate 15 to State Route 78	Escondido
66	Grand Avenue/2nd Avenue/Valley Boulevard	West Valley Parkway to East Valley Parkway	Escondido
67	Hale Avenue	Washington Avenue to Interstate 15	Escondido
68	Lincoln/Ash Parkway	Broadway to Washington Avenue	Escondido
69	Mission Avenue	Andreason Drive to Centre City Parkway	Escondido
70	Mission Road	Barham Drive to Andreason Drive	Escondido
71	Via Rancho Parkway	Del Dios Highway to Sunset Drive	Escondido
72	Washington Avenue	State Route 78 to East Valley Parkway	Escondido
73	West Valley Parkway	Claudan Road to Broadway	Escondido
74	State Route 75	City of Coronado to City of San Diego	Imperial Beach
75	70th Street	University Avenue to Colony Road	La Mesa
76	70th Street	Saranac Street to Interstate 8	La Mesa
77	El Cajon Boulevard	73rd Street to Interstate 8	La Mesa
78	Fletcher Parkway	Interstate 8 to City of El Cajon	La Mesa
79	Grossmont Center Drive	Interstate 8 to Fletcher Parkway	La Mesa
80	Jackson Drive	La Mesa Boulevard to North City limits	La Mesa

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

Arterial	Limits	Jurisdiction
81 La Mesa Boulevard	University Avenue to Interstate 8	La Mesa
82 Lake Murray	Interstate 8 to Dallas Street	La Mesa
83 Massachusetts Avenue	State Route 94 to University Avenue	La Mesa
84 Spring Street	Interstate 8 to State Route 125	La Mesa
85 University Avenue	69th Street to La Mesa Boulevard	La Mesa
86 Broadway	Spring Street to Lemon Grove Avenue	Lemon Grove
87 College Avenue	Livingston Street to Federal Boulevard	Lemon Grove
88 Federal Boulevard	College Avenue to State Route 94	Lemon Grove
89 Lemon Grove Avenue	Viewcrest to State Route 94	Lemon Grove
90 Massachusetts Avenue	Broadway to State Route 94	Lemon Grove
91 Massachusetts Avenue	Lemon Grove Avenue to Broadway	Lemon Grove
92 Sweetwater Road	Broadway to Troy Street	Lemon Grove
93 30th Street	National City Boulevard to 2nd Street	National City
94 Euclid Avenue	Cervantes Avenue to Sweetwater Road	National City
95 Harbor Drive	City of San Diego to Interstate 5	National City
96 National City Boulevard	Division Street to 30th Street	National City
97 Palm Avenue	Interstate 805 to 18th Street	National City
98 Paradise Valley Road	8th Street to Plaza Boulevard	National City
99 Plaza Boulevard	National City Boulevard to 8th Street	National City
100 Sweetwater Road	2nd Street to Plaza Bonita Center Way	National City
101 Coast Highway	Interstate 5 to Eaton Street	Oceanside
102 College Boulevard	North River Road to State Route 78	Oceanside
103 El Camino Real	Douglas Drive to State Route 78	Oceanside
104 Melrose Drive	State Route 76 to Rancho Santa Fe Road	Oceanside
105 Mission Avenue	Coast Highway to Frazee Road	Oceanside
106 North River Road	Douglas Drive to State Route 76	Oceanside
107 North Santa Fe Avenue	State Route 76 to Melrose Drive	Oceanside
108 Oceanside Boulevard	Hill Street to Melrose Drive	Oceanside
109 Rancho del Oro Drive	State Route 78 to State Route 76	Oceanside
110 Vandegrift Boulevard	North River Road to Camp Pendleton	Oceanside
111 West Vista Way	Jefferson Street to Thunder Drive	Oceanside
112 Camino del Norte	World Trade Drive to Pomarado Road	Poway
113 Community Road	Twin Peaks Road to Scripps Poway Parkway	Poway
114 Espola Road	Summerfield Lane to Poway Road	Poway
115 Pomerado Road	Stonemill Drive to Gateway Park Road	Poway
116 Poway Road	Springhurst Drive to State Route 67	Poway
117 Scripps Poway Parkway	Springbrook to Sycamore Canyon Road	Poway
118 Ted Williams Parkway	Pomerado Road to Twin Peaks Road	Poway
119 Twin Peaks Road	Pomarado Road to Espola Road	Poway
120 1st Avenue	Harbor Drive to Interstate 5	San Diego City

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

Arterial	Limits	Jurisdiction
121 4th Avenue	Market Street to Washington Street	San Diego City
122 5th Avenue	Market Street to Washington Street	San Diego City
123 6th Avenue	Ash Street to State Route 163	San Diego City
124 10th Avenue	State Route 163 to Imperial Avenue	San Diego City
125 11th Avenue	G Street to State Route 163	San Diego City
126 32nd Street	Harbor Drive to Wabash Boulevard	San Diego City
127 47th Street	State Route 94 to Interstate 805	San Diego City
128 54th Street	El Cajon Boulevard to Euclid Avenue	San Diego City
129 70th Street	Colony Road to Saranac Street	San Diego City
130 A Street	11th Avenue to Kettner Boulevard	San Diego City
131 Adams Avenue	Park Boulevard to Interstate 15	San Diego City
132 Aero Drive	State Route 163 to Interstate 15	San Diego City
133 Airway Road	Caliente to State Route 125	San Diego City
134 Ash Street	Harbor Drive to 10th Avenue	San Diego City
135 Auto Circle	Camino del Rio North to Camino del Rio South	San Diego City
136 Balboa Avenue	Mission Bay Drive to Interstate 15	San Diego City
137 Barnett Avenue	Lytton Street to Pacific Highway	San Diego City
138 Bernardo Center Drive	Camino del Norte to Interstate 15	San Diego City
139 Beyer Boulevard	Main Street to East Beyer Boulevard	San Diego City
140 Beyer Way	Main Street to Palm Avenue	San Diego City
141 Britannia Boulevard	Otay Mesa Road to Siempre Viva Road	San Diego City
142 Black Mountain Road	Del Mar Heights to Carroll Canyon Road	San Diego City
143 Broadway	Harbor Drive to 11th Avenue	San Diego City
144 Cabrillo Memorial Drive	Cochran Street to Cabrillo National Monument	San Diego City
145 Camino del Norte	Camino San Bernardo to World Trade Drive	San Diego City
146 Camino del Rio North	Mission Center Road to Mission Gorge Road	San Diego City
147 Camino Ruiz	Mira Mesa Boulevard to Miramar Road	San Diego City
148 Camino Ruiz	State Route 56 to Camino del Norte	San Diego City
149 Camino Santa Fe Avenue	Sorrento Valley Boulevard to Miramar Road	San Diego City
150 Canon Street	Rosecrans Street to Catalina Boulevard	San Diego City
151 Carmel Mountain Road	Camino del Norte to Rancho Peñasquitos Boulevard	San Diego City
152 Carmel Mountain Road	Sorrento Valley Road to El Camino Real	San Diego City
153 Carmel Valley Road	North Torrey Pines Road to El Camino Real	San Diego City
154 Catalina Boulevard	Canon Street to Cochran Street	San Diego City
155 Clairemont Drive	Clairemont Mesa Boulevard to Interstate 5	San Diego City
156 Clairemont Mesa Boulevard	Interstate 15 to Regents Road	San Diego City
157 College Avenue	Navajo Road to Livingston Street	San Diego City
158 Collwood Boulevard	Montezuma Road to El Cajon Boulevard	San Diego City
159 Convoy Street	Linda Vista Road to State Route 52	San Diego City
160 Cesar E. Chavez Parkway	Interstate 5 to Harbor Drive	San Diego City

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

Arterial	Limits	Jurisdiction
161 Dairy Mart Road	State Route 905 to Interstate 5	San Diego City
162 Del Dios Highway	Via Rancho Parkway to Claudan Road	San Diego City
163 Del Mar Heights Road	Interstate 5 to Carmel Valley Road	San Diego City
164 El Cajon Boulevard	Park Boulevard to 73rd Street	San Diego City
165 El Camino Real	Via de la Valle to Carmel Mountain Road	San Diego City
166 Euclid Avenue	54th Street to Cervantes Avenue	San Diego City
167 F Street	State Route 94 to 10th Avenue	San Diego City
168 Fairmount Avenue	Interstate 8 to State Route 94	San Diego City
169 Friars Road	Sea World Drive to Mission Gorge Road	San Diego City
170 Front Street	Interstate 5 to Market Street	San Diego City
171 G Street	State Route 94 to 10th Avenue	San Diego City
172 Garnet Avenue	Balboa Avenue to Mission Bay Drive	San Diego City
173 Genesee Avenue	North Torrey Pines Road to State Route 163	San Diego City
174 Gilman Drive	La Jolla Village Drive to Interstate 5	San Diego City
175 Grand Avenue	Mission Boulevard to Mission Bay Drive	San Diego City
176 Governor Drive	Interstate 805 to Regents Road	San Diego City
177 Grape Street	North Harbor Drive to Interstate 5	San Diego City
178 Harbor Drive	Pacific Highway to City of National City	San Diego City
179 Hawthorn Street	Interstate 5 to North Harbor Drive	San Diego City
180 Heritage Road	Otay Mesa Road to Siempre Viva Road	San Diego City
181 Heritage Road	Otay Valley Road to City of Chula Vista	San Diego City
182 Imperial Avenue	Park Boulevard to Lisbon Street	San Diego City
183 Ingraham Street	Sunset Cliffs Boulevard to Grand Avenue	San Diego City
184 Kearny Villa Road	Pomarado Road to Aero Drive	San Diego City
185 Kettner Boulevard	Interstate 5 to India Street	San Diego City
186 La Jolla Boulevard	Pearl Street to Turquoise Street	San Diego City
187 La Jolla Parkway	Torrey Pines Road to Interstate 5	San Diego City
188 La Jolla Shores Drive	Torrey Pines Road to North Torrey Pines Road	San Diego City
189 La Jolla Village Drive	North Torrey Pines Road to Interstate 805	San Diego City
190 La Media Road	Otay Mesa Road to Siempre Viva Road	San Diego City
191 Lake Murray Boulevard	Dallas Street to Navajo Road	San Diego City
192 Laurel Street	North Harbor Drive to Interstate 5	San Diego City
193 Lemon Grove Avenue	Lisbon Street to Viewcrest	San Diego City
194 Linda Vista Road	Morena Boulevard to Convoy Street	San Diego City
195 Lytton Street	Rosecrans Street to Barnett Avenue	San Diego City
196 Market Street	Harbor Drive to Euclid Avenue	San Diego City
197 Mercy Road	Black Mountain Road to Interstate 15	San Diego City
198 Mesa College Drive	Interstate 805 to Marlesta Drive	San Diego City
199 Midway Drive	West Point Loma Boulevard to Barnett Avenue	San Diego City
200 Mira Mesa Boulevard	Interstate 805 to Interstate 15	San Diego City

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

Arterial		Limits	Jurisdiction
201	Miramar Road	Interstate 805 to Interstate 15	San Diego City
202	Mission Boulevard	Loring Street to West Mission Bay Drive	San Diego City
203	Mission Bay Drive	Grand Avenue to Interstate 5	San Diego City
204	Mission Center Road	Camino del Rio North to Friars Road	San Diego City
205	Mission Gorge Road	Interstate 8 to Highridge Road	San Diego City
206	Montezuma Road	Fairmount Avenue to El Cajon Boulevard	San Diego City
207	Morena Boulevard	Balboa Avenue to Interstate 8	San Diego City
208	Navajo Road	Waring Road to Fanita Drive	San Diego City
209	Nimitz Boulevard	Interstate 8 to Harbor Drive	San Diego City
210	North Harbor Drive	Rosecrans Street to Grape Street	San Diego City
211	North Torrey Pines Road (S-21)	Carmel Valley Road to La Jolla Village Drive	San Diego City
212	Ocean View Hills Parkway	Interstate 805 to State Route 905	San Diego City
213	Otay Mesa Road	State Route 905 to State Route 125	San Diego City
214	Pacific Highway	Sea World Drive to Harbor Drive	San Diego City
215	Palm Avenue	State Route 75 to Interstate 805	San Diego City
216	Paradise Valley Road	Plaza Boulevard to Meadowbrook Drive	San Diego City
217	Park Boulevard	Imperial Avenue to Adams Avenue	San Diego City
218	Picador Boulevard	Palm Avenue to Interstate 905	San Diego City
219	Pomerado Road	Interstate 15 (north) to Interstate 15 (south)	San Diego City
220	Poway Road	Interstate 15 to Springhurst Drive	San Diego City
221	Qualcomm Way	Interstate 8 to Friars Road	San Diego City
222	Rancho Bernardo Road	Interstate 15 to Summerfield Lane	San Diego City
223	Rancho Carmel Drive	Carmel Mountain Road to Ted Williams Parkway	San Diego City
224	Rancho Peñasquitos Boulevard	State Route 56 to Interstate 15	San Diego City
225	Regents Road	Genesee Avenue to Clairemont Mesa Boulevard	San Diego City
226	Rosecrans Street	Interstate 8 to Canon Street	San Diego City
227	Ruffin Road	Kearny Villa Road to Aero Drive	San Diego City
228	Sabre Springs Parkway	Ted Williams Parkway to Poway Road	San Diego City
229	San Ysidro Boulevard	Dairy Mart Road to East Beyer Boulevard	San Diego City
230	Scripps Poway Parkway	Interstate 15 to Springbrook Drive	San Diego City
231	Sea World Drive	West Mission Bay Drive to Morena Boulevard	San Diego City
232	Siempre Viva Road	Heritage Road to State Route 905	San Diego City
233	Sorrento Valley Boulevard	Sorrento Valley Road to Camino Santa Fe Avenue	San Diego City
234	Sports Arena Boulevard	Interstate 8 to Rosecrans Street	San Diego City
235	Sunset Cliffs Boulevard	Interstate 8 to West Mission Bay Drive	San Diego City
236	Ted Williams Parkway	Interstate 15 to Pomerado Road	San Diego City
237	Texas Street	Interstate 8 to University Avenue	San Diego City
238	Torrey Pines Road	Girard Avenue to La Jolla Parkway	San Diego City
239	University Avenue	State Route 163 to City of La Mesa	San Diego City
240	Valencia Parkway	Market Street to Imperial Avenue	San Diego City

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

Arterial	Limits	Jurisdiction
241 Via de la Valle	Jimmy Durante Boulevard to El Camino Real	San Diego City
242 Vista Sorrento Parkway	Sorrento Valley Boulevard to Carmel Mountain Road	San Diego City
243 Wabash Boulevard	32nd Street to Interstate 5	San Diego City
244 Washington Street	Pacific Highway to Park Boulevard	San Diego City
245 Waring Road	College Avenue to Interstate 8	San Diego City
246 West Bernardo Drive	Interstate 15 to Bernardo Center Drive	San Diego City
247 West Mission Bay Drive	Mission Boulevard to Sunset Cliffs Boulevard	San Diego City
248 Woodman Street	State Route 54 to Imperial Avenue	San Diego City
249 Alpine Boulevard	Interstate 8/Dunbar Lane to Interstate 8/Willows Road	San Diego County
250 Avocado Boulevard	Dewitt Court to State Route 94	San Diego County
251 Bear Valley Parkway	City of Escondido (north) to City of Escondido (south)	San Diego County
252 Bonita Road	Interstate 805 to San Miguel Road	San Diego County
253 Borrego Springs/Yaqui Pass Road (S-3)	Palm Canyon Drive (S-22) to State Route 78	San Diego County
254 Bradley Avenue	Wing Avenue to Winter Garden Boulevard	San Diego County
255 Buckman Springs/Sunrise Highway (S-1)	State Route 94 to State Route 79	San Diego County
256 Buena Creek Road	South Santa Fe Avenue to Twin Oaks Valley Road	San Diego County
257 Camino del Norte	Rancho Bernardo Road to City of San Diego	San Diego County
258 Campo Road	Spring Street to Sweetwater Springs/State Route 54	San Diego County
259 Citracado Parkway	Greenwood Place to Interstate 15	San Diego County
260 Cole Grade Road	State Route 76 to Valley Center Road	San Diego County
261 Deer Springs Road	Twin Oaks Valley Road to Interstate 15	San Diego County
262 Dehesa Road	Jamacha Road to Harbison Canyon Road	San Diego County
263 Dehesa Road*	Harbison Canyon Road to Sycuan Road	San Diego County
264 Del Dios Highway	Via Rancho Parkway to Paseo de Delicias	San Diego County
265 Dye Road	State Route 67 to San Vicente Road	San Diego County
266 Dye Street	State Route 67 to Dye Road	San Diego County
267 East Vista Way	State Route 76 to City of Vista	San Diego County
268 El Norte Parkway	Rees Road to Nordahl Road	San Diego County
269 Euclid Avenue	City of National City to City of National City	San Diego County
270 Gamble Lane	Eucalyptus Avenue to City of Escondido	San Diego County
271 Gopher Canyon Road	East Vista Way to Old Highway 395	San Diego County
272 Jamancha Road	City of El Cajon to State Route 94	San Diego County
273 Jamancha Road	State Route 125 to State Route 94	San Diego County
274 Keyes Road (Southern Traffic Bypass)	San Vicente Road to State Route 78 (Julian Road)	San Diego County
275 Lake Jennings Park Road	State Route 67 to Interstate 8	San Diego County
276 Lake Wohlford Road	Valley Center Road (north) to Valley Center Road (south)	San Diego County
277 Las Posas Road	City of San Marcos to Buena Creek Road	San Diego County
278 Lone Star Road	City of San Diego to Loop Road	San Diego County
279 Mapleview Street	State Route 67 to Lake Jennings Road	San Diego County
280 Mar Vista Drive	City of Oceanside to City of Vista	San Diego County

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

Arterial	Limits	Jurisdiction
281 Melrose Drive	City of Oceanside to City of Vista	San Diego County
282 Mission Road (S-13)	Interstate 15 to State Route 76	San Diego County
283 Mountain Meadow Road	Interstate 15/Deer Springs Road to Valley Center Road	San Diego County
284 Montezuma Valley/Palm Canyon (S-22)	State Route 79 to Imperial County Line	San Diego County
285 Nordahl Road	El Norte to City of San Marcos	San Diego County
286 Old Highway 80	Buckman Springs Road to Interstate 8 (In-ko-pah)	San Diego County
287 Old Highway 80	State Route 79 to Sunrise Highway	San Diego County
288 Old Highway 395/Champagne/ North Centre City	East Mission Road to City of Escondido	San Diego County
289 Otay Lakes Road	Wueste Road to State Route 94	San Diego County
290 Otay Mesa Road	City of San Diego to Loop Road	San Diego County
291 Paradise Valley Road	City of San Diego to Sweetwater Road	San Diego County
292 Paseo Delicias	El Camino del Norte to Via de la Valle	San Diego County
293 Rancho Bernardo Road	City of San Diego (west) to City of San Diego (east)	San Diego County
294 San Felipe Road/Overland Route (S-2)	County Route S-22 to Imperial County Line	San Diego County
295 San Vicente Road/10th Street	State Route 67 (Main Street) to Wildcat Canyon Road	San Diego County
296 Scripps Poway Parkway	Sycamore Canyon Road to State Route 67	San Diego County
297 Siempre Viva Road	City of San Diego to Loop Road	San Diego County
298 South Santa Fe Avenue	City of Vista to City of San Marcos	San Diego County
299 Sunrise Highway	State Route 79 to Interstate 8	San Diego County
300 Sweetwater Road (Bonita)	Willow Street to City of National City	San Diego County
301 Sweetwater Road (Spring Valley)	Jamacha Boulevard to Broadway	San Diego County
302 Sweetwater Springs Boulevard	Jamacha Boulevard to State Route 94	San Diego County
303 Valley Center Road	State Route 76 to City of Escondido	San Diego County
304 Valley Center New Northern E to W Road	Cole Grade Road to Old Highway 395	San Diego County
305 Via de la Valle	City of San Diego to Paseo Delicias	San Diego County
306 Via Rancho Parkway	Del Dios Highway to City of Escondido	San Diego County
307 Wildcat Canyon Road*	Mapleview Street to San Vicente Road	San Diego County
308 Willow Glen Drive	Jamacha Road to Dehesa Road	San Diego County
309 Willows Road	Interstate 8 to Viejas Casino	San Diego County
310 Winter Gardens Boulevard	State Route 67 to 2nd Street	San Diego County
311 Barham Drive	Twin Oaks Valley Road to Los Amigos	San Marcos
312 Borden Road	Las Posas Road to Woodland Parkway	San Marcos
313 Buena Creek Road	Twin Oaks Valley Road to Sunny Vista Lane	San Marcos
314 Discovery Street	San Marcos Boulevard to Twin Oaks Valley Road	San Marcos
315 Las Posas Road	West San Marcos Boulevard to North City Limits	San Marcos
316 Mission Road	Pacific Street to Barham Drive	San Marcos
317 San Elijo Road	Twin Oaks Valley Road to Rancho Santa Fe Road	San Marcos
318 Rancho Santa Fe Road	Mission Road to Melrose Drive	San Marcos
319 San Marcos Boulevard	Business Park Drive to Mission Road	San Marcos
320 South Santa Fe Avenue	Smilax Road to Pacific Street	San Marcos

Table TA 7.19—Regional Arterials by Jurisdiction (cont’d)

Arterial	Limits	Jurisdiction
321 Twin Oaks Valley Road	Deer Springs Road to Questhaven Road	San Marcos
322 Woodland Parkway	Barham Drive to El Norte Parkway	San Marcos
323 Cuyamaca Street	Mission Gorge Road to City of El Cajon	Santee
324 Magnolia Avenue	Mast Boulevard to Prospect Avenue/State Route 67	Santee
325 Mast Boulevard	State Route 52 to Magnolia Avenue	Santee
326 Mission Gorge Road	City of San Diego to Magonia Avenue	Santee
327 Woodside Avenue	Magnolia Avenue to State Route 67	Santee
328 Coast Highway	City of Encinitas to City of Del Mar	Solana Beach
329 Lomas Santa Fe Avenue	Interstate 5 to Coast Highway	Solana Beach
330 Bobier Drive	North Melrose Drive to East Vista Way	Vista
331 Cannon Road (Mar Vista Drive)	South Melrose Drive to State Route 78	Vista
332 East Vista Way	Escondido Avenue to County of San Diego	Vista
333 Emerald Drive	Sunset Drive to State Route 78	Vista
334 Escondido Avenue	State Route 78 to E. Vista Way	Vista
335 North Melrose Drive	State Route 78 to Bobier Drive	Vista
336 North Santa Fe Avenue	Main Street to North Melrose Drive	Vista
337 Olive Avenue	Emerald Drive to Vista Village Drive	Vista
338 South Melrose Drive	City of Carlsbad to State Route 78	Vista
339 South Santa Fe Avenue	Main Street to County of San Diego	Vista
340 Sycamore Avenue	South Santa Fe Avenue to South Melrose Drive	Vista
341 Thibodo Road	Mar Vista Drive (Cannon Road) to Sycamore Avenue	Vista
342 Vista Village Drive	State Route 78 to Escondido Avenue	Vista
343 West Vista Way	Thunder Drive to Vista Village Drive	Vista

bold = added to Regional Arterial System with 2030 RTP

* Included in Regional Arterial System contingent upon being designated as a four-lane arterial by the County of San Diego.