

Technical Appendix 20

SANDAG Federal Congestion Management Process

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2050 Regional Transportation Plan

Introduction

Federal Highway Administration 23 CFR 450.320 requires that each transportation management area (TMA) address congestion management through a process involving an analysis of multimodal metropolitan wide strategies that are cooperatively developed to foster safety and integrated management of new and existing transportation facilities eligible for federal funding. The requirements specifically state that “in TMAs designated as nonattainment for ozone or carbon monoxide, the congestion management process shall provide an appropriate analysis of reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for single occupancy vehicles (SOV) is proposed to be advanced with Federal funds.” Additionally the guidelines state that “federal funds may not be programmed for any project that will result in a significant increase in the carrying capacity for SOVs (i.e., a new general purpose highway on a new location or adding general purpose lanes, with the exception of safety improvements or the elimination of bottlenecks), unless the project is addressed through a congestion management process meeting the requirements of this section.”

SANDAG was designated as the TMA for the San Diego region. The 2050 RTP meets the requirements of 23 CFR 450.320 by incorporating the following federal congestion management process; performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-SOV analysis, land use impact analysis, the provision of congestion management tools, and integration with the regional transportation improvement program (RTIP) process.

Background

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the State CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region’s continued compliance with the Federal congestion management process.

Regional Transportation System

The 2050 Regional Transportation Plan (2050 RTP) includes a regional transportation system of highways, regional transit service, and regional arterials. Chapter 6 of the 2050 RTP provides a comprehensive overview of the components of systems development for the regional transportation network including the regional transit strategy, flexible roadway system, goods movement strategy, aviation and ground access, active transportation, and planning across borders components.

Performance Monitoring

The 2050 RTP includes a variety of strategies to enhance regional transportation systems management including multimodal traffic management techniques, as well as new techniques related to both improving performance monitoring, and information and services to regional transportation systems users. Chapter 7 of the 2050 RTP provides a comprehensive overview of systems management techniques including

performance monitoring. Performance monitoring reports include the State of Commute Report, Regional Comprehensive Plan (RCP) Monitoring Report, the *TransNet* Independent Taxpayer Oversight Committee (ITOC) Quarterly Corridor Performance Report, as well as the Coordinated Public Transit – Human Services Transportation Plan (Coordinated Plan) Quarterly Transit Performance Monitoring Report.

The State of the Commute, RCP Monitoring, and ITOC Quarterly Corridor Performance reports include and are not limited to monitoring:

- Freeway miles traveled per person during weekdays
- Percent of roadways traveled (freeways versus local roads) versus total lane miles (freeways versus local roads)
- Regional travel by transit
- Total transit, rail, and bus ridership
- San Diego regional annual transit boardings
- Transit use in well served areas
- Regional commute mode shares
- Drive alone mode share
- Alternative Transportation Mode share (carpool/vanpool, public transit, walk, bike, telework, other)
- Auto and transit passenger travel times and travel volumes in key corridors
- Annual hours of traffic delay per traveler
- Annual peak period delay during weekends

- Regional bottlenecks determined by annual freeway delay (vehicle hours) per lane mile
- Delay by freeway during commute periods
- Annual freeway delay by major corridor per traveler (estimated)

The State of the Commute Report is updated annually, while the RCP Monitoring Report is updated biennially.

The Quarterly Transit Performance Monitoring Report includes monitoring the efficiency and productivity of transit operating services by service type. These indicators include:

- Operating cost per passenger
- Operating cost per revenue hour
- Passengers per revenue hour
- Passengers per revenue mile
- Revenue hours per employee
- Farebox recovery rate

The Coordinated Plan also includes annual transit performance indicators by service route for both the Metropolitan Transit System (MTS) and North County Transit District (NCTD). This plan is updated annually.

Multimodal Alternatives and Non-Single Occupancy Vehicle Analysis

SANDAG incorporates multimodal alternative and non-SOV analysis throughout all levels of planning and/or programming for transportation project improvements. These forms of analysis are incorporated whether the project improvement relates to an SOV or non-SOV capacity increasing improvement. The three primary areas of project development involved in this analysis include

regionwide study analysis through the RTP and RTIP, corridor study analysis, and local level analysis.

Regionwide Study Analysis

The RTP serves as the long-range transportation plan for the San Diego region. Updated every four years, the RTP incorporates recommendations from various corridor studies, transit studies, and project study reports. All projects, services, and programs are evaluated and prioritized for future funding. The RTP also includes regionwide and corridor level performance indicators that are reflective of a multimodal approach and inform the development and management of the most effective long-term transportation system, as well as demand management strategies for minimizing and/or managing anticipated congestion. Technical Appendices 3 and 4 provide a comprehensive overview of the development of the 2050 RTP transportation project evaluation criteria and plan performance measures and methodologies.

The RTIP serves as the short-term programming document that implements the RTP, and includes projects funded with federal, state, and local transportation funding. These projects include regionally significant capacity increasing projects (as identified in the RTP), minor projects, maintenance and operations projects and other exempt projects. For the regionally significant capacity increasing projects including SOV capacity increasing projects, the RTIP relies on the process implemented through the RTP for the coordination and consultation involved in developing and establishing the congestion management strategies. The projects included in the RTIP are the end result of implementing the process established in the RTP.

Corridor Study Analysis

Corridor studies incorporate RTP long-range multimodal transportation projects including operational improvements, highway capacity increasing improvements, transit service improvements, active transportation, and transportation demand management (TDM) and transportation systems management (TSM), etc. Corridor studies allow for opportunities to highlight the need for additional transportation improvements and/or the future planning development of projects as related to the RTP. Examples of recent SANDAG corridor studies include:

- I-15 Managed Lanes Study
- I-5 South Multimodal Corridor Study
- SR 78 Corridor Study

Other corridor studies include transportation concept summaries (TCS) and project study reports (PSR) developed by Caltrans and corridor system management plans (CSMP) jointly developed by Caltrans and SANDAG. The development of PSRs informs the development of RTP priorities and RTIP programming. As highway projects are further developed through the environmental phase, viable multimodal alternatives are analyzed along with capacity enhancing alternatives.

Local Level Analysis

Local jurisdiction projects that receive federal funds to develop capacity increasing improvements are required to provide sufficient documentation that an appropriate multimodal alternative and non-SOV analysis has been performed. This analysis is required to be completed prior to submitting a project for inclusion within the RTIP.

Land Use Impact Analysis

Regional Models

The 2050 RTP includes the 2050 Regional Growth Forecast which is based on land use inputs gathered from the region's 18 incorporated cities and the County. These inputs include current adopted general and community plans, the County's Referral Map draft land use plan of 2009 with adjustments to reflect habitat constraints, and draft general plan updates, as provided by the local land use authority. In many cases jurisdictions are moving forward with Smart Growth principles as outlined in the Regional Comprehensive Plan (RCP). SANDAG uses four models in its forecasts: (1) the Demographic and Economic Forecasting Model (DEFM), (2) the Interregional Commute Model (IRCM), (3) the Urban Development Model (UDM) and (4) the Transportation Forecasting Model. The 2050 RTP Technical Appendix 15 provides additional information specifically related to the SANDAG transportation modeling process.

Intergovernmental Review

Per state law, SANDAG has the authority to determine whether a project or plan will need to be reviewed for regional significance. SANDAG staff reviews projects and determines if they are regionally significant based on the amount of traffic generated and other regionally significant issues. If significant, environmental review of projects should include consideration of applicable policy objectives contained in the RCP and 2050 RTP.

For projects considered to have significant impacts, SANDAG staff provides comments from a regional perspective that emphasize the need for land use and transportation coordination and are based on policies contained in the RCP and the 2050 RTP. In addition to the RCP and 2050 RTP, SANDAG

provides resources for the evaluation of projects including:

- San Diego Region Aggregate Supply Study
- Designing for Smart Growth, Creating Great Places in the San Diego Region
- Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region
- Trip Generation for Smart Growth
- Parking Strategies for Smart Growth
- Regional Multimodal Analysis Study

Congestion Management Tools

The 2050 RTP provides a variety of congestion management tools. Many of these tools and strategies are included within Chapters 6, 7, and 8 of the 2050 RTP. In addition to the 2050 RTP, the RCP provides incentives and assistance to local member agencies to encourage smart growth development in the areas identified on the Smart Growth Concept Map. The SANDAG "Smart Growth Tool Box" includes both planning and financial tools.

Systems Development Measures

- Improvements to the current system that will improve the convenience and travel speed of bus and rail services
- Implementation of new transit services that will improve transit in more areas and offer new service types designed to attract new riders to transit
- Enhancing the transit customer experience to make transit easier, safer, and more enjoyable to use
- Continue to develop and enhance active transportation through bicycle and

pedestrian facilities and bike lockers, and implementation of Regional Bicycle Plan

- Continue to develop and enhance safe routes to schools plans and strategies

TSM Measures

- Multimodal integration and performance based management including performance monitoring and real time modeling/simulation
- Traveler information
- Arterial management
- Freeway management
- Transit management – bus and light rail including regional scheduling system (RSS), regional transit management system (RTMS), positive train control (PTC), and centralized train control (CTC)
- Electronic payment services including Compass Card, FasTrak® Open Road Tolling, and smart parking systems
- Advanced technologies including wireless detection, real time multimodal modeling and simulation, etc.

TDM Measures

- iCommute – the regional TDM program
- TDM strategy – outreach, education, and financial incentives
- TDM programs including regional vanpool, carpool, buspool, school services (SchoolPool), telework and alternative work schedules, and bicycle encouragement programs, and multimodal solutions including first- and last-mile solutions, Compass Card integration, and 511 advanced traveler information services

- New directions including corridor approach and construction mitigation

- Performance monitoring

RCP Implementation Measures

- Outreach program
- Smart Growth Concept Map
- Visualization tools and photo library
- Smart growth design guidelines
- Smart growth trip generation/parking study
- Research on connections between public health, land use, and transportation
- Planning and designing for pedestrians
- *TransNet* Smart Growth Incentive Program (SGIP)
- TDA/*TransNet* Bicycle, Pedestrian, and Neighborhood Safety Program

Regional/Federal Transportation Improvement Program

The Regional/Federal Transportation Improvement Program (R/FTIP) is a multi-billion dollar, five-year program of major highway, transit, arterial, and nonmotorized projects funded by federal, state, *TransNet* local sales tax, and other local and private funding.

The RTIP serves as a prioritized program designed to implement the region's overall strategy for providing mobility and improving the efficiency and safety of the transportation system, while reducing transportation related air pollution in support of efforts to attain federal and state air quality standards for the region.

Chapters 2 and 3 in the 2010 RTIP provide a description of the development process, including federal, state, and *TransNet* transportation programming requirements and the detailed listings of projects. All local agency SOV capacity increasing projects seeking or that is eligible for federal funds are required to perform a multimodal alternative and non-SOV analysis prior to submitting SOV capacity increasing projects for inclusion in the RTIP. The multimodal alternative and non-SOV analysis must document an SOV capacity increasing project assessment that has considered the components within the congestion management tools section of the SANDAG Federal Congestion Management Process:

- Systems development measures
- TSM measures
- TDM measures
- RCP implementation measures

Each agency is required to assess whether the project has been evaluated for non-SOV capacity improvements. Agency documentation should be provided to SANDAG when submitting the project for inclusion in the RTIP.