Ms. Tina Quigley, General Manager  
Regional Transportation Commission of Southern Nevada  
600 S. Grand Central Parkway, Suite 350  
Las Vegas, NV 89106

Re: 2017 Federal Certification of the Planning Process for the Regional Transportation Commission (RTC) of Southern Nevada

Dear Ms. Quigley:

Enclosed is the 2017 RTC Southern Nevada Certification Review Report. The report provides an overview of the MPO certification process, detailed review findings and issues the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) certification action.

The review team determined that RTC’s planning process is continuous, cooperative and comprehensive and satisfies the provisions of 23 U.S.C. 134, 49 U.S.C. 1607, and associated federal requirements. Based on the overall findings, FHWA and FTA hereby certify the Regional Transportation Commission of Southern Nevada’s planning process.

During the on-site visit, the review team noted significant improvements and many noteworthy practices that are summarized in the report. In addition, there are a number of recommendations to improve the current planning process.

We appreciate the time and effort of the RTC staff in both providing data prior to the review and providing follow up information as the final report was being prepared. If you have any questions regarding the certification review process or the report, please feel free to contact either Ted Matley of FTA Region IX at 415-734-9468 or Christina Leach of FHWA Nevada division at 775-687-8580.

Sincerely,

[Signature]
Leslie T. Rogers  
Regional Administrator, Region IX  
Federal Transit Administration

[Signature]
Susan E. Klekar  
Nevada Division Administrator  
Federal Highway Administration
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Introduction

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) are required to jointly certify that the metropolitan transportation planning process in a Transportation Management Area (TMA) compiles with federal requirements, at least every four years. A TMA is defined as an urbanized area with a population over 200,000. The purpose of the certification review is to ensure that the metropolitan planning process of a Metropolitan Planning Organization (MPO) serving a TMA is being carried out in accordance with applicable provisions of Federal law. The certification is not just a review of the MPO or its staff; rather, it is a review of the planning process conducted by all of the agencies (State, MPO, and transit) charged with cooperatively carrying out the process on a daily basis. The certification review is a valuable opportunity to enhance the planning process and improve the quality of transportation investment decisions.

Certification reviews consist of three primary activities: review of planning products, a site visit, and preparation of a report that summarizes the review and offers findings. The reviews focus on compliance with federal law and regulation, challenges, successes, and the cooperative relationships between the MPO, its member jurisdictions, the State Department of Transportation, and transit operators in the conduct of the metropolitan planning process. Joint FHWA/FTA certification review guidelines provide agency field reviewers with latitude and flexibility to tailor the review to reflect local issues and needs.

Upon completion of the review and evaluation, FHWA and FTA must either:

2. Certify that the transportation planning process substantially meets Federal requirements with conditions tied to resolution of specific corrective actions;
3. Certify the transportation planning process with conditions and project funding restrictions, or;
4. Not certify the planning process and withhold funds if the process does not meet Federal requirements.

The certification review process is only one of several methods used to assess the quality of the metropolitan planning process and compliance with applicable statutes and regulations. Other activities also provide opportunities for review including Unified Planning Work Program (UPWP) approvals, air quality conformity determinations (in nonattainment and maintenance areas) on the Long Range Metropolitan Transportation Plan (MTP), also called the Regional Transportation Plan (RTP), and Transportation Improvement Program (TIP), Statewide Transportation Improvement Program (STIP) findings, as well as other formal and less formal items. While the planning certification review report may not fully document the many intermediate and ongoing checkpoints, the final outcome of a certification review is based on the cumulative findings of all these activities as well as day to day interactions.
Overview

Certification Action
FHWA and FTA jointly reviewed the transportation planning processes of the Regional Transportation Commission of Southern Nevada (RTCSNV) in accordance with the requirement of 23CFR §450.334 to assure compliance with federal requirements. Based on this review, FHWA and FTA find that the metropolitan planning process carried out by the RTC meets the requirements of 23 U.S.C. 134, 49 U.S.C. 1607 and associated Federal laws and regulations. FHWA and FTA certify the transportation planning process with no corrective actions. This certification is valid for four years from the date of the final certification review report.

Methodology

This certification review consisted of a desk audit, an on-site review conducted on January 27-28, 2016 and a public comment session held on January 27, 2016. FHWA and FTA provided RTC with a list of questions in advance of the on-site review. The RTC prepared extensive written responses and back up documentation, which served as the basis for discussions during the review. The findings presented in this report are also based on routine oversight activities such as attendance at meetings, day-to-day interactions, review of work products, and coordination with the RTC on past certification review recommendations and corrective actions. The USDOT review team consisted of staff from FTA Region IX, the FHWA Nevada Division, and the FHWA Resource Center. The certification review initiation letter, public notice, and list of participants from the FHWA, FTA, RTC, the Nevada Department of Transportation (NDOT), and other agencies are provided in the appendices.

Review Findings

This report presents the legal and regulatory basis for each certification review topic and the major findings, corrective actions, recommendations, and commendations resulting from this review. Findings describe the conditions found during the data gathering and review process and provide the basis for determining the actions contained in the certification report. Corrective actions describe items that fail to meet the requirements of the transportation statute and regulations. Failure to respond to a corrective action will likely result in a more restrictive certification and potential restriction or withholding of Federal funds. Recommendations are suggestions that should be implemented to improve processes and planning products that already meet minimum Federal requirements. Commendations describe processes and products that are considered notable and identified as best practices. The following is a summary of the corrective actions, recommendations and commendations identified by the review team.
Corrective Actions
The team did not identify any corrective actions.

Recommendations

Coordinate efforts with NDOT on UPWP and SPR
RTC is encouraged to work with NDOT to coordinate work efforts in the UPWP with the State Planning and Research Program (SPR) to demonstrate the link between the State, MPOs and Local Public Agencies in their planning efforts. This was a recommendation in the 2016 STIP Planning Finding.

Continue to enhance performance measures
The review team did observe discernable improvements in the direction of performance measures especially in efforts to educate and to establish baseline data, however; the RTC has a tremendous amount of applicable data that has the opportunity to be incorporated into the planning process to make more strategic investment decisions that will help advance transportation goals that are important to the region.

Place more focus on performance measures in the RTP related to project selection and evaluation
The team recommends making performance measures a stronger focus in the 2040 RTP, especially in the area of project selection. The team also recommends developing a process to better evaluate the overall performance of the transportation system.

Develop and evaluation process for the Public Participation Plan
RTC utilizes a number of mediums to gain public input. RTC should evaluate the effectiveness of these outreach efforts by developing an evaluation process that measures the success of the outreach. This evaluation should be included in the public participation plan.

Commendations
Link between RTC and FAST in data collection and analysis
The coordination between the RTC MPO and RTC FAST is to be commended. The MPO relies on FAST for the collection and analysis of roadway system performance data. RTC takes the initiative to utilize data effectively and is always looking for new ways to collect and analyze data to improve system performance. There is consistent communication, integration and innovation in this area.
Integration of Southern Nevada Strong

The review team commends RTC on becoming the administrators of the Southern Nevada Strong (SNS) Regional Plan. The City of Henderson was the lead on this plan and once it was developed the RTC took it over to move the plan into the implementation phase. The plan has many elements outside of the traditional realm of transportation, but RTC sees the benefits of integrating all of these elements to develop comprehensive projects that can improve the community and address livability from many approaches and disciplines. The integration of SNS also provides additional opportunity for integrating land use and transportation. Incorporating SNS is an innovate effort that came without a roadmap, however; RTC, along with strong support from local jurisdictions, is developing a new model to ultimately improve the integration of transportation, education, housing and job opportunities in Southern Nevada.

2012 Certification Review

FHWA and FTA certified the RTC planning process in October 2012 and noted the following corrective actions and recommendations. Resolutions for all of these corrective actions and recommendations were discussed at the review. Below is an overview of how RTC addressed these issues.

Corrective Actions

Metropolitan Planning Agreements

The RTC must work with the appropriate agencies to develop a metropolitan planning agreement that meets the requirements of 23 CFR 450.314(a). The revised agreement must be completed within twelve months from the date of this certification report. The agreement must clearly define the roles and responsibilities of each party in cooperatively carrying out the transportation planning process and must include specific provisions for cooperatively developing and sharing information related to the development of financial plans that support the MTP and TIP and the development of the annual listing of obligated projects.

Resolution: The RTC addressed this issue through a Transportation Planning Prospectus approved by the RTC Board and NDOT as the Appendix to the Unified Planning Work Programs for FY 2014, 2015 and 2016. The Prospectus defines the responsibilities of RTCSNV and NDOT in the planning process (including transit). It also addresses air quality planning, the public participation program and congestion management.

Recommendations from 2012 Review

1. The RTC is encouraged to consider further development of performance based planning approaches to support the regional transportation planning process, as well as methods of measuring the performance of efforts to reaching planning goals and monitoring planning goal achievement.
Resolution
The RTC is working to create a more focused and performance based planning approach that will enable RTC to invest in projects and programs that achieve targets and collectively make progress toward the attainment of national goals. The 2040 Regional Transportation Plan (RTP) will include performance measures and describe the targets used in assessing system performance and progress in achieving the performance targets. The Transportation Improvement Program (TIP) will be developed to make progress toward established performance targets and include a description of anticipated achievements.

2. The RTC is encouraged to work closely with the Nevada Department of Transportation and local transportation project sponsors to improve the development of cost estimates and financial assumptions. To strengthen this process, agreements to create a regular process to develop financial estimates with stakeholders are strongly encouraged as well as documenting this process through inter-agency agreements.

Resolution
The Prospectus identifies the provision of cost estimates for State-sponsored projects as an NDOT responsibility. The Prospectus also proposes that NDOT be responsible for showing how anticipated project costs relate to funding availability after factoring the costs of maintenance, operations, debt service, administration and other associated agency costs.

The RTC now requests detailed information from project sponsors for projects in the TIP. The project sponsors are required to provide complete information for each project phase, all Federal and non-Federal sources of funds, and all anticipated future costs beyond the four-year TIP horizon. The RTC also requires full cost and phasing plans for all projects requested for administrative modifications and amendments.

In preparation in the development of the 2040 RTP and TIP, the RTC has worked with NDOT and other NV MPOs to determine year-of-expenditure inflation factors as well as financial forecast methodologies through the PEG S/TIP RTP working group. As documented in the Appendices to the existing RTP, the RTC makes use of established multi-year funding models to establish the fiscal reasonableness of locally-funded projects. The RTC also has established procedures for working with FHWA and FTA on the estimation and projection of federal funds.

3. The RTC is strongly urged to further develop the TIP development process to better include the information gathered during the regional transportation planning process and included in the RTP. The TIP should be considered as the means of implementing the RTP and the selection of the projects for the TIP should more visibly include
consideration and review of the excellent qualitative and quantitative analysis performed in these earlier steps.

Resolution
The RTC is working on updating the 2040 RTP which will include a strong link between the RTP and the TIP. The RTC is also working on their project prioritization process which is planned to be developed in a manner consistent with performance measures to ensure that projects achieve established targets. The RTC is also developing a transportation visioning and outreach effort in the RTP update to identify community priorities.

4. The public should be given the opportunity to actively influence the direction of plans and programs as they are developed rather than just reacting to a draft after major decisions have been made. The RTC should seek opportunities to use innovative approaches to gain public involvement.

Resolution
The RTC has begun a comprehensive visioning and public outreach process. The visioning process will assess the public’s transportation priorities for the region. The results of the visioning process will help inform regional goals and objectives, and ultimately inform future performance measures and targets. It is envisioned this process will utilize a series of visualization techniques, workshops, charrettes and/or other proven public outreach methodology to engage the public in developing transportation related priority needs for Southern Nevada. This outreach will promote the transparency of public data and decision-making, and improve the accountability of public spending by better linking investment decisions to outcomes.

As called out for in the SNS Regional Plan, the RTC is also developing other processes and information packages to maximize the public participation that would include (but not be limited to):

- Continually improving the current design and content of the website to be more user-friendly for the general public to access information and provide comments.
- Enhancing ways to reach out to the traditionally underserved residents through already established planning processes.
- Linking the 2040 RTP to input received during the various transportation studies conducted under the UPWP. The UPWP studies have very inclusive and well-established public outreach and input processes built into them, the results of which can help inform the RTP.
- Compiling data from the various surveys and integrating the analysis into the next RTP.

5. The RTC should continue to implement and expand its Title VI Program by continually
reviewing its internal program areas, as well as its sub-recipients.

Resolution
RTC is committed to ensuring that no person is excluded from participation, denied the benefits of, or discriminated against under the projects, programs and activities on the basis of race, color, creed, national origin, sex or age, as provided in Title VI of the Civil Rights Act. The RTC in its capacity as an MPO and a transit provider produced Title VI reports in 2013 and will update the report in 2016.

6. The RTC Southern Nevada and NDOT Planning have crafted an excellent CMP, and should take steps to initialize and mainstream it through a small pilot project. The Goals, Objectives and Measures of Effectiveness should be validated and then monitored to see what improvements can be expected and ultimately achieved. Key elements of the CMP can be refined and enhanced through hosting of various planning for operations activities/events such as workshops on performance measures/monitoring and ITS regional architectures and systems engineering. Workshops on advanced operation should also be considered (Active Traffic Demand Management (ATDM), Adaptive Signal Control (ASC)). Lastly, RTCSNV and NDOT should work to integrate and consolidate processes on using the CMP and project evaluation and selection.

Resolution:
RTC hosted the FHWA Planning for Operations course in 2015 and they are in the process of updating the current CMP. The RTC plans to establish a full access subscription to INRIX Insights service in conjunction with NDOT and the three other Nevada MPOs. Once this subscription is in place, RTC plans to utilize it for monitoring roadway performance in areas where capacity improvement projects have occurred. With this resource, RTC will be able to compare post project performance in the corridor to historical INRIX data for traffic performance prior to the project. Options for addressing congestion can be determined from an array of different Congestion Management Strategies. These should be considered for applicability starting with Tier 1 and ending with Tier 4.

Potential strategies fall into four categories:

- Tier 1: Strategies to Reduce Person Trips and Vehicle Miles Traveled
  Examples of these include transportation demand management (TDM) programs, promoting alternative work hours and telecommuting.
- Tier 2: Strategies to Shift Automobile Trips to Other Modes
  Examples of these initiatives include increasing transit accessibility, constructing new sidewalk connections, expanding the bicycle lane network across the region and constructing complete streets corridors.
- Tier 3: Strategies to Improve Roadway Operations
These include traffic signal coordination projects, using dynamic messaging, and advanced traveler information systems (ATIS),

- Tier 4: Strategies to Add Capacity-
  These include bottleneck removal, intersection improvements, lane channelization and new travel lanes.

The congestion or safety mitigation strategies identified as having the greatest potential benefit are to be evaluated in detail based on committee or technical recommendations. During this phase, additional analysis of potential projects is undertaken to identify the specific improvement, implementation issues, and costs. Programs such as demand-reducing programs or policy changes are evaluated to identify recommended action items.

Recommendations then are made for the projects or programs to be considered for inclusion of the TIP or RTP. This may result in refocusing resources, programming improvements in local agency capital improvement programs or using boxed funds controlled by the MPO. These finally may be identified as projects for implementation in future RTPs. In summary, the RTP projects can be funded by any of the following means:

**Funding for Project Implementation**

1. Congestion Mitigation Air Quality (CMAQ) funding
2. Surface Transportation Program (STP)
3. Transportation Alternatives Program (TAP)
4. Other Funding Options

The RTC will use its Operational Management Committee, consisting of technical professionals from each of the member jurisdictions as well as the RTC, to review recommendations during the different phases of the CMP.

Once the congested corridors are reviewed by the Operations Management Committee after the end of Phase I, they are screened to identify applicable mitigation strategies to reduce the occurrence of congestion or improve safety. The RTC congestion reduction strategies would be applied to address areas of congestion while the safety factors would come from the Southern Nevada Transportation Safety Plan.

7. The RTC should consider how to effectively use their extensive data sources to improve and evaluate their operational and management strategies in the systematic process. The RTC needs to clearly present the comprehensive system-level estimates of operation and maintenance costs for federally supported facilities and services within the metropolitan planning area in the financial plans for the RTP and the TIP. The financial plans should clearly demonstrate that these operation and maintenance costs
are taken into account to determine resources remaining that are available for capital expenditure.

Resolution
A primary consideration when the RTC develops project prioritization criteria and performance measures is the incorporation of existing data sources. The Freeway and Arterial System of Transportation (FAST) branch of the RTC has a wealth of data that is expected to play a significant role in these tasks. Much of this data is being used to update the CMP. RTC is also working with local and state partners to identify other data sets that can help evaluate existing conditions of the transportation network and the effects of planned improvements. It is anticipated this task will include the gathering of information on operation and maintenance costs so that cost-effective strategies can be developed to address the needs of existing transportation infrastructure.

8. The RTC should work toward fully integrating safety considerations into the long-range metropolitan transportation planning and decision making processes and by developing key goals, objectives and performance measures related to safety that are derived from the SHSP. Safety data and analysis tools should be used to develop strategies and actions and assist in the project prioritization process to help achieve the safety-related goals and objectives. Appropriate monitoring information should be used to determine the effectiveness of safety related strategies and actions and whether performance targets are being achieved.

Resolution
To enhance the transportation safety in Southern Nevada, the RTC recently completed the Southern Nevada Transportation Safety Plan (TSP). The TSP evaluated the causes of death or serious injuries to all road users and strategies to reduce all such risks in the Las Vegas Valley. The TSP established a vision, goals, objectives, strategies, countermeasures and performance measures for transportation safety. The TSP also identifies strategies which address new areas of safety planning such as spatial analysis and utilization of appropriate analytical methods from the Highway Safety Manual. The recommendations from the TSP will then be integrated into the Regional Transportation Plan. It should also be noted that the RTC is fully engaged in regional and state discussions regarding safety including the Strategic Highway Safety Plan (SHSP) process, the State's Zero Fatalities Goal, the Traffic Records Coordinating Committee, and road safety audits.

9. The RTC should consider developing a more systematic analysis and approach to identifying key freight facilities and improvements and integrating this information into the transportation planning process to a greater extent.

Resolution
The RTC conducted a regional freight data collection study. This study built a freight
database while conducting data analysis to help better understand the freight movement in the region. Specifically, data was collected on origins, destinations, and routing of trucks in the Las Vegas region for use in the RTC’s TransCAD travel demand model. The process also provided better understanding of why freight moves the way it does in the Las Vegas region. The stakeholder engagement activities were a key part of this understanding and set a foundation for future collaboration between the RTC and the freight stakeholders. The project collected local freight data by using intercept interviews, phone and web surveys, face-to-face interviews with freight providers, freight advisory committee meetings, national freight database and other local available data.

The RTC also recently completed the Las Vegas Regional Freight Master Plan. This project used information collected in the freight data collection study to identify freight planning strategies for the near future and long term transportation plans. The plan identified barriers to freight movement and strategies to address those barriers.

Lastly, the RTC will begin a truck arterial route study in 2016. The purpose of the study is to conduct an assessment of safety, operational, capacity, geometric, and weight requirements of the defined arterial truck routes, and recommend improvements to ensure they meet minimum requirements to support freight movement needs.

10. The RTC should work to develop more visualization techniques to be integrated into the Regional Transportation Plan development process.

Resolution
The visioning process for the RTP will use innovative visualization techniques to engage the public. A draft survey is nearly ready for launch and will be accompanied by an interactive map which will allow the public to comment on project ideas as well as suggest new ones.

11. The review team recommends the RTC develop CMAQ project selection procedures that are transparent, in writing, and publicly available (as recommended by FHWA CMAQ Final Program Guidance at http://www.fhwa.dot.gov/environment/air_quality/cmaq/). The selection process should identify the agencies involved in rating proposed projects, identifying how the projects are rated, and name of the committee or group responsible for making the final recommendation to the MPO Board. As part of the selection process, the RTC should evaluate the cost-effectiveness of the projects and give priority consideration to those that will create the greatest emissions reductions for the least cost. In addition, while the program of projects is being developed, the RTC should consult with FHWA and FTA to resolve any questions about eligibility. This will ensure that the projects programmed for CMAQ funding in the TIP are all eligible.
Resolution
The CMAQ project selection procedure is in place. Public review of the written CMAQ procedures was provided in conjunction with the overall 2015-2019 TIP public outreach. The CMAQ procedures describe the quantitative project selection ranking criteria.

The selection process was used to select CMAQ projects through 2020. The primary criterion for ranking and selecting CMAQ projects was based on the cost-effectiveness of projects, and priority consideration was given to those that provided the greatest emissions benefit for the least cost. The RTC will continue to consult with both FHWA and FTA to resolve questions about project eligibility, particularly to ensure compliance with federal requirements. The RTC will continue to assess and enhance the selection process for projects eligible under CMAQ funding.
Site Visit

The following subject areas were discussed during the site visit:

- Metropolitan Planning Area Boundaries and Designation
- Organizational Structure and Board Membership
- Agreements and Coordination
- Unified Planning Work Program
- Transportation Planning Process
- Regional Transportation Plan Development
- Financial Planning and Fiscal Constraint
- Air Quality Conformity
- TIP Development and Project Selection
- Public Outreach
- Self Certification
- Title VI, ADA, and Environmental Justice
- Congestion Management Process
- List of Obligated Projects
- Consultation, Coordination, and Mitigation
- Management and Operations
- Transportation Safety Planning
- Security in the Planning Process
- Freight in the Planning Process
- Visualization
- Land Use and Livability
- Travel Demand Forecasting and Modeling
- Intelligent Transportation Systems
- Congestion Mitigation Air Quality (CMAQ)

The legal and regulatory basis for each certification review topic and the major findings, corrective actions, recommendations, and commendations resulting from this review are presented below. Findings describe the conditions found during the data-gathering and review process and provide the basis for determining the actions contained in the certification report. Corrective actions describe items that fail to meet the requirements of the transportation statute and regulations. Failure to respond to a corrective action will likely result in a more restrictive certification and potential restriction or withholding of Federal funds. Recommendations are suggestions that should be implemented to improve processes and planning products that already meet minimum Federal requirements. Commendations describe processes and products that are considered notable and identified as best practices.
Metropolitan Planning Area Boundaries and Designation

In accordance with 23 CFR 450.312, the boundaries of a metropolitan planning area (MPA) shall be determined by agreement between the MPO and the Governor. At a minimum, the MPA boundaries shall encompass the entire existing urbanized area (as defined by the Bureau of the Census) plus the contiguous area expected to become urbanized within a 20-year forecast period for the metropolitan transportation plan. MPA boundaries may be established to coincide with the geography of regional economic development and growth forecasting areas.

Identification of new urbanized areas within an existing metropolitan planning area by the Bureau of the Census shall not require re-designation of the existing MPO. Where the boundaries of the urbanized area or MPA extend across two or more States, the Governors with responsibility for a portion of the multistate area, MPO(s), and the public transportation operator(s) are strongly encouraged to coordinate transportation planning for the entire multistate area.

Findings

The Regional Transportation Commission of Southern Nevada (RTC) is the agency designated by the State of Nevada to act as the Metropolitan Planning Organization (MPO) for Clark County. The RTC is both the transit authority and the transportation-planning agency for the Las Vegas Metropolitan Planning Area. As the region’s MPO, the RTC is responsible for coordinating transportation planning activities with the Nevada Department of Transportation (NDOT) and the local government agencies and for maintaining a continuing, cooperative and comprehensive (3-C) transportation planning process ensuring that transportation plans and programs involve public input and the recommendations and conform to approved air quality standards.

The maps below show the metropolitan planning area and the urbanized area. The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.
Organizational Structure and Board Membership

Federal legislation (23 U.S.C. 134(d)) requires the designation of an MPO for each urbanized area with a population of more than 50,000 individuals. When an MPO representing all or part of a TMA is initially designated or redesignated according to 23 CFR 450.310(d), the policy board of the MPO shall consist of: (a) local elected officials, (b) officials of public agencies that administer or operate major modes of transportation within the area, and (c) appropriate State transportation officials. This designation and the voting membership of the MPO remains valid until the MPO is redesignated. Redesignation is required whenever the existing MPO seeks to substantially change the proportion of voting members representing individual jurisdictions or the State or the decision-making authority or procedures established under the MPO bylaws. The addition of jurisdictional or political bodies into the MPO or members to the policy board generally does not constitute a redesignation of the MPO.

In addition, 23 U.S.C. 134(d)(2) states the following about the MPOs Board:

(2) Structure.—Not later than 2 years after the date of enactment of MAP-21, each metropolitan planning organization that serves an area designated as a transportation management area shall consist of—
(A) local elected officials;
(B) officials of public agencies that administer or operate major modes of transportation in the metropolitan area, including representation by providers of public transportation; and
(C) appropriate State officials.

Findings

Membership in the RTC consists of two members from the Board of Clark County Commissioners, two members from the city council of the largest incorporated city, the City of Las Vegas, and one member from the city council of every other incorporated city in the county. This includes membership from the following cities: Henderson, North Las Vegas, Mesquite, and Boulder City. The Director of the Nevada Department of Transportation serves as an ex-officio member. Each member of the Board has one vote.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

Agreements and Coordination

Federal legislation (23 U.S.C. 134) requires the MPO to work in cooperation with the State and public transportation agencies in carrying out a continuing, cooperative, and comprehensive (3C) metropolitan planning process. These agencies determine their respective and mutual roles and responsibilities and procedures governing their cooperative efforts. Federal regulation requires that these relationships be specified in agreements between the MPO and the State and between the MPO and the public transit operators:
The MPO, the State, and the public transportation operator(s) shall cooperatively determine their mutual responsibilities in carrying out the metropolitan transportation planning process. These responsibilities shall be clearly identified in written agreements among the MPO, the State(s) and the public transportation operator(s) serving the MPA. To the extent possible, a single agreement between all responsible parties should be developed. The written agreement(s) shall include specific provisions for cooperatively developing and sharing information related to the development of financial plans that support the metropolitan transportation plan (see § 450.322) and the metropolitan TIP (see § 450.324) and development of the annual listing of obligated projects (see § 450.332). [23 CFR 450.314(a)]

In nonattainment or maintenance areas, if the MPO is not the designated agency for air quality planning under section 174 of the Clean Air Act (CAA), there shall be a written agreement between the MPO and the designated air quality planning agency describing their respective roles and responsibilities for air quality related transportation planning. [23 CFR 450.314 (c)]

Findings

2016 Cooperative Agreement
This agreement identifies the roles and responsibilities of RTC and NDOT for the administration and implementation of the Unified Planning Work Program. This agreement is updated yearly.

Interlocal Agreement for Metropolitan Planning
This agreement between RTC, NDOT, Clark County and the local entities, details the roles and responsibilities of each agency in the planning process. It includes details related to public involvement, project selection and required planning documents. It is a 10 year contract and will expire 3/13/2018.

Consolidated Planning Grant Program MOU
This agreement between FHWA, FTA, NDOT and the four Nevada MPOs automatically transfers 5303 funds to the Federal Metropolitan Planning Program (PL funds) at the beginning of the Federal Fiscal Year (FFY). It allows FHWA planning funds and FTA planning funds to be combined for work in the UPWP. This agreement was effective 2/22/2013 and remains in effect until written notification is received to cancel or alter the agreement.

Cooperative Agreement for 2015 Consolidated Planning Grant
This is a yearly agreement between NDOT and RTC the detail the funding for the UPWP. It specifies the 95/5 (federal/local) match and gives the estimated amount of funding that will be available that federal fiscal year.

Regional Planning Prospectus – approved as an appendix to the UPWP
- NDOT provides the RTC with up-to-date fiscal and financial information and projections on the statewide and regional transportation improvement programs to the extent practicable. This will include anticipated federal funding resources by federal aid category by year for the four years covered by the TIP, and by five-year
intervals for the 20-25 year time frame of the RTP for inclusion in the TIP and RTP financial charts.

- For each federal program for which funds are sub-allocated to Southern Nevada, NDOT will provide an annual statement identifying:
  1. Unobligated funds brought forward from the previous year;
  2. Funds appropriated during the year;
  3. Fund obligated during the year and any adjustments thereto;

- For each federal transit program for which funds are allocated to the Las Vegas Urbanized Area, the RTC will provide an annual statement identifying:
  1. Unobligated funds brought forward from the previous year;
  2. Funds appropriated during the year;
  3. Funds obligated during the year and any adjustments thereto;

- NDOT will notify the RTCSNV when the anticipated cost of a project, regardless of funding category, has changed in accordance with the agreed upon TIP/STIP amendment and administrative action process.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Unified Planning Work Program**

23 CFR 450.308 identifies the requirements for the unified planning work programs (UPWP) to be prepared in TMAs. 23 CFR 420.111 governs work programs required for the expenditure of FHWA highway planning and research funds.

MPOs are required to develop UPWPs in cooperation with the State and public transit agencies. [23 CFR 450.308(c)] Elements to be included in the UPWP include:

- Discussion of the planning priorities facing the metropolitan planning area
- Description of all metropolitan transportation planning and transportation-related air-quality planning activities anticipated within the following one-to-two-year period, regardless of funding source, indicating: who will perform the work, the schedule for completion of the work.
- and the intended products, including all activities funded under Title 23 and the Federal Transit Act [23 CFR 450.308(c)]

The regulations allow for integration of the UPWP as part of a work program for other Federal sources of planning funds. [23 CFR 450.308(e)]

In addition, 23 CFR 420.111 identifies several requirements for projects receiving FHWA highway planning and research funds, including:

- Description of the work to be performed
• Cost estimates for each activity
• Financial summary indicating the shares of funding to be provided from Federal, State, and local sources

**Findings**
The UPWP meets the requirements of the regulation and includes all necessary elements. RTC included the 2015 Planning Emphasis Areas as requested by FHWA/FTA. Annually, the RTC, NDOT, FHWA and FTA hold a kick off meeting during the January/February timeframe to talk about upcoming projects and available PL funds for the new UPWP. In addition, RTC posts the quarterly UPWP updates on their website as well as copies of the plans that are completed with PL funds.

The RTC meets the requirements outlined in regulation. There are no corrective actions associated with this certification topic.

**Recommendations**
RTC is encouraged to work with NDOT to coordinate work efforts in the UPWP with the State Planning and Research Program (SPR) to demonstrate the link between the State, MPOs and local public agencies in their planning efforts. This was a recommendation in the 2016 STIP Planning Finding.

**Transportation Planning Process**
Federal regulation (23 CFR 450.306) defines the scope of the metropolitan transportation planning process and requires MPOs to implement a continuous, cooperative, and comprehensive (3C) process that provides for consideration and implementation of projects, strategies, and services that will address the following factors:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.
Other key provisions of 23 CFR 450.306 are related to coordination with statewide transportation planning and consistency with related planning processes including asset management strategies, intelligent transportation system (ITS) architecture, the coordinated public transit-human services transportation plan, and the Strategic Highway Safety Plan (SHSP).

In addition, 23 CFR 450.316 (c), (d) and (e) address the need for participation by Federal Land Management Agencies and Tribal governments in the development of key products in the planning process. 23 CFR 450.318 defines the relationship of corridor and other subarea planning studies to the metropolitan planning process and the National Environmental Policy Act (NEPA) requirements.

**Findings**

**Planning Factors**

- The planning factors are addressed in the RTP, TIP, UPWP and other planning studies. The 8 factors are specifically identified in the RTP, the TIP has a summary of the relation to the planning factors and the UPWP discusses how the studies reflect the planning factors.

**Performance Measures**

- The RTC is working toward fully utilizing performance measures in the planning process to ensure the best performing projects are prioritized to meet the needs and priorities of the region. The update to the 2040 RTP will utilize performance measures to help frame public outreach efforts, and to ultimately influence project categorization, scoring, prioritization and selection.

In addition to the RTP, the RTC also hosts the Transportation Resource Advisory Committee (TRAC). The purpose of TRAC is to address the economic needs of Southern Nevada. The committee is committed to improving economic vitality to ensure that transportation infrastructure is in place to accommodate current and future growth in order to improve the community by enhancing connectivity and improving mobility throughout the valley. TRAC analyzes baseline data, specifically from the EPA’s Smart Location Database, to seek out, identify, fund, and implement transportation solutions to impact desired outcomes. This committee will be helpful in moving performance measures forward. In addition, the updated CMP provides specific performance measures and procedures for prioritizing projects.

The RTC also actively participates in the Planning Executive Committee (PEG) Performance Measures Working Group. This working group has developed performance
measures to guide the planning process on a statewide level and is currently working on establishing targets. The RTC routinely provides data and input on analysis of these measures. This group also discusses federal requirements for performance measures/target setting and provides regular updates on rulemaking.

The review team did observe discernable improvements in the direction of performance measures especially in efforts to educate and to establish baseline data, however; the team highly recommends making performance measures a much stronger focus in the 2040 RTP and the overall planning process, especially in the area of project selection. The RTC has a tremendous amount of applicable data that could be incorporated into the planning process to make more strategic investment decisions that will help advance transportation goals that are important to the region.

Statewide Planning
- The RTC works closely with NDOT, FHWA and the three other MPOs in the state on the statewide planning process. RTC staff played an instrumental role in developing the e-STIP, they participate in the Planning Executive Group and the Statewide Transportation Advisory Committee and they were active in the development of NDOT’s first Statewide Freight Plan.

Regional ITS Architecture
The coordination between the RTC MPO and RTC FAST is to be commended. The MPO relies on FAST for the collection and analysis of roadway system performance data. FAST collects current and historical data by location for crashes, congestion levels, peak hour speeds, and traffic volume. This data is collected through use of in-pavement sensors, fiber optics, freeway monitoring cameras, ramp metering, Bluetooth sensors and police reports. The operations data collected by FAST has been utilized by the MPO to develop a baseline to assess future performance and promote performance measures.

FAST ITS equipment is being extended to most of the Network of Interest identified in the CMP and provides an extensive data set for the measurement of system performance and congestion, both recurring and non-recurring. The RTC is also in the process of beginning an Arterial Truck Routes Study that will gather additional performance data on the arterial street network.

RTC’s FAST Division has developed an extensive methodology for assessing Maintenance and Operation transportation system efficiencies in the Southern Nevada region. This data is used both for monitoring existing highway conditions in order to identify performance issues, and to inform the public of current roadway traffic conditions through a real-time, highly intuitive website application called the ‘Dashboard’.

The data collected through FAST is extensive and provides a great opportunity to continue to
modify and utilize data to assess performance needs and investment priorities.

**Coordinated Public Transit-Human Services Transportation Plan**
The Coordinated Public Transit-Human Services Transportation Plan for Southern Nevada was adopted in 2015. The MPO coordinated closely with RTC Transit and non-profit transportation providers in developing the Coordinated Plan. Current needs were assessed during the development of the plan and the RTC learned that medical appointments and mental health appointments were the most important trips reported. Projects selected under the Coordinated Plan procedures are included in the TIP.

**Strategic Highway Safety Plan**
- RTC adopted the Southern Nevada Transportation Safety Plan (TSP) in August 2015. As required, the TSP supports the Nevada SHSP. In addition to integrating the TSP with the SHSP, the RTC participates in the Strategic Highway Working Group, RTC staff reviews and analyzes NDOT crash data and participates in roadway safety audits (RSA).

**Public Involvement**
The RTC follows the Public Participation Plan (PPP) adopted in 2015. The plan specifies public notification requirements, comment periods, anticipated meeting frequencies, and anticipated coordination with other agencies. In addition to the required outreach as outlined in the PPP, RTC also engages the public on a project level basis. This includes conducting online surveys to gain public input, emails blasts to provide updates on the progress of studies and providing draft documents for review and comments.

The RTC meets the requirements outlined in regulation. There are no corrective actions associated with this certification topic.

**Recommendations**
The team highly recommends making performance measures a much stronger focus in the 2040 RTP and the overall planning process, especially in the area of project selection. The RTC has a tremendous amount of applicable data that could be incorporated into the planning process to make more strategic investment decisions that will help advance transportation goals that are important to the region.

**Commendations**
The coordination between the RTC MPO and RTC FAST is to be commended. The MPO relies on FAST for the collection and analysis of roadway system performance data. RTC takes the initiative to utilize data effectively and always looking for new ways to collect and analyze data to improve system performance.
Regional Transportation Plan Development

Federal regulations require the development of a Metropolitan Transportation Plan (MTP) as a key product of the metropolitan planning process. 23 CFR 450.322 governs the development and content of the MTP.

The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon. The transportation plan shall include both long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand. [23 CFR 450.322] The MTP must be reviewed and updated at least every four years in air quality nonattainment and maintenance areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon.

The regulation also identifies a number of required elements that must be addressed in the MTP, including:

- Coordination with the process for developing transportation control measures (TCMs) in a State Implementation Plan (SIP) [23 CFR 450.322(d)]
- Projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan [23 CFR 450.322(f)(1)]
- Existing and proposed transportation facilities (including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system [23 CFR 450.322(f)(2) and (8)]
- Operational and management strategies to improve the performance of existing transportation facilities [23 CFR 450.322(f)(3)]
- Consideration of the results of the congestion management process [23 CFR 450.322(f)(4)]
- System preservation [23 CFR 450.322(f)(5)]
- Design concept and scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source, in nonattainment and maintenance areas for conformity determinations and to develop cost estimates [23 CFR 450.322(f)(6)]
- A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities [23 CFR 450.322(f)(7)]
- Transportation and transit enhancement activities [23 CFR 450.322(f)(9)]
- A financial plan that demonstrates how the adopted transportation plan can be implemented [23 CFR 450.322(f)(10)]
- Consultation with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation and comparison of transportation plans with State conservation plans or maps and inventories of natural or historic resources, if available [23 CFR 450.322(g)]
• A safety element that incorporates or summarizes the Strategic Highway Safety Plan (required under 23 U.S.C. 148) as well as emergency relief and disaster preparedness plans and strategies (as appropriate) [23 CFR 450.322(h)]
• Provision of citizens, affected public agencies, and other interested parties with a reasonable opportunity to comment on the transportation plan using the participation plan developed under 23 CFR 450.316(a) [23 CFR 450.322(i) and (j)]
• Conformity determination in nonattainment and maintenance areas [23 CFR 450.322(l)]
• (1) Development of long-range plans and tips.—To accomplish the objectives in subsection (a), metropolitan planning organizations designated under subsection (d), in cooperation with the State and public transportation operators, shall develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning for metropolitan areas of the State 23 USC § 134(i)(2)(B)

Findings
The RTC is currently updating the RTP and plan to have it completed by December 2016. This will be the 2040 RTP. The 2035 RTP was reviewed and substantially addresses all of the requirements of 23 CFR 450.322 and 23 USC § 134(i)(2)(B). As discussed at the on-site visit and in other sections of this document, the team does see opportunity to improve performance measures to advance investment decisions and provide a better evaluation of the overall performance of the transportation system.

The RTC meets the requirements outlined in regulation. There are no corrective actions associated with this certification topic.

Recommendations
The team recommends making performance measures a stronger focus in the 2040 RTP and the overall planning process, especially in the area of project selection and developing a process to better evaluate the overall performance of the transportation system.

Financial Planning and Fiscal Constraint
The requirements for financial plans are contained in 23 CFR 450.322(f)(10) for the MTP and 23 CFR 450.324(e, h-k) for the TIP. The MTP and TIP each require a financial plan that clearly demonstrates how the adopted plan can be implemented. Fiscal constraint requirements that apply to both the MTP and the TIP include the following:

Revenue estimates are cooperatively developed by the State, the MPO, and public transit operators as set forth in the MPO agreement.
• Revenue estimates include public and private sources that are committed, available, or reasonably expected to be available within the timeframe anticipated for implementation of the project.
- Revenue estimates may include recommendations for new funding sources, which must identify strategies for securing their availability.
- System-level estimates of operation and maintenance costs for Federally supported facilities and services are taken into account to determine resources remaining available for capital expenditure.
- Cost and revenue estimates incorporate inflation rates to reflect year of expenditure (YOE) dollars.
- The process, methods, and assumptions for determining costs must be documented.
- Cost estimates in the MTP and TIP should be reviewed and periodically updated (at least as frequently as the MTP or TIP update cycle).
- Fiscal constraint requirements specific to the MTP include the following:
  - Cost estimates for the period beyond the first ten years may be expressed in terms of ranges or “bands” as long as sufficient future funding sources are reasonably expected to be available.
  - If a revenue source include in the MTP is determined to be fiscally constrained and is subsequently removed or reduced, FHWA and FTA will not approve future updates or amendments of the MTP that do not reflect the change in revenues.
  - Fiscal constraint requirements specific to the TIP include the following:
  - The TIP must demonstrate and maintain financial constraint by year.
  - The TIP must identify projects to be funded with current and available revenues.
  - The TIP must identify estimated total project cost, which may extend beyond the four years of the TIP.
  - The TIP may only include projects or phases of projects for which full funding can reasonably be expected to be available for the project within the time period anticipated for completion of the project.
  - The TIP may only include projects for which construction or operating funds can reasonably be expected to be available.
  - In air quality non-attainment or maintenance areas, projects included in the first two years of the TIP shall be limited to those for which funds are available or committed.
  - The amount and category of Federal funds proposed to be obligated during each program year for each project.
  - All projects receiving Federal funding and all regionally significant projects that are not Federally-funded must be included in the TIP.

**Findings**
The 2035 RTP and the TIP each include a financial element documenting the revenues available within the MPO area that substantially meet the requirements outlined. RTC worked cooperatively with the RTP Working Group to determine the inflation rate in year of expenditure dollars for the updates of all the MPOs and the State to ensure statewide consistency. Fuel Revenue Indexing (FRI) is also a significant source of funding for transportation projects in Southern Nevada. This funding is authorized through December 31, 2016 and is on the ballot for a 10 year extension (2017-2027). This vote will impact available transportation funding in the coming years.
The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Air Quality Conformity**

Section 176(c)(1) of the Clean Air Act Amendments of 1990 (CAAA) states: “No metropolitan planning organization designated under section 134 of title 23 United States Code, shall give its approval to any project, program, or plan which does not conform to an implementation plan approved or promulgated under section 110.” The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and implementing regulations subsequently included provisions responsive to the mandates of the CAAA.

Provisions governing air quality related transportation planning are incorporated in a number of metropolitan planning regulations rather than being the primary focus of one or several regulations. For MPOs that are declared to be air-quality nonattainment or maintenance areas, there are many special requirements in addition to the basic requirements for a metropolitan planning process. These include formal agreements to address air quality planning requirements, requirements for setting MPA boundaries, interagency coordination, MTP content and updates, requirements for implementing transportation control measures (TCMs), requirements for the congestion management process (CMP), public meeting requirements, and conformity findings on MTPs, TIPs, and projects.

**Findings**

The Clark County Transportation Conformity Plan outlines the roles and responsibilities of the RTC and the Clark County Department of Air Quality and Environmental Management (DAQEM). A resolution dated January 15, 2008 serves as the agreement between the two agencies. The RTC follows the roles and responsibilities in the document for RTP/TIP conformity determinations specified in the Clark County Transportation Conformity Plan and public participation requirements according to Public Participation Plan. As defined in the Conformity Plan, the Conformity Working Group (CWG) meets the interagency consultation process requirement. The CWG membership is comprised of the agencies of RTC, DAQEM (the lead agency for SIP related responsibilities), NDOT, NDEP, EPA, FHWA, FTA, and all RTC member local entities. This ensures the latest planning assumptions are incorporated into the conformity process and that all applicable agencies are involved in the consultation process.

The EPA is currently developing new ozone standards (expected to be completed by October 1, 2016). It is anticipated that the new rules and regulations for the implementation will take at least one year to develop and will not impact the development of the 2040 RTP. The RTC will work together with DAQEM to develop a new emissions target with the new standard upon EPA’s implementation of a new ozone standard. Discussion of transportation control measures and the congestion management process are discussed in other sections of this document.
RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**TIP Development and Project Selection**

The MPO is required, under 23 CFR 450.324, to develop a TIP in cooperation with State and public transit operator. Specifics requirements and conditions, as specified in the regulation, include:

- Updating of the TIP and approval by the MPO and Governor, according to a cycle (at least every four years) compatible with development of the State Transportation Improvement Program (STIP). The TIP shall cover a period of no less than four years.
- Reasonable opportunity for public comment in accordance with 23 CFR 450.316(a)
- The TIP shall include capital and non-capital surface transportation projects (or phases of projects)... proposed for funding under 23 USC and 49 USC Chapter 53.
- The TIP shall contain all regionally significant projects requiring an action by the FHWA or the FTA.
- Information shall be provided as follows for each project included in the TIP: sufficient descriptive material to identify the project or phase; estimated total cost; the amount of Federal funds proposed to be obligated during each program year; proposed source of Federal and non-Federal funds; and the responsible agency.
- Projects that the States and MPO do not consider to be of appropriate scale for individual identification in a given program year may be grouped by function, geographical area, and work type.
- The TIP must be consistent with the MTP.
- The TIP shall include a financial plan that demonstrates how the approved TIP can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the TIP.
- Only projects (or phase of a project) with full funding reasonably anticipated shall be included in the TIP.
- Suballocation of STP or 49 USC 5307 funds to individual jurisdictions or modes shall not be used (unless it can be clearly demonstrated that the distribution of funds is based on considerations addressed as part of the planning process).
- The total federal share of projects in the first year of the TIP shall not exceed levels of funding committed. The total federal share of projects included in the second, third, fourth, and/or subsequent years of the TIP may not exceed levels of funding committed, or reasonable expected to be available.
- As a management tool for monitoring progress in implementing the Transportation Plan, the TIP shall identify the criteria and process for prioritizing the implementation of Transportation Plan elements through the TIP; list major projects implemented from the previous TIP and identify significant delays in implementation.
Findings
RTC has made improvements since the last certification review to develop a better connection between the TIP and the RTP. RTC was a strong supporter of the eSTIP and directly contributed to the completion and success of the final product. The eSTIP made the projects in the TIP easier to find and sort. It greatly improved the transparency and accessibility of the projects in the TIP.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

Public Outreach
The requirements for public involvement are set forth primarily in 23 CFR 450.316, which addresses elements of the metropolitan planning process. Requirements related to the public participation plan in 23 CFR 450.316 are summarized as follows:

- Documented process defining reasonable opportunities to be involved in the metropolitan transportation planning process for citizens, affected public agencies, representative of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties.
- The participation plan shall be developed by the MPO in consultation with all interested parties and shall, at a minimum, describe explicit procedures, strategies, and desired outcomes.
- Provide adequate public notice of public participation activities and time for public review and comment at key decision points.
- Timely public notice of public involvement activities and information about transportation issues and processes.
- Employ visualization techniques to describe metropolitan transportation plans and TIPS.
- Make public information available in electronically accessible formats and means.
- Hold public meetings at convenient and accessible locations and times.
- Explicit consideration and response to public input.
- Consideration of the needs of people traditionally underserved by transportation systems, including low-income and minority households; consistency with Title VI of the Civil Rights Act of 1964, including actions necessary to comply with the Americans with Disabilities Act of 1990.
- Provide for an additional opportunity for public comment, if the final MTP or TIP differs significantly from the version that was made available for public comment.
- Coordination of metropolitan and statewide public involvement processes.
- Periodic review of public involvement effectiveness.
• A minimum public comment period of 45 days before adoption or revision of the public participation plan.

Findings
The Public Participation Plan was adopted in 2015 and the processes in the Plan guide the process for public outreach. The RTC educates the public and solicits public comment throughout the Las Vegas Valley using a number of mediums to ensure all audiences receive information regarding agency planning and have means through which to address their concerns and offer comments and suggestions.

RTC utilizes outlets such as paid advertising, non-paid media exposure, special events, workshops, website, media releases, transportation fairs, social media, grassroots, and initiatives including RTC Staff Street teams. These outreach efforts are conducted with the goal of expanding the number of participants in the process by attracting new participants, especially those typically not involved in the planning process, improve the quality of the participation experience, and ultimately aid in reaching the best possible outcome for the community as a whole.

RTC Staff also accompanies NDOT on its periodic visits to regional tribal leaders and county tours to inform them of upcoming plans, programs and projects. During these visits, staff solicits tribal and local interests and needs and incorporates these comments into the planning process.

The RTC meets the requirements outlined in regulation. There are no corrective actions associated with this certification topic.

Recommendation
RTC utilizes a number of mediums to gain public input. RTC should evaluate the effectiveness of these outreach efforts by developing an evaluation process that measures the success of the outreach. This evaluation should be included in the public participation plan.

Self-Certification
Self-Certification of the metropolitan planning process, at least once every four years, concurrent with the submittal of the TIP, is required under 23 CFR 450.334. The State and the MPO shall certify to FHWA and FTA that the planning process is addressing the major issues facing the area and is conducted in accordance with all applicable requirements of 23 CFR 450 Subpart C and:
• 23 U.S.C. 134 and 49 U.S.C. 5303 and Sections 174 and 176(c) and (d) of the Clean Air Act (if applicable)
• Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each State
• 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity
• Section 1101(b) of SAFETEA-LU and 49 CFR Part 26, regarding involvement of DBE in U.S. DOT-funded planning projects
• 23 CFR Part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts
• ADA and U.S. DOT regulations governing transportation for people with disabilities [49 CFR Parts 27, 37, and 38]
• Older Americans Act as amended, prohibiting discrimination on the basis of age
• Section 324 of Title 23 U.S.C., regarding the prohibition of discrimination based on gender
• Section 504 of the Rehabilitation Act of 1973 and 49 CFR Part 27, regarding discrimination against individuals with disabilities
• All other applicable provisions of Federal law (e.g., while no longer specifically noted in a self-certification, prohibition of use of Federal funds for “lobbying” still applies and should be covered in all grant agreement documents (see 23 CFR 630.112)
• A Certification Review by FTA and FHWA of the planning process in TMAs is required at least once every four years, in addition to the required self-certification by the MPO and State.

Findings
The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.
Title VI, ADA, and Environmental Justice

It has been the long-standing policy of USDOT to actively ensure nondiscrimination under Title VI of the Civil Rights Act of 1964. Title VI states that, “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Title VI bars intentional discrimination (i.e., disparate treatment) as well as disparate-impact discrimination stemming from neutral policy or practice that has the effect of a disparate impact on protected groups based on race, color, or national origin. The planning regulations [23 CFR 450.334(a)(3)] require FHWA and FTA to certify that “the planning process . . . is being carried out in accordance with all applicable requirements of . . . Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR 21.” The Civil Rights Restoration Act of 1987 clarified the intent of Title VI to include all programs and activities of Federal-aid recipients and contractors whether those programs and activities are federally-funded or not.

In addition to these statutory authorities, Title VI is supplemented by two Executive Orders (EOs). Executive Order (EO) 12898 requires that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations.” Executive Order 13166, “Improving Access to Services For Persons With Limited English Proficiency (LEP),” requires Federal agencies to examine their services, develop and implement processes by which limited English proficient persons can meaningfully access those services.

Through the self-certification process set forth in the joint FHWA/FTA planning regulation, as required by 23 CFR 450.218 and 450.334, MPOs and State DOTs must affirm that their respective programs and activities comply with the nondiscrimination laws and regulations, including Title VI, at least every four years, when an updated or amended STIP is submitted to FHWA and FTA for joint approval.

Findings

The RTC met the requirements for Title VI compliance. The RTC created a Title VI Plan, submitted signed Title VI assurances and the Plan to the USDOT, and designated a Title VI Coordinator. Also, RTC developed system-wide service policies and standards to evaluate existing and proposed transit services. These policies and standards ensure that proposed changes are equitable in all aspects of bus stop and route management and are included in the Title VI Report. The PPP also identifies Title VI requirements. Finally, RTC has utilized demographic data to analyze concentrations of Limited English Proficiency (LEP), low income and minority populations within the region. This information is identified in the 2035 RTP document.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.
Congestion Management Process

A congestion management process (CMP) is a systematic approach for managing congestion through a process that “provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C., and title 49 U.S.C. Chapter 53 through the use of travel demand reduction and operational management strategies.” [23 CFR 450.320(a)]

The CMP requirements only apply to transportation management areas (TMAs). 23 CFR 450.320(c) mandates that the CMP shall include:

- Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of recurring and non-recurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the effectiveness of implemented actions;
- A definition of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods. Since levels of acceptable system performance may vary among local communities, performance measures should be tailored to the specific needs of the area and established cooperatively by the State(s), affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area;
- Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with operations managers in the metropolitan area; Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combinations of strategies, are some examples of what should be appropriately considered for each area:
  - Demand management measures, including growth management and congestion pricing
  - Traffic operational improvements
  - Public transportation improvements
  - ITS technologies as related to the regional ITS architecture
  - Where necessary, additional system capacity

- Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation; and
• Implementation of a process for periodic assessment of the effectiveness of implemented strategies, in terms of the area’s established performance measures. The results of this evaluation shall be provided to decision-makers and the public to provide guidance on selection of effective strategies for future implementation.

Findings
The CMP follows the 8-step CMP Approach in the FHWA CMP Guidebook and includes performance measures. The RTC uses the services of FAST for freeway performance monitoring which includes direct observation of speed, travel time and delay along with volume to capacity ratios. These measures will help the RTC identify problem areas and perform post-implementation analysis for project areas. A full set of INRIX data was recently purchased by NDOT for all of the MPOs. RTC will use this data to monitor roadway performance in areas where capacity improvement projects have occurred. This will allow RTC to compare post project performance in the corridor to historical INRIX data for traffic performance prior to the project. Options for addressing congestion can be then determined from an array of different Congestion Management Strategies. The RTC has made improvements in their CMP and data collection efforts.

This meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

List of Obligated Projects
23 CFR 450.332 requires that the State, the MPO, and public transportation operators cooperatively develop a listing of projects for which Federal funds under 23 U.S.C. or 49 U.S. C. Chapter 53 have been obligated in the previous year. The listing must include all Federally funded projects authorized or revised to increase obligations in the preceding program year and, at a minimum, the following for each project:

- The amount of funds requested in the TIP
- Federal funding obligated during the preceding year
- Federal funding remaining and available for subsequent years
- Sufficient description to identify the project of phase
- Identification of the agencies responsible for carrying out the project or phase

The listing of projects, including investments in pedestrian walkways and bicycle transportation facilities, must be published or otherwise be made available in accordance with the MPO’s public participation criteria for the TIP within 90 calendar days of the end of the program year. Further, cooperative procedures among the State, the MPO, and transit operators to submit the fund-obligation information necessary for this report should be set forth in the MPO Agreement [23 CFR 450.314(a)].
The list of projects is generated from the eSTIP by RTC staff. The annual listing is presented to the committees of the RTC including the Board of Commissioners. Once finalized, it is published on RTCSNV’s website.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Consultation, Coordination, and Mitigation**

The requirements for consultation are set forth primarily in 23 CFR 450.316(b-e) which calls for consultation in developing the MTP and TIP. Consultation also is addressed specifically in connection with the MTP in 23 CFR 450.322(g)(1)(2) and (f)(7) related to environmental mitigation. In developing MTPs and TIPs, the MPOs shall, to the extent practicable, develop a documented process(es) that outlines roles, responsibilities, and key decision points for consulting with other governments and agencies as described below:

- To the maximum extent possible, consult with agencies and officials responsible for other planning activities (State and local growth, economic development opportunities, environmental protection, airport operations or freight movements) that are affected by transportation or coordinate the planning process with such planning activities.
- Consider other transportation services that are provided to recipients under 49 U.S.C. 53, 23 U.S.C. 204, and non-profit organizations that provide non-emergency transportation services with assistance from Federal agencies other than U.S. DOT.
- Appropriately involve the Indian Tribal government(s) in development of the plan MTP and TIP when the MPA includes Federal Tribal Lands
  - Appropriately involve Federal land management agencies in development of the plan MTP and TIP when the MPA includes Federal Public Lands
- In addition, when developing the MTP, the MPO shall consult as appropriate with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation. The consultation shall involve, as appropriate (1) comparison of the MTP with State conservation plans or maps, if available, or (2) comparison of the MTP with inventories of natural or historic resources, if available.

The specific requirements for environmental mitigation are set forth in connection with the MTP in 23 CFR 450.322(f)(7). In developing and considering potential environmental mitigation to restore and maintain environmental functions affected by the MTP, the MPO shall consult with Federal, State, and Tribal land management, wildlife, and regulatory agencies.

Requirements related to environmental mitigation are as follows:
1. The MTP shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities.
2. The discussion should include activities that may have the greatest potential to restore and maintain the environmental functions affected by the MTP. It may focus on policies,
programs, or strategies, rather than addressing the project level and it shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timeframes for performing this consultation.

Findings
- The 2035 RTP provides an inventory and maps of land ownership, FEMA flood areas, utility corridors, active mining claims, and EPA designated air quality boundaries.
- The RTP specifically documents RTC’s Native American Tribal Consultation. RTC staff accompanies NDOT staff to tribal consultation meetings. The Las Vegas and Moapa Paiutes have reservations within Clark County: the Las Vegas Paiutes in the urbanized area and northwest and the Moapa Paiutes in the northeast.
- The RTC followed the adopted PPP process for an early public agency involvement in the development of 2013-2035 RTP. Public notices were published in newspapers and social media outlets. Public meetings were conducted throughout the Las Vegas Valley and in the outskirts of the Metropolitan Planning Area. The public comments and response to the comments were documented and attached in the RTP appendices.
- The most relevant mitigation strategies to new roadway development and roadway expansion in the Southern Nevada region is the requirement for tortoise fencing and training of field staff in the handling of this and other sensitive species. The RTC will also include information on climate resiliency in the 2040 RTP.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

Management and Operations
Federal statute and regulation require the metropolitan planning process to include the consideration of projects and strategies that will promote efficient system management and operation.
23 CFR 450.322(f)(3) specifies that the MTP shall include: Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.
23 CFR 450.322(f)(10)(i) further requires that the financial plan for the MTP – and per the 23 CFR 450.324(h), the financial plan for the TIP – must include the following:

For purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain Federal-aid highways and public transportation.

Findings
The RTP includes the goals and identifies strategies to address maintenance and operations.
This includes maintenance and preservation activities, safety projects, complete streets treatments, operational improvements, transportation demand management strategies, and freight considerations. The MPO works closely with the FAST in the development of goals related to operations. Maintenance for infrastructure is typically handled at the local level with local funding.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Transportation Safety Planning**

SAFETEA-LU requires MPOs to consider safety as one of eight planning factors. As stated in 23 CFR 450.306, the metropolitan transportation planning process provides for consideration and implementation of projects, strategies, and services that will increase the safety of the transportation system for motorized and non-motorized users. Safety was identified in TEA-21 as a planning factor, in combination with security. SAFETEA-LU emphasized the importance of safety by separating safety and security into individual considerations in the planning process, thus highlighting the importance of each issue.

In addition, SAFETEA-LU established a core safety program called the Highway Safety Improvement Program (HSIP) (23 U.S.C. 148), which introduced a mandate for Strategic Highway Safety Plans (SHSPs) that are collaborative, comprehensive and based on accurate and timely safety data. An SHSP is a Statewide coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. The goals, objectives, and strategies of the SHSP should be integrated into Statewide and metropolitan transportation plans as well as TIPs to place safety on par with other planning factors, particularly in choosing or evaluating new and continuing projects and initiatives. These types of best practices have the added benefit of helping to satisfy the safety-planning factor required for the transportation planning process.

23 CFR 450.306 (h) states that the metropolitan transportation planning process should be consistent with the SHSP, and other transit safety and security planning and review processes, plans, and programs as appropriate.

23 CFR 450.322 (h) encourages the inclusion of a safety element in the MTP that incorporates or summarizes the priorities, goals, countermeasures, or projects for the MPA contained in the SHSP, as well as (as appropriate) emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users.

Safety also appears in the Metropolitan Transportation Planning rule as a consideration in the CMP (23 CFR 450.320), Development and Content of the MTP (23 CFR 450.322), and Development and Content of the TIP (23 CFR 450.324).

**Findings**

Safety is a key component of the 2035 RTP and is identified as the most critical goal of the RTC. Safety data is utilized in the selection process and is considered in all RTC projects. RTC focuses on safety for all modes of travel and has multiple performance measures that evaluate safety and are included in the annual report. The SHSP is incorporated in and is consistent with the RTP.
The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic

**Security in the Planning Process**

Federal legislation has separated security as a stand-alone element of the planning process (both metropolitan and statewide planning). Prior to SAFETEA-LU, safety and security were combined into one planning factor. Decoupling the two concepts in SAFETEA-LU signified a heightened importance of both safety and security to transportation decision-making. The metropolitan transportation planning process shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following factors:

(3) Increase the security of the transportation system for motorized and non-motorized users 

23 CFR 450.306(a)(3)

The MTP should include:

(as appropriate) emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users.” [23 CFR 450.322(h)]

The inclusion of the “as appropriate” language suggests standards and security planning needs are different for each MPO. Each MPO and State DOT is challenged to develop a holistic approach based on area-specific assets, resources, and environment.

**Findings**

The RTC has adopted a regional transit security strategy which was developed by the Southern Nevada Regional Transit Security working group. In addition to specific training and logistical and operations exercises, the RTC cooperates with first responders in providing security for the annual New Year’s Eve celebrations on the Las Vegas Strip. Activities are coordinated at an off-site command center that is informed by cameras on the Strip and other communications.

In 2004, the RTC launched its ‘Transit Watch’ program, a public education campaign patterned after the successful ‘Neighborhood Watch’ program. Transit Watch seeks to engage transit employees, passengers, and neighborhood residents to become actively involved in transit security by staying alert and working together to maintain a safe transit environment.

Non-transit facilities are addressed in the System Security and Emergency Preparedness Plan which includes an “All Hazards Emergency Transportation Plan” which lays out how RTC resources will be used, along with other regional resources, in the event of evacuation or emergency. The RTP includes a discussion of regional transportation security and emergency preparedness and how it is supported by the RTP investment strategies.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.
Freight in the Planning Process

Three of the eight SAFETEA-LU planning factors identified within 23 U.S.C. 134 include freight-related provisions that should be addressed as part of the metropolitan and Statewide transportation planning process:

The metropolitan transportation planning process shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following factors:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
- Increase the accessibility and mobility of people and for freight
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight [23 CFR 450.306(a)]

In addition, the consultation requirements were expanded under SAFETEA-LU to specifically include freight shippers, who are providers of freight transportation services, as interested parties that should be provided a reasonable opportunity to comment on MTPs and TIPs [23 CFR 450.316].

Findings

The RTC conducted a regional freight data collection study. This study built a freight database while conducting data analysis to help better understand the freight movement in the region. Specifically, data was collected on origins, destinations, and routing of trucks in the Las Vegas region for use in the RTC’s TransCAD travel demand model. The process also provided better understanding of why freight moves the way it does in the Las Vegas region. The stakeholder engagement activities were a key part of this understanding and set a foundation for future collaboration between the RTC and the freight stakeholders. The project collected local freight data by using intercept interviews, phone and web surveys, face-to-face interviews with freight providers, freight advisory committee meetings, national freight database and other local available data.

The RTC also recently completed the Las Vegas Regional Freight Master Plan. This project used information collected in the freight data collection study to identify freight planning strategies for the near future and long term transportation plans. The plan identified barriers to freight movement and strategies to address those barriers.

Lastly, the RTC will begin a truck arterial route study in 2016. The purpose of the study is to conduct an assessment of safety, operational, capacity, geometric, and weight requirements of the defined arterial truck routes, and recommend improvements to ensure they meet minimum requirements to support freight movement needs.
All recommended projects in the Southern Nevada Regional Goods Movement Master Plan have been compared with the programmed or planned projects in the existing RTP and TIP. RTC also made significant efforts in collecting and analyzing freight data. In addition to these efforts, RTC was actively involved in the development of NDOT’s State Freight Plan.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Visualization**

SAFETEA-LU requires MPOs to consider safety as one of eight planning factors. As stated in 23 CFR 450.306, the metropolitan transportation planning process provides for consideration and implementation of projects, strategies, and services that will increase the safety of the transportation system for motorized and non-motorized users. Safety was identified in TEA-21 as a planning factor, in combination with security. SAFETEA-LU emphasized the importance of safety by separating safety and security into individual considerations in the planning process, thus highlighting the importance of each issue.

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23 CFR 450.306 (h) states that the metropolitan transportation planning process should be consistent with the SHSP, and other transit safety and security planning and review processes, plans, and programs as appropriate.

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Safety also appears in the Metropolitan Transportation Planning rule as a consideration in the CMP (23 CFR 450.320), Development and Content of the MTP (23 CFR 450.322), and Development and Content of the TIP (23 CFR 450.324).

**Findings**
RTC uses a number of visualization techniques in planning studies and in the development of their RTP including:

- Aerial photographs or with mapping overlays
- Photo simulations of proposed projects
- Photographs of existing projects comparable to those proposed
- Interactive maps that allow comparison of proposals
- Interactive maps that allow addition/subtraction of proposed elements
- Printed, three-dimensional, or raised print maps, diagrams, or architectural figures
- “Before” and “After” photos, simulations, maps, diagrams or drawings
- Scenario planning exercises

The RTC utilizes social media technology, such as Facebook, Twitter, and YouTube to bring attention to transportation issues and upcoming RTC events and integrates visualization techniques with their PPP.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Land Use and Livability**

While current statute and transportation planning regulations do not make direct references to land use or livability planning, the transportation planning process is required to be coordinated with “planned growth” and similar activities that exist within the region. Certain activities pertaining, at least indirectly, to land use and livability that must be addressed through the transportation metropolitan planning process include:

- **Addressing the required planning factor** – *Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns* [23 CFR 450.306(a)(5)]
- Developing an integrated, multimodal transportation plan, which includes pedestrian walkways and bicycle facilities
- Involving a broad cross section of interested parties and the public
- Addressing environmental mitigation and consulting with agencies responsible for land use and natural resource management activities
- Meeting the CMP requirements for consideration of demand management strategies, including growth management and restrictions on SOV capacity increasing projects in TMA nonattainment areas

The relationship of transportation planning and system development to the concept of “livability” has not yet been defined in statute or regulation, but the issue has been receiving much more attention from various organizations and agencies, including the USDOT. While defining the term
“livability” has been challenging, the USDOT, in partnership with the U.S. Department of Housing and Urban Development (HUD) and EPA, has established the following principles to guide the development of livability-supportive policies and legislation:

- Provide more transportation choices
- Promote equitable, affordable housing
- Enhance economic competitiveness
- Support existing communities
- Coordinate policies and leverage investment
- Value communities and neighborhoods

**Findings**
The RTC coordinates a collaborative effort with the Planning Departments of the local jurisdictions to produce 20-year forecasts for land use based on current local agency land use and zoning policies. These are used to generate population and employment forecasts at the level of the Traffic Analysis Zone (TAZ) used in the RTC Regional Travel Demand Forecast Model. The RTC is also working with local jurisdictions to implement the Southern Nevada Strong Regional Plan. This plan includes elements other than transportation that are interconnected to livability such as housing, education and sustainability. The RTC is also considering working with local jurisdictions to initiate Scenario Planning process.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Commendations**
The review team commends RTC on becoming the administrators of the Southern Nevada Strong Regional (SNS) Plan. The City of Henderson was the lead on this plan and once it was developed the RTC took it over to move the plan into the implementation phase. The plan has many elements outside of the traditional realm of transportation, but RTC sees the benefits of integrating all of these elements to develop comprehensive projects that can improve the community and address livability from many approaches and disciplines. The integration of SNS also provides additional opportunity for integrating land use and transportation. Incorporating SNS is an innovate effort that came without a roadmap, however; RTC, along with strong support from local jurisdictions, is developing a new model to ultimately improve the integration of transportation, education, housing and job opportunities in Southern Nevada.

**Travel Demand Forecasting and Modeling**
Federal transportation planning legislation requires each MPO to develop an MTP as part of its planning process (23 U.S.C. 134(i) and 49 U.S.C. 5303(i)). This plan must cover at least a 20-year planning horizon and “shall include both long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods.” [23 CFR 450.322(b)]
An MTP requires valid forecasts of future demand for transportation services. These forecasts are commonly made using travel demand models, which allocate estimates of regional population, employment and land use to person-trips and vehicle-trips by travel mode, route, and time period. The outputs of travel demand models are used to estimate regional vehicle activity for use in motor vehicle emissions models for transportation conformity determinations in nonattainment and maintenance areas, and to evaluate the impacts of alternative transportation investments being considered in the MTP.

The Statewide and Metropolitan Transportation Planning Regulations provide a degree of specificity on the analytical capacity of the MPO to prepare the MTP, as follows: “The MPO, the State(s), and the public transportation operator(s) shall validate data utilized in preparing other existing modal plans for providing input to the transportation plan. In updating the transportation plan, the MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The MPO shall approve transportation plan contents and supporting analyses produced by a transportation plan update.” [23 CFR 450.322(e)] The regulation further states that “The metropolitan transportation plan shall, at a minimum, include (1) The projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan....” [23 CFR 450.322(f)]

The CMP requirements also necessitate a modeling capability that will allow for the “Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures.” [23 CFR 450.320(C)(4)].

Based on the planning requirements outlined above, the travel forecasting methods used by an MPO are typically addressed in the certification review to ensure that they adequately support the applications for which they are being used. These applications can vary considerably from one MPO to another, depending on such factors as nonattainment status, regional population and economic growth, and the types of strategies/investments being considered in the MTP.

**Findings**

In 2015, RTC completed a household travel survey, On-board transit survey and hotel visitor survey. The current RTC TDM is being recalibrated and enhanced with the survey data along with NPMRDS, INRIX, AirSage, freight data and 2015 Average Week Day hourly traffic count data. RTC is currently working to enhance and calibrate the new model which will be a full four-step model but with more purposes of trips based on more land use categories. The new model also includes a Pedestrian Environment Factor to capture some Complete Street components. The facility functional class has been increased by adding Super Arterials. The model will now be able to differentiate between an on-ramp and an off-ramp, as well as accounting for ramp metering. CD roads and frontage roads are now modeled as well. The new model will be used for the upcoming 2040 RTP modeling and Conformity Analysis. The model horizon years for the upcoming RTP are 2020, 2030 and 2040. The update of RTC’s model will enhance the planning
process and result in more accurate outputs.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Intelligent Transportation Systems**

The FHWA Final Rule and FTA Policy on Intelligent Transportation Systems (ITS) Architecture and Standards were issued on January 8, 2001, to implement section 5206(e) of TEA-21. This Final Rule/Policy required that all ITS projects funded by the Highway Trust Fund and the Mass Transit Account conform to the National ITS Architecture, as well as to USDOT adopted ITS Standards. The Final Rule on ITS Architecture and Standards is published in 23 CFR Part 940.

23 CFR Part 940 states:

- Regions which implemented ITS projects at the time the Final Rule/Policy was issued were required to have a regional ITS architecture in place by April 8, 2005. Regions that had not implemented ITS projects at the time the Final Rule/Policy was issued must develop a regional ITS architecture within four years from the date their first ITS project advances to final design.
- All ITS projects funded by the Highway Trust Fund (including the Mass Transit Account), whether they are stand-alone projects or combined with non-ITS projects, must be consistent with the Final Rule/Policy.
- Major ITS projects should move forward based on a project level architecture that clearly reflects consistency with the National ITS architecture.
- All projects shall be developed using a system engineering process.
- Projects must use USDOT adopted ITS standards as appropriate.
- Compliance with the regional ITS architecture will be in accordance with USDOT oversight and Federal-aid procedures, similar to non-ITS projects.

**Findings**

As discussed in the regional architecture section, FAST is the administrative and implementation entity for RTC regional ITS programs. FAST includes the intelligent transportation system field devices and traffic signals, central system software and hardware, operator work stations, video wall, and communications systems including the fiber optic and microwave network. FAST is also responsible for the development of methodologies for data collection and performance monitoring of traffic conditions throughout the Las Vegas Valley.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.

**Congestion Mitigation Air Quality (CMAQ)**

The purpose of the CMAQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter (PM). The CMAQ program supports two
important goals: improving air quality and relieving congestion. These goals were strengthened in a new provision added to the CMAQ statute by SAFETEA-LU, which directs States and MPOs to give priority to two categories of funding. The first priority is for diesel retrofits, particularly where necessary to facilitate contract compliance. Second priority is to be given to cost-effective congestion mitigation activities that provide air quality benefits and maximize the effectiveness of the CMAQ program toward meeting the CAA requirements. Though SAFETEA-LU establishes these CMAQ investment priorities, it also retains State and MPO authority in project selection. Within MPO areas, the CMAQ project selection process should be carried out in accordance with the metropolitan planning process.

Close coordination is encouraged between the MPO, the State, MPO member agencies, and State or local air quality agencies to ensure that CMAQ funds are used appropriately and to maximize their effectiveness in meeting the CAA requirements. During the CMAQ project selection process, the MPO should consult with the appropriate air quality agency to develop a project list of CMAQ programming priorities that will have the greatest impact on air quality. In developing this list, the MPO should evaluate the cost-effectiveness of the projects and give priority consideration to those that will create the greatest emissions reductions for the least cost. The EPA has conducted a study of the cost-effectiveness of diesel retrofits in reducing PM, NOx, and VOC emissions. In addition, the National Academy of Science's Transportation Research Board published information on the cost effectiveness of CMAQ-eligible projects should be used as a guidepost in evaluating the different types of projects under consideration by an MPO. However, cost-effectiveness ultimately will depend on local conditions and project specific factors that affect emission reductions and costs.

**Findings**

The CMAQ project selection process involves NDOT, local transportation agencies, the Clark County Department of Air Quality, and both the Las Vegas and Moapa Band of Paiutes. The process provides an opportunity for stakeholders to present a case for the selection of eligible projects that will best use CMAQ funding to meet the requirements and advance the goals of the Clean Air Act (CAA). CMAQ projects are evaluated and prioritized based on their cost-effectiveness. Priority consideration is given to those projects that create the greatest emissions reductions for the least amount of CMAQ funds expended. The prioritization process also ensures timely implementation of Transportation Control Measures (TCMs) in the State Implementation Plans (SIPs) developed by the Clark County Department of Air Quality by granting eligible projects funding priority. Also, if Southern Nevada is found to not meet PM 2.5 air quality conformity standards in the future, the CMAQ project prioritization process can be quickly modified to give priority consideration to diesel retrofit projects or any other projects designed to mitigate PM 2.5.

The RTC meets the requirements outlined in regulation. There are no corrective actions or recommendations associated with this certification topic.
Conclusion
The certification review focused on compliance with federal law and regulation, challenges, successes, and the cooperative relationships between RTC, its member jurisdictions and NDOT in the conduct of the metropolitan planning process.

The primary recommendations include:
1. Coordinate efforts with NDOT on UPWP and SPR
2. Continue to enhance performance measures in the planning process
3. Place more focus on performance measures in the RTP related to project selection and evaluation
4. Develop and evaluation process for the Public Participation Plan

Commendations from the review team include:
1. Link between RTC and FAST in data collection and analysis
2. Integration of Southern Nevada Strong

FHWA and FTA jointly reviewed the transportation planning processes of the RTC in accordance with the requirement of 23 CFR §450.334 to assure compliance with federal requirements. Based on this review, FHWA and FTA find that the metropolitan planning process carried out by the RTC substantially meets the requirements of 23 U.S.C. 134, 49 U.S.C. 1607 and associated Federal laws and regulations. FHWA and FTA certify the transportation planning process with no corrective actions. This certification is valid for four years from the date of the final certification review report.