

SCOPE OF WORK

Task 1: Develop Scope of Work

The first task will be to work with the Yuma Metropolitan Planning Organization's (YMPO) Executive Director to refine and supplement the scope of services for the project. The Consultant's project manager will coordinate with the various team members to ensure a complete, concise, and achievable scope is developed for review by the YMPO. Minor adjustments to the fee estimate may need to be made. A final Scope of Work and fee estimate will be submitted to the YMPO TAC for review and approval.

Products:

1. Draft Scope of Work
2. Final Scope of Work and Fee Estimate

Task 2: Update TransCAD Model

The Consultant will update the current TransCAD regional traffic-forecasting model to reflect the socio-economic and network changes produced in the update of the existing conditions to 2037. The regional model will be updated to 2014 transportation/traffic conditions. Average daily traffic volume and volume/capacity plots will be produced and reviewed with the Technical Advisory Committee (TAC). Based on comments from the TAC, a final validation/calibration will be made for the model and the current model documentation will be updated.

The Consultant will update the Yuma urban area model for a non-seasonal timeframe for traffic volume counts. The Consultant will revise, if necessary, the Traffic Analysis Zones (TAZ) structure to reflect regional growth, future land use trends, and future highway networks when creating the new TAZs.

The 2010 model network will be revised to include 2012 roadway improvements. The network will contain only roads functionally classified as rural minor collectors and above, and roadway changes will be provided by the YMPO. The network will be reviewed for roadway characteristics, such as the number of lanes, speed, capacity, LOS, and type of pavement. The model will use look-up tables to populate some link characteristics.

The 2010 external trips matrix will be revised to reflect current conditions. A transit share matrix will be developed to account for transit usage in the YMPO area. The consultant will develop the matrix by quantifying transit share and identifying transit dependent TAZs from the Transit Needs Study.

The 2037 TransCAD model will be updated and validated to the 2011 average traffic counts provided by the YMPO using latest TransCAD version. Trip generation variables as well as trip rates will be reviewed to assess if current trip making characteristics are reflected in the model.

TransCAD model runs will then be made for the current year. The model runs will output traffic volumes, speeds, and the vehicle miles traveled (VMT). The Consultant will coordinate with the YMPO to define screen-lines for the study area and with ADOT statewide modeling efforts.

The accuracy of the model validation process will be evaluated using the following statistics:

1. Percent error and the percent root mean square error of the modeled volumes versus actual counts for the entire network grouped by functional classification.
2. Comparison of screen-lines total traffic counts with screen-lines total estimated traffic volumes. In particular, maintaining a ten to twenty percent difference (depending on facility type and

existing volume) between the counted screen-line total volumes and the assigned screen-line total volumes.

The Consultant will discuss the possibility of a new TransCAD interface for YMPO. All modeling steps as well as automated data field population could be incorporated in the interface. The interface could have the ability to create and store scenarios for the evaluation.

The Consultant will develop a custom user interface for the YMPO TransCAD travel demand model compatible with the existing TransCAD software. The interface will provide the following functionality:

1. Running of the model: The travel demand model can be executed in a step-by-step or single step process using the interface. The custom interface will reduce the time required to perform a model run.
2. Ability to store different scenario set-ups: Set-up scenarios for different model runs such as base year and horizon years can be saved using the custom interface.
3. Ability to select user-specified locations for input and output files: The custom interface adds the capability of selecting the input files from the hard drive or network drives. In addition, output files can be stored at user-specified locations with user-specified file names.
4. Other functionality: User will have the capability to modify options such as number of iterations for trip distribution and assignment, enable or disable turn penalties, etc.

Products:

1. Updated and Calibrated TransCAD Travel Demand Model
2. Updated Model Calibration and Users Guide Documentation
3. Custom user Interface for the YMPO TransCAD travel demand model.

Task 3: Collect and Review Existing Conditions Data

In order to form a basis for development of the various elements of the Regional Transportation plan (RTP), a good understanding of existing conditions and past transportation system work will be required. Following notice to proceed, the YMPO will provide the Consultant with the following data:

1. Previous 2010-2033 RTP
2. Current Transportation Improvement Program (TIP)
3. Current Comprehensive Plans
4. Transit Plans and Reports
5. Bicycle and Pedestrian Plans
6. U.S. – Mexico Port of Entry Programs and Initiatives
7. Other Reports – Master Plans, Corridor Studies, Design Concept Reports, Circulation Studies, Traffic Impact Studies, Safety Studies, Traffic Operations Studies, etc.
8. 2011 Air Quality Conformity Analysis
9. Travel Demand Model Documentation, Supporting Data, and Electronic Files
10. Socio-Economic Data
11. Financial Data – Revenue/Budget
12. Historical Construction and R-O-W Cost Estimates from State, County, and Cities.
13. Roadway Design Standards

From each of the documents, data will be extracted for use in subsequent tasks. The Consultant will review and summarize available data.

The existing land use, population, dwelling units, and employment data will be updated based on the U.S. Census data and changes in the land use data from the last update of the Plan. For this, the Consultant will coordinate closely with the YMPO Technical Advisory Committee (TAC), local jurisdictions, and the State of Arizona Population Technical Advisory Committee (POPTAC). The current Transportation Analysis Zones (TAZ) will be refined where necessary and the land use and dwelling unit data will be allocated to the appropriate zones. The socio-economic data, as well as any intermediate years required for transportation conformity, will be entered into a GIS database for the display and analysis. Figures will be prepared to display the socio-economic data for the report and public meetings.

The Consultant will be responsible for the base (2014) and future year (2037) socio-economic data, as well as any intermediate years required for transportation conformity, and will rely on the YMPO and the YMPO member agencies to assist, and to advise of land use distributions at the TAZ level. This data will include population, dwelling units, and how much by type by land use category. Population and occupied dwelling units will be updated based on 2010 Census data and base 2014 data from previous RTP. Census blocks data will be aggregated to TAZ levels to generate the base 2014 demographic data. The base will then be updated to reflect the 2014 conditions, with data furnished by YMPO and member agencies.

The future socio-economic data will be derived from future land use information provided by the YMPO. Jurisdictional General Land Use Plans will be used as the base for the development of the data. Preliminary results will be presented to the TAC for review and comments.

YMPO and member agencies will review the 2014 land use file. Current land use modeling categories will be reviewed for adequacy and consolidated if necessary. The 2014 land use variables will be estimated using the 2012 land use database, and incorporating land use changes occurring from 2010 to 2014 from data provided by the YMPO and member agencies. The Consultant will work with the YMPO TAC or TAC subcommittee for this work.

The Consultant will present a summary of the existing conditions of the Yuma region experience as it relates to transportation facilities, traffic levels of service and congestion, and to highlight the trends in population and economic growth expected to have an impact on that experience.

The Consultant will use the TransCAD model outputs to assess current traffic levels and congestion. In order to aid in presenting this information, traffic volume and volume/capacity plots will be produced for the existing roadway network. In addition, a look-up table of levels of service versus volume/capacity will be established and levels of service will be color coded on the plots.

The Consultant will collect and review non-motorized transportation data. The existing urban trails and bikeway systems will be described and shown on a map. Based on information reviewed and learned through the public meetings, probably non-motorized use trends will be forecasted and any planned projects will be described and shown on maps.

Existing transit information including current service and ridership will be described. Transit service options will be described and ridership trends will be forecasted. Information on trends will be presented in tabular form.

The information described above will be assembled into Technical Memorandum #1. This will be submitted to the TAC for review and comment. Comments will be incorporated in the memorandum and included in the draft Regional Transportation Plan as a chapter.

Products:

1. Bibliography of Data Reviewed
2. Update Socio-economic Data for 2014 and 2037
3. Technical Memorandum #1 – Existing Conditions (12 Copies)

Task 4: Title VI and SAFETEA-LU/MAP21 Discussion

Information to address Title VI and Environmental Justice considerations will be obtained from existing data collection tools and resources including, but not limited to: the U.S. Bureau of the Census, aerial maps, geographic information system data, poverty guidelines data, state and local economic development offices, and the U.S. Economic Census.

The regulations addressed in SAFETEA-LU/MAP21 will be taken into consideration and applied to developing the goals and objectives of the RTP. The SAFETEA-LU/MAP21 factors will also be used as criteria to evaluate alternatives developed for roadway, transit, air, freight and rail movements, and non-motorized travel.

Products:

1. Technical Memorandum #2 – Title VI and SAFETEA-LU/MAP21 Considerations (12 Copies)

Task 5: Public Involvement Plan

A key aspect of the project will be public involvement. The public involvement program will be designed, at a minimum, to satisfy the intents of SAFETEA-LU/MAP21, Title VI of the Civil Rights Act of 1964, and the Executive Order on Environmental Justice 12898.

As a first step, the Consultant will develop a public involvement/engagement plan. The plan will list the roles and responsibilities of the YMPO, the Consultant, and the Public Involvement team. It will also identify the number of proposed meetings and outline the schedule for TAC meetings, public meetings, small group meetings, and presentations to elected officials and commissions.

The activities of the Public Involvement Plan include:

Public Meetings:

The Consultant will conduct three (3) public meetings for the RTP. The first meeting will be held prior to the development of various transportation alternatives. The purpose of the first meeting will be to present the study team, outline the Study purpose, state the goals of the project, and present existing conditions and capacity deficiencies within the transportation system. The meeting will be held at three different sites over two or three days.

The second meeting will be held after the development and analysis of the transportation alternatives are complete also at three sites. In this meeting, the Consultant will present the roadway, transit, air, freight truck and rail movements, and non-motorized systems with special emphasis on the alternatives and the benefits of each. Comments received at this meeting will be considered for incorporation into the final draft of the RTP.

The final public meeting will be held to present the final plans of each study. Comments received during the final public meeting may be used when developing the final plans. All meetings will be held in an open house format with the Consultant and Executive Director making a short presentation followed by a questions and answers session. The Consultant will provide Spanish translation opportunities at each of the public meetings. For each public meeting the Consultant will provide a Power Point presentation and up to six (6) 24" x 36" display boards, an interpreter, bilingual informational handouts, and bilingual comment sheets.

The YMPO will arrange for the meeting space and provide any necessary meeting locations. The consultant will be responsible for advertising. The Consultant will be responsible for up to six black/white with up to four page newsletters and one (page black/white meeting notices. The meeting notices will be bilingual. The Consultant will be responsible for printing of the newsletters and meeting notices.

The YMPO will be responsible for providing the initial mailing list to the Consultant. The Consultant will supply any update to the mailing list from the public meeting and present it to the YMPO for inclusion in their mailing list database. The YMPO will be responsible for postage and distribution of all project materials sent out by U.S. Postal Service.

1. After each public meeting, the Consultant will prepare notes summarizing the items discussed at the meeting and forward those to the YMPO's Executive Director as project manager.
2. Presentations to Elected Officials, Boards, and Commissions: The Consultant will make up to four (4) presentations to elected officials, Boards and/or Commissions. The first presentation will be held immediately prior to or following the first public meeting to introduce the Consultant team, explain the methodology and understanding of the project goals, and to solicit ideas from the elected officials and commissions about their specific goals and entertain questions about the process. The second presentation will be held midway through the project and will be used to update the elected officials and commissions on the project progress. The third meeting will be held upon completion of the draft and approval of final plan. A fourth meeting may be held, if necessary.

TAC Project Support

1. The TAC will be used to gain final comments and input on the draft findings and recommendations. Between these presentations, the Consultant will rely on the TAC members to brief their respective agencies and commissions. The Consultant will provide a Power Point presentation and informational handouts. The YMPO will arrange for the meeting space and invite the appropriate attendees. YMPO will provide a briefing and introductions of the study team and keep the public informed on the YMPO website.
2. Technical Advisory Committee (TAC): As part of the project review process, the Consultant will utilize the TAC to review the work in progress. This project specific TAC should be based on the YMPO's established TAC with potential additional key stakeholders as determined by the YMPO project manager. During the course of the project, the Consultant team will make up to eight (8) presentations to the TAC during their regularly scheduled monthly meetings at the YMPO's office. The purpose of these presentations will be to review work in progress and to discuss issues that arise during the course of the project.

Products and Meetings:

1. Technical Memorandum #1-3 (12 Copies)
2. Up to three (3) Public Information Meetings (with translator)
3. Up to three (3) distinct Power Point Presentations, Bilingual
4. Up to eighteen (18) distinct Display Boards
5. Up to three (3) distinct Black/White (B/W) Public Information Bulletins Bilingual
6. Up to three (3) distinct B/W Public Meeting Notices (Bilingual)
7. Up to three (3) distinct B/W Comment Sheets (Bilingual)
8. Up to three (3) distinct B/W Newsletter (Bilingual)
9. Up to four (4) Elected Officials Presentations

10. Up to eight (8) Technical Advisory Committee Meetings
11. Comparison and Evaluation of the 2037 Alternatives
12. Recommend 2037 RTP
13. Meeting Minutes/Summaries

Task 6: RTP

Elements:

1. Significant Route Roadway
2. Roadway system
3. Safety Analysis
4. Intelligent Transportation System (ITS)
5. Bridge Inventory
6. Railroad Grade Separation
7. Alternative Energy
8. Travel Demand Management (TDM)
9. Land use
10. Transit
11. Air Quality Analysis
12. Congestion Management
13. Freight truck
14. Air, Rail, and Truck Freight Movements
15. Border Infrastructure
16. Inland Ports, Warehousing, Distribution Centers
17. Aviation
18. Economic Development Analysis
19. Trade and Tourism
20. Trends and Conditions
21. Financial
22. Implementation
23. Environmental
24. Transportation Security

Significant Route Projects and Maps

Roadway Element: This will be the main element of the updated RTP. The updated TransCAD model will be used to determine where deficiencies in the existing network would exist. It is important to note that the baseline for this effort will be the existing and committed transportation system. This travel demand model run is considered the Existing plus Committed (E + C) network. The updated TransCAD model will then be used to estimate future traffic volumes for the year 2037.

Average daily traffic volume of max quarter (January-February-March) and volume/capacity plots will be produced and reviewed with the TAC. Deficiencies will be identified for the no-build street network and for the recommended improvements from the previous plan. The previous recommendations will be re-evaluated under the new traffic forecasts and will be re-visited with the TAC in regard to meeting transportation needs. A sensitivity analysis will be conducted on the seasonal traffic volumes to determine the impact of seasonal variations on recommended improvements.

Improvements to the roadway system will then be tested. These improvements will include widening of existing roadways, creation of new roadways, or deletion of existing roadways, or combinations of the two. In addition, the need for new interchanges or **grade separations** will be investigated. Intersection

capacity improvements, traffic operations improvements, and other transportation demand or system management tools will be used where appropriate and coded into the network for analysis.

The model traffic assignments will be conducted for 2037 alternative networks and up to a maximum of three (3) alternative networks will be coded and analyzed. Traffic volume and volume/capacity plots will be produced for each of the alternative networks. In addition, a look-up table of levels of service versus volume/capacity will be established and levels of service will be color coded on the plots. VMT and VHT by roadway functional classification will be show in tabular form by alternative.

The Consultant will develop future traffic volume forecasts using the revised TransCAD model. The 2037 network will contain all new roadways and roadway improvements confirmed in the 2014-2037 Regional Transportation Plan and adopted by the YMPO. Inputs for the future traffic forecast will include the revised street network and the 2037 socio-economic forecasts.

Once the preferred alternative has been established, the Consultant will use the incremental traffic projections to determine when and which improvements are required. For the recommended improvements, approximate costs will be developed based on the historical cost for State, County, and City facilities. Cost estimates for intersection or interchange improvements will be developed on a per location basis. Model runs will also be performed for the years 2012, 2013, 2014, 2024, and 2034, 2037 verified with ADEQ and ADOT.

Using the roadway network model and additional model runs as necessary, the consultant will prepare a **Roadway System element** in map and tabular form that describes the 2037 roadway system in terms of number of lanes, separations or new interchanges if appropriate, and major intersection reconstruction and roadway widening.

A forecast of the performance of this future roadway system is to be in terms of an adopted **level of service criteria using the FHWA approved Highway Capacity Manual 2010**. An overall phasing of critical projects required to achieve this roadway network is to be in five-year increments.

Safety element will include diagrams, maps of crashes, matrix of crashes and severity, benefit and cost ratios, suggested improvements, coordinate and plan projects in conjunction with other roadway improvements. **Safety** should include Federal Highways Everyday Counts measures including the Safety edge and other technologies.

ITS element or Intelligent Transportation Systems (ITS) programs use real-time, travel-related information to integrate all components of a traditional transportation system into an interconnected network. ITS programs use advanced technologies in electronics, information processing, and communications to gather, process and distribute information necessary to maintain and increase the efficiency and safety of the function system. **Road inspection and ITS element** should also be reviewed to include earthquake and dust storm alerts and other new techniques.

A **Bridge program** used to build new bridges and repair, renovate, or reconstruct existing structurally deficient bridges. Complete inventory and sufficiency ratings of Yuma County bridges.

The improvements required for **railroad grade separations** (with new railroad overpasses or underpasses) that are constructed at several locations throughout the region.

Alternative Energy element will view the FHWA Everyday Counts initiatives in highway, bridge, and infrastructure development. The plan should include innovative sustainable actions. The transportation infrastructure plan and development should be coordinated with Solar Power and other planned projects

impacting traffic flow and transportation corridors.

Travel Demand Management (TDM) is designed to change the travel habits of single occupancy vehicle (SOV) users through various strategies. The TDM program encourages the use of carpools, vanpools, and transit for commuting to work and all other trips. TDM also promotes walking or bicycling, shifting travel outside the peak periods and eliminating work trips with telework or compressed workweeks.

Land use data will be updated to 2014 conditions using a percent growth by jurisdiction provided by the YMPO. Additionally, the new 2010 U.S. Census Bureau population projections will be used to estimate the 2014 demographic data. Vehicle-miles traveled for paved and unpaved roads will be estimated using the GIS comprehensive street coverage.

A **transit** level of service criteria is to be developed, along with other criteria as appropriate, as a basis for the **Transit element**. The consultant will analyze all existing data sources and prior plans and studies and then prepare a desired long-range transit system to meet future anticipated needs.

This long-range system will then form the basis for developing a short-term (5-year) plan. The Transit Element will address short-range alternatives, key service characteristics (frequency, duration, routing, etc.) and will estimate fleet requirements and service operating costs for each.

The consultant will identify all known funding sources to start and maintain a transit system in the Yuma region. If local funds are identified as a funding source, the amount of local funds needed for each transit alternative will be estimated.

For a transit system, what type and size of fleet, in number and seat capacity, type and size of vehicles would be desirable. The consultant would be required to coordinate with the Yuma County Intergovernmental Public Transportation Authority regarding the development of this section to ensure compliance with A.R.S. 28-9124.

Transit and Non-Motorized Modes: The Consultant will use the data collected and reviewed, public input, and travel demand person trips forecasted to review the present transit system and make recommendations to meet future anticipated needs. The transit system will define the system current conditions, future expansion scenarios, service characteristics (frequency, service hours, routing), and would estimate the fleet requirements and service operating costs.

The Consultant will research future funding options, including local matching requirements for any fixed-route system expansion plans that could be recommended. Existing fixed route and demand responsive transit services will be reviewed and future expansion plans will be discussed in coordination with YCIPTA.

A **non-motorized element** will be implemented for bikeway and pedestrian facilities to include Transportation Enhancement and Safe Routes to School projects. The report is to be highly readable by a lay audience, and utilize graphics rather than technical text where possible.

Transit data and results will be presented in tabular form and maps will be used to show current and proposed transit route locations. The Consultant will evaluate the existing urban trails and bikeway plans and supplement these trails and plans with information received in the public and small group meetings. Based on this evaluation, the Consultant will recommend needed segments and linkages for 2037. Maps will be prepared showing locations of proposed segments and linkages.

Air Quality: A new Air Quality Conformity Analysis will be developed to assess the contribution of emissions to the ambient air quality resulting from the proposed roadway element of the plan. All air quality analyses will be coordinated with the YMPO to determine air quality impacts and conformity with environmental regulations.

Vehicle-miles traveled for paved and unpaved roads will be estimated using the GIS comprehensive street coverage. The Consultant will estimate vehicle particulate emission factors for both paved and unpaved roads in the Yuma nonattainment area using EPA AP-42 Methodology and the MOVES model as necessary to estimate speed and other air quality parameters. The total vehicle emissions will be computed as a product of the emission factors and VMT on paved and unpaved roads. Six (6) transportation scenarios will be evaluated: 2012, 2013, 2014, 2024, 2034, and 2037.

An **Air Quality element** to the plan based on the existing 2011 Air Quality Analysis is required for the development of Yuma's air quality State Implementation Plan as established through consultation with ADEQ, EPA, and ADOT.

The Consultant will estimate vehicle particulate emission factors for both paved and unpaved roads using EPA AP-42 methodology and the MOVES model as a necessary to estimate speed and other air quality parameters. The total vehicle emissions, for the base year 2014, will be computed as a product of the emission factors and VMT on paved and unpaved roads. A PM-10 conformity analysis will be performed for all required analysis years.

Vehicle miles traveled for the year 2037 for paved and unpaved roads will be estimated using the GIS comprehensive street coverage. The Consultant will estimate vehicle particulate emission factors for both paved and unpaved roads using EPA AP-42 Methodology and the MOVES model as necessary to estimate speed and other quality parameters. The total vehicle emissions, for the preferred 2037 alternative will be computed as a product of the emission factors and VMT on paved and unpaved roads. A PM-10 conformity analysis will be performed for all required analysis years.

Congestion Management element should follow Federal Highways "Congestion Management Process (CMP). The Congestion Management Process (CMP), which has evolved from what was previously known as the Congestion Management System (CMS), is a systematic approach, collaboratively developed and implemented throughout a metropolitan region, that provides for the safe and effective management and operation of new and existing transportation facilities through the use of demand reduction and operational management strategies. The CMP is required to be developed and implemented as an integral part of the metropolitan planning process in Transportation Management Areas (TMAs) – urbanized areas with a population over 200,000, or any area where designation as a TMA has been requested. Although the CMP is not required in non-TMAs, the CMP represents the state-of-the-practice in addressing congestion, and should be considered in metropolitan areas that are facing current and future congestion challenges".

A **Freight Element** is to be developed addressing truck, rail and air segments, and linkages. An analysis of potential markets (market assessment) is to be included. The freight element is to consider potentials of industrial growth cross border, agriculture, agriculture food processing, and air freight to Pacific Rim areas. A comparison of freight volumes (truck, rail and air) over the past ten (10) years is to be included. Freight information will be reviewed and summarized in tabular form. Main freight corridors will be described and shown on maps.

Air, Truck, and Rail Freight: The Consultant will review and update the previous Rail and Air Freight Plan and include these updated materials in the RTP and coordinate with U.S. Customs and Border Protection (CBP), U.S. Border Patrol (BP), Greater Yuma Economic Development Corporation

(GYEDC), Greater Yuma Port Authority (GYPA), Yuma Airport Authority, and Yuma County Chamber of Commerce, including an economic analysis, business mapping, and trends.

Border Infrastructure will include improvements to transportation infrastructure connecting San Luis ports of entry and area traffic related to Mexico and the region to increase trade and tourism. Review highway and rail infrastructure that supports our Mexico ports of entry and to explore additional funding and creative financing to implement these projects for the economic vitality of Yuma County and Arizona.

Inland Ports, Warehousing, Distribution Centers and the development of the infrastructure to support economic development and warehousing industries in the region. The development of inland ports for the repacking and distribution for freight and rail and air are the future of the economy and support jobs for the community. The San Luis POE II and possible rail corridor will support growth with this element being of significance to the region.

An **Aviation** Developmental strategic plan for growth through prudent use of resources (fiscal responsibility) while focusing on customer service. Stay abreast of community growth and needs by collaborating and/or leading with our community for economic development. Promote international airport status. Expand aviation related business with U.S. Marine Air Corp Station-Yuma, general aviation, government, and NASA. Develop communications with partners in the aviation field too enhance transportation corridors that surround the airport facilities in the City of Yuma, MCAS-Yuma, Raleigh Air Field, and Somerton Airport.

Economics Development element will include modeling clusters or groups of interrelated businesses that drive the wealth in Yuma County. A framework of business clusters and work force development linking Economic Development and Planning for infrastructure needs of the region's economy.

Trade and Tourism is what our economy is based on and the transportation system must provide a range of affordable transportation choices. The roadways must be easy to navigate with signage that is understandable and visible and provide access to our cultural and natural attractions. The plan must support legal entry of Mexican residents and goods as an essential element of Arizona's economy, with Mexico being the largest bilateral trading partner with Arizona.

A **"Trends and Conditions" element** describing key trends in future travel and travel behavior in the Yuma region is to be developed from data and other information that was derived as part of the Travel Demand TransCAD Model project. This data should be related to the conditions that people experience in the Yuma region, e.g., traffic levels, and congestion.

Financial: The final RTP will be fiscally constrained. The cost of improvements identified, as part of the plan, must match with the amount of funding or revenues that can be expected within the time frame of the plan. To the extent possible, funding will be identified for each five-year increment to formulate development of the implementation plan.

In order to determine the expected future funding, the Consultant will examine past funding to predict what funding could be expected in future years, based on existing sources of revenue as well as reasonable increases. The forecasts will reflect, where appropriate, state forecasts of revenue streams.

In addition, the Consultant will identify other funding sources that have a reasonable chance of being procured, including local, state, and federal monies. SAFETEA-LU/MAP21 allows transportation plans to be approved that depends on reasonable expected revenues. The key to this task will be to determine what funding can be reasonably expected. The TAC and other local officials will be consulted during this

task to determine what new revenue sources are reasonably likely.

The resulting funding for the RTP timeframe will be compared to the expected improvement needs. If the expected funding falls short of the proposed transportation expenditures, then some recommended investments would be moved to a “Needs” status. The funding calculations and projections would be presented in tabular format.

In order to be useful in funding of projects in the 2014-2037 timeframe, the development of an implementation plan will be necessary. The implementation plan will list the improvements that should be considered for the transportation system either to correct existing deficiencies or to meet future traffic demand. The implementation element will consist of a series of tables that will list the improvement, its limits, a brief description of the improvement, and the estimated cost.

Environmental Element should provide an overview of the physical, natural, and cultural environments, including environmentally sensitive features affected by the transportation system.

Environmental Overview

On June 16, 2009, EPA joined with the U.S. Department of Housing and Urban Development (HUD) and the U.S. Department of Transportation (DOT) to help improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide. Through a set of guiding livability principles and a partnering agreement that will guide the agency’s efforts, this partnership will coordinate federal housing, transportation, and other infrastructure investments to protect the environment, promote equitable development, and help to address the challenges of climate change.

Livability Principles

Provide more transportation choices. Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.

Develop walkable, sustainable communities to promote economic development. Coordinate with local agencies in implementing the walkable and sustainable element into the enhancement projects to promote economic development within our region.

Support existing communities. Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.

Coordinate and leverage federal policies and investment. Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe, and walk-able neighborhoods—Whether rural, urban, or suburban.

The information described above will be assembled into Technical Memorandum #3 – Draft RTP with the all the elements in detail. This will be submitted to the TAC for review and comment. It will be subsequently revised and included in the Final RTP.

Use of public meetings and public input is necessary and an outline of the proposed process is required.

Transportation security is defined as the freedom from intentional harm and tampering that affects both motorized and non-motorized travelers, and may also include natural disasters. Security goes beyond safety and includes the planning to prevent, manage, or respond to threats and its transportation system and users.

The consultant will develop criterion to select and advance projects that recognizes highlights, and promotes projects, strategies, and services that will increase the security of the transportation system for motorized and non-motorized users.

The consultant and plan should discuss Yuma County in its entirety, not reflecting only Yuma in its presentations or discussions. The region should be noted in all documents and presentations that include the Cities of San Luis, Somerton, Yuma, and Yuma County, and the Town of Wellton, Winterhaven, CA, or any other relevant area as it applies to the region.

Products:

1. Technical Memorandum #3 – Draft RTP (12 Copies)

Task 7: Comparison and Evaluation of Alternatives

The Consultant will develop evaluation criteria that will be used to assess the impact of transportation and roadway improvements on the environment of the surrounding communities. The comparative advantages and disadvantages of alternatives will be described and ranked.

The evaluation criteria will be used for the RTP. The evaluation of each alternative will be made straightforward. Evaluation criteria will be developed, and it could include the following generalized area:

1. Environmental and Community Impacts
2. Traffic Service Levels and Mobility
3. Alternative Mode/Facility Compatibility
4. Costs and Cost Effectiveness
5. Trends and Conditions
6. Community Acceptance

The Consultant will closely look at all evaluation criteria and concepts stated above and present a package to the TAC for consideration, review, and edits. The final criteria are very important in the evaluation of each alternative developed. The Consultant will generate appropriate tables, graphics, and matrices to illustrate how each of the alternatives compares to each other. The Consultant will present the detail evaluation data for each alternative in a matrix that can be used to rank the alternatives presented.

Products:

1. Comparison and Evaluation of the 2037 RTP Alternatives

Task 8: Recommendations

In order to aid in the selection of the preferred RTP alternative, priority matrixes will be used. In conjunction with the TAC and YMPO staff, a priority ranking system will be developed related to

environmental and community impacts, traffic service levels, mobility, alternative mode/facility compatibility, costs and cost effectiveness, and community acceptance. From these priority rankings, the best alternative will be decided.

Once the recommended alternative is selected, transportation improvements, cost estimates, implementation plans, and other details will be refined and presented in maps, graphics, and schematics. Presentation style graphics will be prepared to illustrate the recommended alternative for presentations to the general public as well as all appropriate public agencies and Committees.

Products:

1. Recommended 2037 RTP

Task 9: Project Administration

Throughout the life of the contract, the Consultant will conduct regular quality control reviews, provide monthly progress reports to the YMPO, and provide schedule updates. The Consultant will also maintain project records and, following acceptance, deliver copies of the records to the YMPO, if they desire them.

Products:

1. Monthly Progress Report(s)
2. Monthly Schedule Updates
3. Project Records

50 copies of the Final RTP will be submitted, 20 Executive Summaries, 10 CD's, the updated TransCAD Model, all data collected, to include contact information, summaries, and documents.

