

**VI. TASK 5.0 SPECIAL STUDIES**

**A. OBJECTIVE:**

Special studies are needed to support the development and maintenance of the planning process. The MPO Congestion Management Process (CMP) working group utilizes updated travel time and delay data which is a product of previous special studies tasks. Additional studies will provide guidance to respond to changing priorities.

**B. EXPECTED PRODUCTS:**

The staff is continually updating the transportation system data and will also respond to directives from the Transportation Policy Committee for special studies that will require professional assistance in an amount not to exceed \$130,000. Four special studies will provide:

1. The information needed to improve the methodology of incorporating accident data into the congestion management process;
2. The information and process necessary to improve interagency coordination of pavement maintenance programs;
3. The development of a financial plan that explore and evaluates alternative strategies to fund major transportation improvement projects for the region and;
4. The analysis and evaluation of improvements needed for the area general aviation airports to improve general aviation, air cargo and freight opportunities.

**C. PREVIOUS WORK:**

- 2010 Regional Travel Speed Study

**D. SUBTASKS:**

- Subtask 5.1 Congestion Management Process (CMP)
- Subtask 5.2 Coordinated Maintenance Study
- Subtask 5.3 Financial Plans
- Subtask 5.4 Aviation Needs Study

**E. FUNDING SUMMARY:**

<b>Subtask</b>	<b>Responsible Agency</b>	<b>TPF*</b>	<b>Local*</b>	<b>Total*</b>
Subtask 5.1	MPO	\$ 33,486	\$0	<b>\$ 33,486</b>
Subtask 5.2	MPO	\$ 41,649	\$0	<b>\$ 41,649</b>
Subtask 5.3	MPO	\$ 72,119	\$0	<b>\$ 72,119</b>
Subtask 5.4	MPO	\$ 25,824	\$0	<b>\$ 25,824</b>
<b>Total</b>		<b>\$173,078</b>	<b>\$0</b>	<b>\$ 173,078</b>

TxDOT will apply transportation development credits sufficient to provide the match for FHWA PL-112 and FTA Section 5303 programs. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

\* TPF – This includes both FHWA PL-112 and FTA Section 5303 funds.

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**SUBTASK 5.1 CONGESTION MANAGEMENT PROCESS (CMP)**

**OBJECTIVE:**

This subtask provides for the use and development of an accident analysis capability in support of the Congestion Management Process (CMP). The CMP establishes a systematic process that provides information on transportation system performance and alternative strategies to alleviate congestion and enhance the safety and mobility of persons and goods in the Corpus Christi Metropolitan Area. As part of the process the MPO has used the travel time and delay studies and the traffic count data to gauge the degree of congestion on various segments of the streets within the urbanized area but is in need of expanding on the incorporation of safety data into the planning process. The effort would utilize professional services in an amount not to exceed \$20,000 in support of this effort.

**EXPECTED PRODUCTS:**

The MPO collects traffic count and travel demand data on over 200 locations on a recurring basis. The data is analyzed to illustrate the degree of congestion on various segments of streets. This data is used to select projects for MTP and TIP and to evaluate project performance but does not include a quantitative assessment of cost / benefits related to safety. The MPO needs enhanced safety data that could help identify the selection of projects that could have a significant impact on the network.

**PREVIOUS WORK:**

The GIS Maps showing the Mobility Ratios for the streets in the MPO area and an interactive map on the website showing recent traffic counts. Analysis of high impact projects on the transportation network.

**SUBTASK FUNDING SUMMARY:**

Subtask	Responsible Agency	TPF	Local	Total
Subtask 5.1	MPO	\$33,486	\$0	\$33,486

**SUBTASK 5.2 COORDINATED MAINTENANCE STUDY**

**OBJECTIVE:**

It is necessary for metropolitan planning organizations (MPO) to explore innovative and creative methodology to utilize limited financial resources to the optimum. Given that financial resources are limited for new construction the emphasis on Operations and Maintenance projects has taken on new importance.

**EXPECTED PRODUCTS:**

In an effort to identify opportunities, interagency coordination and cooperation in the forecasting, planning, design and contracting for operations and maintenance projects could lead to the more efficient use of limited resources. Currently, state, county and municipalities each pursue projects with interaction only on those that are part of the MPO planning process. This effort would explore information sharing and task sharing possibilities that could have overall benefit to the taxpaying community. The effort would utilize professional services in an amount not to exceed \$30,000 to assist in this study effort.

**PREVIOUS WORK:**

For the 2010 study, the MPO contracted to collect roadway characteristics and field-measured travel time and speed data for use in calibrating and validating the regional transportation model. The contractor expanded the scope of the study without increasing the cost to include a larger sample of roadways, a major GIS enhancement, digital video, percent stops at intersections, congestion index (% of posted speed) and pavement condition profile.

**SUBTASK FUNDING SUMMARY:**

Subtask	Responsible Agency	TPF	Local	Total
Subtask 5.2	MPO	\$41,649	\$0	\$41,649

**SUBTASK 5.3 FINANCIAL PLAN**

**OBJECTIVE:**

The Corpus Christi MPO needs to develop as part of its long-range MTP update a financial plan that includes estimates of costs and revenues association with its major projects over the period of the 25-year long-range transportation plan (2015-2040).

The Corpus Christi MPO must also address financial shortfalls within its next long-range metropolitan transportation plan (MTP) update by exploring alternative methods of funding projects.

**EXPECTED PRODUCTS:**

The plan will require professional services not to exceed \$60,000 and will provide estimated costs and contain estimates at the systems-level for costs and revenue sources that are reasonably expected to be available in order to adequately operate and maintain Federal-aid highways and public transportation.

The plan will explore innovative finance techniques (including pass-thru funds, managed lanes, TIFIA and SIB loans, bonding opportunities, and public-private partnerships). The major MTP projects will be evaluated for alternative methods of financing in order to fund financial shortfalls over the 25-year period of the MTP. The discussion of alternative financing mechanisms will be documented as part of the next MTP update and will include the associated long-range financial plan.

The plan will include input from locally elected officials and may result in public dialogue on potential funding alternatives provided by state and federal legislative changes.

**PREVIOUS WORK:**

The long-range financial plan of the current MTP has included the eleven years of financial revenue data developed as part of the next Unified Transportation Program (UTP) to ensure fiscal constraint and consistency with state revenue projections.

**SUBTASK FUNDING SUMMARY:**

Subtask	Responsible Agency	TPF	Local	Total
Subtask 5.3	MPO	\$72,119	\$0	\$72,119

**SUBTASK 5.4 AVIATION NEEDS STUDY**

**OBJECTIVE:**

This subtask would provide for an evaluation of general aviation services demand and would consider a wide range of alternatives for adding capacity to the three county general aviation airports. Alternatives would be selected from those advocated by the County advisory board, interested businesses or local or State government such as: improved facilities, plane and equipment storage areas and improved facilities to support the movement of freight and cargo.

**EXPECTED PRODUCTS:**

The study, utilizing professional services at an estimated cost of \$20,000, would provide a compilation of existing conditions, history of previous studies, documentation of existing business needs based on input from the individuals, business officials, and public officials. The study would also document potential projects that would increase the volume and efficiency of freight and cargo movement.

The study may utilize travel forecasts, modal, management design and environmental considerations, and cost estimates of reasonably practical alternative improvements.

The study will also explore economic benefits of improvements, preliminary determination of economic justification and financial feasibility.

**PREVIOUS WORK:**

The MPO had a “Freight and Hazardous Materials Movement Study” done in 2004 that compiled data on freight and cargo movement with the MPO study area. The primary focus was on truck freight and cargo however, rail and air cargo assets were considered. The MPO also conducted a “Corpus Christi Major Freight Facilities Impact Study”. This report described and evaluated the regions existing and planned assets and their impact on the road and rail infrastructure. The Aviation Needs Study will build upon that work and respond to requests for information and insight to assist the respective Counties in their project prioritization process.

**SUBTASK FUNDING SUMMARY:**

Subtask	Responsible Agency	TPF	Local	Total
Subtask 5.4	MPO	\$25,824	\$0	\$25,824