TECHNICAL ADVISORY COMMITTEE (TAC) REGULAR MEETING AGENDA AND 2050 METROPOLITAN TRANSPORTATION PLAN (MTP) WORKSHOP

THURSDAY, MAY 16, 2024

9:00 A.M. REGULAR TAC MEETING (Boardroom 210)
10:00 A.M. 2050 MTP WORKSHOP (Multi-Purpose Room 324)

Venue: Corpus Christi Regional Transportation Authority (CCRTA) Staples Street Center, 602 N. Staples Street, Corpus Christi, Texas 78401

1. **CALL TO ORDER, ROLL CALL, AND QUORUM DETERMINATION**
2. **NON AGENDA ITEMS PUBLIC COMMENTS:**

   Opportunity for public suggestions and comments for any items not on the Agenda and within the TAC's jurisdiction (except in matters related to pending litigation). Proceedings are recorded. To make a public suggestion or comment at the meeting, please fill out the printed comment card available at the meeting and submit it to Corpus Christi MPO staff 10 minutes before the meeting starts. We ask that remarks be limited to three minutes, that you identify yourself, and give your address.
3. **APPROVAL OF THE TAC APRIL 18, 2024 REGULAR MEETING MINUTES**
4. **DISCUSSION AND POSSIBLE ACTION ITEMS**
   - **A. DRAFT FY 2025 and FY 2026 Unified Planning Work Program (UPWP)**
     Action: Review, Discuss, Receive Public Comments and Possible Action
5. **INFORMATION ITEMS**
   - **A. DRAFT FY 2025-2028 Transportation Improvement Program (TIP)**
   - **B. DRAFT FY 2023 and FY 2024 Unified Planning Work Program (UPWP) with Amendment 2**
   - **C. 2050 MTP Vision, Goals, and Objectives**
6. **TAC MEMBER STATEMENTS ON LOCAL AGENCY ACTIVITIES OR ITEMS OF INTEREST**
7. **UPCOMING MEETINGS/EVENTS**

A.	**Transportation Policy Committee:**	**Special Meeting**	**May TBD, 2024**
B.	**Technical Advisory Committee:**	**Special Meeting**	**May TBD, 2024**
C.	**Transportation Policy Committee:**	**Regular Meeting**	**June 6, 2024**
D.	**Technical Advisory Committee:**	**Regular Meeting/Workshop**	**June 20, 2024**

8. **ADJOURN REGULAR TAC MEETING**
9. **TAC 2050 MTP WORKSHOP (MULTI-PURPOSE ROOM 324)**
   - **A. Consultant Update – Resiliency Plan**
     - **i. Resilience Overview**
     - **ii. Assessing Regional Resiliency**
     - **iii. Example Scenarios (Web Map)**
     - **iv. Scenario Feedback and Criteria Weighting Development**

10. ADJOURN

- Indicates attachment(s) for the agenda item. - Indicates a weblink for agenda item.

Public suggestions and comments may be provided before the meeting by emailing ccmpo@cctxmpo.us, by regular mail, or by hand-delivery to the Corpus Christi MPO Office at 602 N. Staples St., Suite 300, Corpus Christi, TX 78401. Please limit written comments to 1,000 characters. Written comments should be provided at least 1 hour before the start of the TAC meeting.

All Corpus Christi MPO Committee meetings are public meetings and open to the public subject to the access policies of the building owner where the meeting is being held. Any persons with disabilities who plan to attend this meeting and who may need auxiliary aids or services are requested to contact the Corpus Christi MPO at (361) 884-0687 at least 48 hours in advance so that appropriate arrangements can be made.

MEETING LOCATION MAP

CORPUS CHRISTI METROPOLITAN PLANNING ORGANIZATION (CORPUS CHRISTI MPO)
TECHNICAL ADVISORY COMMITTEE (TAC) MEETING MINUTES
THURSDAY, APRIL 18, 2024

1. CALL TO ORDER, ROLL CALL, AND QUORUM DETERMINATION

TAC Chairperson Brian DeLatte called the meeting to order at 9:00 a.m.

TAC Members Present:

Brian DeLatte, P.E., City of Portland, Chairperson
Liann Alfaro, Corpus Christi Regional Transportation Planning Authority (CCRTA)
Tom Yardley, San Patricio County
Juan Pimentel, P.E. Nueces County
Dan McGinn, AICP, City of Corpus Christi
Paula Sales-Evans, P.E., TxDOT – Corpus Christi District (CRP)
Emily Martinez, Coastal Bend Council of Governments

MPO Staff Present: Rob MacDonald, P.E., Craig Casper, AICP, Daniel Carrizales, Victor Mendieta, and Karla Carvajal, MBA

2. NON AGENDA ITEMS PUBLIC COMMENTS:

None were made or offered.

3. APPROVAL OF THE TAC MARCH 21, 2024 REGULAR MEETING MINUTES

Ms. Sales-Evans made a motion to approve the March 21, 2024, TAC Regular Meeting Minutes. Mr. McGinn seconded; the motion passed unanimously.

4. DISCUSSION AND POSSIBLE ACTION ITEMS

A. DRAFT FY 2025-2028 Transportation Improvement Program (TIP)

The DRAFT FY 2025-2028 Transportation Improvement Program (TIP) was proposed for TAC recommendation for the TPC to release for the required one-month public comment period. The approval for TPC release is necessary to meet the TxDOT scheduled adoption of the FY 2025-2028 Statewide Transportation Improvement Program (STIP). The TxDOT HQ must receive the final approved TIPs from all MPOs no later than June 10th, 2024. This means that the Corpus Christi MPO Draft FY 2025-2028 TIP must be released by the TPC for public comment during their May 9th meeting and the final Corpus Christi MPO DRAFT FY 2025-2028 TIP approved at the June 6th TPC meeting.

Mr. MacDonald mentioned the previous process of TIP project selection and prioritization, including input from members and previous approvals. He noted upcoming changes in the document due to new revenue forecasts and updated project information sheets.

Discussion:

Ms. Sales-Evans mentioned a project where there might be extra funds needing adjustment into the DRAFT FY 2025-2028 TIP due to cost increases beyond allowable limits. She expected clarity on this topic within two weeks. She asked about the approval timeline and if changes could be made by the next Transportation Policy Committee meeting.

Mr. MacDonald told the TAC that they could hold special meetings or workshops as needed to address any issues with the DRAFT TIP document. He emphasized the importance of meeting the June 18 deadline for uploading the document into the eSTIP Portal, but also stressed that adjustments could be made throughout the process, even after the release for the one-month public comment period. TAC members were encouraged to email any concerns they have with the DRAFT TIP document so that they can be addressed before the document's public review. Mr. MacDonald highlighted the MPO's flexibility to accommodate changes, noting that the one-month public comment period was the minimum requirement, but aimed to provide more time if possible. He reminded everyone that amendments to the TIP were always an option for TAC to consider and that most projects wouldn't be impacted until the next fiscal year starting in October 2024. This timing would allow ample time for adjustments to the DRAFT FY 2025-2028 TIP.

Ms. Sales-Evans mentioned the timeline for FHWA approval, pointing out that the first project wouldn't likely start until November or December. She stated the urgency for accurate funding details, especially for a project needing additional funds, suggesting it would be best to include correct numbers in the DRAFT FY 2025-2028 TIP from the start. She expressed the need for additional comments to ensure all project information is accurate before recommending it for public involvement. Ms. Sales-Evans also mentioned the importance of reviewing an updated version of the document before opening the public comment period. TxDOT is expecting alignment on these items by the end of the month.

Mr. MacDonald mentioned that the public comment period begins on May 9th, which offers enough time for offline discussions and email exchanges with TAC members to review upcoming changes. He explained that the packet for the Transportation Policy Committee will be sent out on May 2, serving as a critical deadline. Even if the TAC conditionally recommended the release of the DRAFT TIP for the one-month public comment period, updated information could be provided by May 2 for the Transportation Policy Committee's May 9 meeting. He assured that there is flexibility for last-minute changes and emphasized that the public wouldn't see the document until May 9 if the Transportation Policy Committee agreed to release it. Mr. MacDonald suggested options for the TAC, including conditional approval or tabling the item for a special meeting in the coming weeks, while emphasizing the need for time to accommodate production of the TPC Agenda Packet based on TAC discussions.

Mr. DeLatte asked Mr. MacDonald what the schedule looked like after the TPC starts the 30-day comment period on May 9th.

Mr. MacDonald explained that the DRAFT FY 2025-2028 TIP document would be posted on the MPO website along with advertisements for the one-month public comment period. Afterward, the TAC would review the comments at their next TAC meeting and make a recommendation for approval to the TPC. This recommendation would then go to the June 6 meeting of the TPC, which would serve as the final opportunity for public comments. He emphasized that all comments would be acknowledged and responded to, with a record of them included in the appendix of the TIP document.

Mr. DeLatte reiterated that there would be enough time by May 9 if they recommended approval for the 30-day comment period and suggested they would have adequate time offline to implement the revisions being discussed before May 9.

Ms. Sales-Evans expressed confidence that they would have all the necessary information by the end of the following week, ensuring a thorough review before a TPC vote. She questioned whether TAC is comfortable with not having additional opportunities to review the document after internal meetings, and agreed with recommending the document for public comment after the May 9 meeting, with the understanding that modifications and changes would be made before the deadline date.

Mr. DeLatte asked if the DRAFT FY 2025-2028 TIP document would come back to TAC. Mr. MacDonald confirmed that it will come back during the one-month public comment period for recommendation for TPC approval.

Ms. Sales-Evans expressed uncertainty about whether the MPO's process allows for changes after a certain point if concerns arise. She suggested that any changes made afterward would likely be additional information rather than modifications to the document. However, she indicated that she would be fine with proceeding if everyone else was agreeable.

Mr. MacDonald explained the public process regarding the TIP document, restating that it would not be public until May 9 with TPC approval to release the document. He clarified that MPO staff could distribute the document to all TAC members individually, as long as there was no communication among members. This would allow members to review and provide feedback individually to MPO staff. Mr. MacDonald mentioned that he could send a notification to TAC members specifying which pages had changed for their review. He emphasized that this approach would afford them several weeks to finalize the document for conditional release before the public comment period, ensuring it was ready by May 2 for distribution to the TPC members only.

Mr. Yardley inquired about the frequency of reviewing the FY 2025-2028 TIP after approval, asking if it's done annually or as needed. He sought clarification on the process for amendments or updates to the TIP post-approval.

Mr. MacDonald explained that typically, the TIP is reviewed on a two-year cycle, but it can be amended more frequently, even monthly if necessary, especially with the introduction of a new long-range transportation plan. He mentioned that TIP amendments can be done relatively quickly, taking about 60 to 90 days. He cited an example of a recent amendment for an electric charging station, where there was urgency at TxDOT to quickly approve the NEVI projects so they could be constructed soon. Mr. MacDonald assured the TAC that the MPO's policies and methodologies are flexible enough to accommodate changes in project costs and funding.

Ms. Sales-Evans emphasized the importance of the TIP for accessing federal funds. She also mentioned her understanding that there are quarterly revision opportunities for each year the TIP is in effect, which are official time periods for FHWA reviews or revisions. Even after the MPO takes action and makes amendments, approval from the FHWA is still required for federal funds to be used on the intended projects.

Mr. MacDonald pointed out the schedule, highlighting the time delay from the TPC's approval on June 6 to the FHWA's approval no later than October 1. He mentioned that FHWA reviews all the Texas TIPs, often resulting in a lengthy list of exceptions for larger metropolitan areas like Houston. He underscored that the projects discussed are for fiscal year 2025, and he referenced a table in the agenda packet showing the list of projects.

Ms. Sales-Evans pointed out that the Harbor Bridge mitigation projects were not listed.

Mr. MacDonald stated that the DRAFT FY 2025-2028 TIP document has a project rollover section in a TIP Table, and that is where some are listed, since they were programmed in prior fiscal years. He also stated that they would ensure each formatted version of the TIP project pages include accurate fiscal years and dollar amounts. He noted that the table presented as an attachment in the TAC Agenda item is a snippet of the larger 85-page document, containing previously publicized project lists. Mr. MacDonald requested TAC action to keep the process moving forward.

Recommendation:

The Corpus Christi MPO staff recommended TAC approval to recommend the TPC release the DRAFT FY2025-2028 TIP document for a one-month public comment period.

Motion:

Ms. Sales-Evans made a motion to approve the release of the DRAFT FY 2025-2028 TIP document for a one-month public comment period.

Mr. Pimentel seconded; the motion passed unanimously.

5. INFORMATION ITEMS

A. 2025-2050 Metropolitan Transportation Plan (2050 MTP)

1. Vision, Goals and Objectives Discussion

2. Timeline for Meetings and Events

Federal funds for transportation projects can only be programmed for projects that are contained within the MPOs Fiscally Constrained Metropolitan Transportation Plan (MTP). The Corpus Christi 2050 MTP must be updated at least every 5 years and was last adopted on February 6, 2020.

In addition to an increase in funding for transportation, the passage of the Infrastructure Investment and Jobs Act (IIJA) brought additional planning requirements. Due to the completion of the 2020 Decennial Census, the Governor will need to approve updates to the Corpus Christi MPO Boundary. This process will begin after the 2050 MTP Small Area Forecast is approved by the TPC. As part of the overall 2050 MTP update, several other plans or products are being updated or newly created. The items listed below will need formal approval from the TPC, either separately or as part of the overall 2050 MTP. TAC will provide their recommendations to the TPC.

Mr. Casper outlined the upcoming critical path items for approval by the TPC over the next 10 to 12 months. These include small area forecast scenarios, federal functional classification, Regional Safety Action Plan, 2050 MTP Goals and Objectives, Bicycle-Pedestrian-Active Transportation Plan, Regional Complete Streets Policy, Congestion Management Process, Regional Resiliency Plan, Regional Freight and Urban Goods Plan, Airport Plan, Ports Strategic Plan, Regional Financial Plan, MPO Boundary Adjustment, Regional Safe System Plan, And Environmental Mitigation. He emphasized the importance of these plans and their alignment with various state and federal requirements, noting that some plans are incentivized by reduced local match requirements for federal funds. He invited questions from the attendees.

Ms. Sales-Evans expressed confusion regarding the sequencing of efforts related to the Corpus Christi MPO boundary. She highlighted that while certain plans and items tied to the boundary, such as the Congestion Management Process (plan) and functional classification, are scheduled to occur before the boundary is finalized in winter, there appears to be a lack of clarity regarding the defined area for these efforts.

Mr. Casper mentioned that while the Corpus Christi MPO boundary remains unchanged until approved by the Governor, planning efforts can proceed within the existing boundary. He indicated that there might be an opportunity to amend items within a certain timeframe after the boundary is approved, typically occurring every 10 years, although he was unsure of the exact duration for amendments. Additionally, he noted that MPO boundaries generally don't expand significantly, and many regions in Texas choose to use the Metropolitan Statistical Areas (MSA) as the boundary.

Ms. Sales-Evans expressed a desire for a more holistic approach to planning, particularly concerning the Regional Safety Action Plan, Bicycle And Pedestrian Active Transportation Plan, and Regional Complete Streets Policy. She suggested that these elements should be examined together to ensure consistency and coherence in their goals and efforts. She questioned the organization of the planning documents, specifically mentioning the 2050 MTP goals, and emphasized the importance of aligning these plans to work together effectively.

Mr. Casper mentioned that the plans are ordered based on their current timeline. They're making sure that consultants working on different plans, like the bicycle-pedestrian plan and the regional complete streets policy, are coordinating closely. They're also ensuring consistency and sharing data between these plans and the Safety Action Plan. While the order of the plans might change, MPO Staff aims to align the plans logically and integrate their goals and objectives into the overall 2050 MTP as needed.

Ms. Sales-Evans raised concerns about the crash data and how it's incorporated into the Regional Safety Action Plan and Complete Streets initiatives. She emphasized the importance of considering recent events and changes, suggesting that the plans should be flexible enough to address evolving issues.

Mr. Casper responded by explaining the technical necessity of analyzing crash data over a period of three to five years to avoid recency bias and ensure rigor in the analysis. He mentioned ongoing efforts to clean and process the 2022 data and prepare for use of the 2023 data when TxDOT closes the year. He highlighted the challenges involved in maintaining data quality. Overall, they discussed the balance between addressing recent incidents and considering broader trends in crash data analysis for effective planning and decision-making.

Ms. Sales-Evans pointed out it could be challenging to explain why some incidents take precedence in transportation planning. She notes that incidents can be influenced by various factors like behavior, decisions, or infrastructure issues. While she understands the need for a structured process, she suggests considering evolving situations and past improvements made in certain areas. She proposed that planning methods should be flexible enough to address changing dynamics and improve situations where needed, even if they don't align with the usual process.

Mr. MacDonald explained the challenge of planning transportation projects, noting that it typically takes several years before construction can begin. He mentioned that urgent issues like safety concerns may need immediate action outside of the regular planning process. For instance, fixing problems like wrong-way drivers on the Harbor Bridge required immediate attention from relevant law

enforcement and TxDOT. Despite these challenges, he stressed the importance of using best technical practices and up-to-date data in planning studies to inform decision-making and eventually develop projects and programs to address various issues.

Ms. Alfaro asked if the MPO conducted educational activities.

Mr. MacDonald mentioned that TxDOT is actively engaged in educational initiatives, including school visits, public safety events with demonstrations on impaired driving, and grant funding for local law enforcement efforts. However, he emphasized that these activities and funding do not involve the MPO, as our focus is solely on planning and identifying funding transportation infrastructure projects and programs.

Ms. Sales-Evans suggests exploring the possibility of using Category 7 funds for additional outreach and education initiatives, which could be integrated into existing plans like the Complete Streets or Regional Safety Action Plan.

Mr. Casper added that when compared against equivalent Texas roads, Corpus Christi has an unusually high frequency and extent of high injury network routes, identified through calculations comparing safety performance functions developed by the Texas Transportation Institute (TTI). He emphasized the importance of education and outreach efforts to address this issue and improve road safety in the region.

Mr. MacDonald provided an overview of the upcoming Safe System Plan, a comprehensive strategy to tackle safety concerns in transportation, covering various aspects like emergency medical care accessibility. While the MPO will supervise the plan's development, its implementation falls under the jurisdiction of local governments. He emphasized the availability of federal grants available for initiatives such as Complete Streets and Active Transportation projects and programs. Mr. MacDonald highlighted the responsibility of local entities to apply for and efficiently utilize these funds to go towards improvements in transportation safety. Additionally, he discussed examples from across Texas where similar initiatives have been successfully implemented using federal safety grants, showcasing the potential impact of effective utilization of available resources. Mr. Casper cited an example from Chicago, where the approach to emergency medical response is using drones in congested urban areas to transport needed medicine directly to crash locations. He discussed the use of Category 7 funds for such initiatives.

Shifting the focus to vision and goals, he presented ten draft vision statements crafted based on discussions from the previous month. These statements incorporate elements from local and state plans to provide a framework for further refinement. Regarding goals, he outlined five conceptual areas: safety, community quality of life, economics, transportation technology, and environmental preservation. Seeking feedback, he invited discussion on resonant or conflicting vision elements. None were given. He emphasized the importance of creating SMART objectives aligned with these goals to track progress and assess project effectiveness over time. Finally, he solicited input on additional or alternative goal areas for consideration. None were given.

Ms. Sales-Evans raised a question about the alignment of goals with the efficient movement of people and goods, referencing ongoing efforts such as the Congestion Management Process (plan).

Mr. Casper suggested that this objective would intersect with the goal of regional prosperity within the economics domain, as it involves saving both travel time and money.

Ms. Sales-Evans brought up whether the goals clearly prioritize the efficient movement of people and goods. She suggested that while efficient and effective investments are highlighted, it's unclear if the primary goal is specifically focused on ensuring efficient transportation. She expressed a desire to see how these goals will translate into improvements that can be implemented and measured effectively.

Mr. MacDonald acknowledged the need to refine the goals to cover all key ideas, like effient traffic flow and road maintenance. He stressed the need to condense the goals to a manageable number and invited input on refining them. He suggested reviewing examples from other MPOs to guide the process and aims for clear, straightforward goals that capture the MPO's objectives.

Mr. Casper asked about vision statements, prompting Ms. Sales-Evans to request more time for review. Mr. Casper suggested revisiting the topic next month.

Mr. McGinn emphasized the importance of efficient road usage, maintenance, and resilience, suggesting updates to incorporate these aspects.

Ms. Martinez praised Laredo's vision statement as a model to follow. Mr. Casper appreciated her input and invited further comments or questions.

B. Corpus Christi MPO Regional Coordination Group for Federal Transportation Grants Update

Mr. MacDonald provided an update on federal grants, highlighting opportunities available through the federal Infrastructure and Jobs Act. He discussed ongoing grant request such as the RTA's efforts to promote loweremission vehicles, and the proposed rail yard expansion project led by the Port of Corpus Christi that will seek federal grant funding. Additionally, he highlighted the importance of initiatives like the Safe Streets and Roads for All (SS4A) grant in enhancing transportation safety. He also shared examples of successful federal grant applications within Texas, including the Reconnecting Communities (RCN) grants awarded to projects like the $105 million Austin RCN Grant related to the TxDOT I-35 reconstruction project in Austin.

Mr. MacDonald encouraged committee members to consider potential grant opportunities and assured them of support from the MPO staff throughout the application process. He stressed the significance of maximizing available federal funding for transformative transportation projects. The committee was invited to provide input on potential grant opportunities. Mr. MacDonald concluded by reiterating the importance of working as one coordinated region to secure and utilize federal grants effectively.

6. TAC MEMBER STATEMENTS ON LOCAL AGENCY ACTIVITIES OR ITEMS OF INTEREST

Mr. Yardley attended the Texas Desalination Association legislative workshop in Austin. Although not directly linked to transportation, he stated that the event holds significance for the region's future growth. He also mentioned a public comment session by TCQ on the desalination project at the American Bank Center later that evening.

Mr. DeLatte provided an update on the FM 893 (Moore Avenue) project in Portland, mentioning a companion drainage project currently out to bid. He reported that all the required rights-of-way have been acquired, and bids will be opened in approximately two weeks. This progress is expected to facilitate the FM 93 project. Additionally, he mentioned the ongoing construction of the Broadway Boulevard expansion and traffic improvements between Walmart and Target in Portland, anticipating its full opening to traffic within the next two weeks.

7. UPCOMING MEETINGS/EVENTS

A.	**Transportation Policy Committee:**	**Regular Meeting**	**May 9, 2024**
B.	**Technical Advisory Committee:**	**Regular Meeting**	**May 16, 2024**
C.	**2050 MTP Public Meetings:**		**May TBD, 2024**

8. ADJOURN

The meeting was adjourned at 10:10 a.m.

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date:	May 13, 2024
To:	Technical Advisory Committee (TAC)
From:	Craig Casper, Senior Transportation Planner
Through:	Robert MacDonald, Transportation Planning Director
Subject:	Item 4A: DRAFT FY 2025 and FY 2026 Unified Planning Work Program (UPWP)
Action:	Review, Discuss, Receive Public Comments and Possible Action

Summary

Each Metropolitan Planning Organization (MPO) is required to develop a Unified Planning Work Program (UPWP). Key assumptions in this new two-year UPWP are:

- the total Transportation Planning Funding (TPF) amounts shown in the table and document are the same as from FY 2024 until the new amounts are received;
- that $700,000 of carryover funds from the CRRSAA 100% federal grant for the completion of the Metropolitan Planning tools and products.

These items are proposed to be included as rollover in this proposed FY 2025 and FY 2026 UPWP. Additional changes may be made after the new funding allocations from FHWA and TxDOT are received. Also, TxDOT continues to request that the Planning Emphasis Areas (PEAs) from FHWA are required to be incorporated into the upcoming planning and programming efforts. These are included in the work program and the letter is provided as Attachment 1.

While the final amount of planning funds from both the Federal Highway Administration PL-112 and FTA 5303 planning funds from the Federal Transit Administration have not yet been determined, much of the necessary (from federal requirements) and desired (from the 2045 MTP After-Action Report) work tasks are known and listed below. The table below show funding amounts by Task that reflect both the level of effort and timing needed to complete the integrated subtasks. These subtasks are shown in Attachment 2 on pages 3-4 and described on pages 14-46. The Infrastructure Investment and Jobs Act (IIJA), aka Bipartisan Infrastructure Law (BIL), became law on November 15, 2021. The BIL includes 11 factors that the metropolitan planning process must explicitly consider and analyze. Specifically, and in alphabetical order as opposed to any implied priority, BIL compliant metropolitan (and statewide) planning processes must consider transportation projects and strategies that will:

- Emphasize the preservation of the existing transportation system.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Enhance travel and tourism
- Improve transportation system resiliency and reliability
- Increase accessibility and mobility of people and freight
- 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
- Promote efficient system management and operation

- Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
- Reduce (or mitigate) the stormwater impacts of surface transportation
- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency

The Planning Emphasis Areas listed in the December 30th 2021, joint letter from the Federal Highway Administration and the Federal Transit Administration require the following:

- Tackling the Climate Crisis – Transition to a Clean Energy, Resilient Future
- Equity and Justice40 in Transportation Planning
- Complete Streets
- Public Involvement – Integrating Virtual Public Involvement
- Strategic Highway Network (STRAHNET)/US Department of Defense (DoD) Coordination
- Federal Land Management Agency (FLMA) Coordination
- Planning and Environment Linkages (PEL)
- Data in Transportation Planning

The following Budget Summary Table provides an overview of the funding allocation by major Task.

UPWP Task	Description	FY 2025 TPF[1] Funds	FY 2026 TPF[1] Funds	CRRSAA	Other Funds	Total Funds
1.0	Administration-Management (with Direct Expenses and Consultant Services)	$1,480,661	$746,461	$ 700,000	$0	**$2,227,122**
2.0	Data Development and Maintenance	$ 88,900	$ 167,000	$ 0	$ 0	**$255,900**
3.0	Short Range Planning	$147,400	$ 208,500	$ 0	$ 0	**$355,900**
4.0	Metropolitan Transportation Plan	$ 219,000	$ 64,000	$ 0	$ 0	**$283,000**
5.0	Special Studies	$0	$0	$ 0	$ 0	**$0**
	TOTAL	**$ 1,935,961**	**$ 1,185,961**	**$ 700,000**	**$ 0**	**$ 3,121,922**

[1] TPF–This includes both FHWA PL-112 and FTA Section 5303 Funds. TxDOT will apply transportation development credits sufficient to provide the match for TPF. As the credits reflect neither cash nor man-hours, they are not reflected in the funding tables.

The following Staffing Costs Exhibit provides an overview of the allocation of staff effort, by Task, broken into Subtasks, for both FY 2025 and FY 2026. Additional information on the scope of each subtask is found in Attachment 2, Exhibit 2, which is on pages 3-4 of the DRAFT FY 2025 and FY 2026 UPWP.

Recommendation

The Corpus Christi MPO staff recommends that the Technical Advisory Committee (TAC) review, comment and recommend the TPC release the DRAFT FY 2025 and FY2026 Unified Planning Work Program.

Proposed Motion

Move to recommend the TPC release the DRAFT FY 2025 and FY 2026 UPWP for the one-month public comment period.

Attachments

1. Public Notice #24-3 for the FY 2025 and FY 2026 UPWP
2. DRAFT FY 2025 and FY 2026 UPWP (Pending TPC release for one-month public comment)

PUBLIC NOTICE #24-3
JUNE 6, 2024

The **Corpus Christi Metropolitan Planning Organization** (Corpus Christi MPO) is seeking public input and comments on the **DRAFT FY 2025 and FY 2026 Unified Planning Work Program (UPWP)**.

The UPWP serves as the scope of work for the Corpus Christi MPO and documents transportation-related planning activities conducted in the Corpus Christi MPO Planning Area. In accordance with the Corpus Christi MPO Public Participation Plan, the MPO is seeking to inform those who are interested in or affected by transportation decisions with opportunities to provide input on the **DRAFT FY 2025 and FY 2026 UPWP**.

Public Comments may be provided in writing, limited to 1,000 characters, by emailing ccmpo@cctxmpo.us or by regular mail or hand-delivery to the Corpus Christi MPO offices at 602 N. Staples St., Suite 300, Corpus Christi, TX 78401, and MUST be submitted at least 1 hour before the start of a meeting in order to be provided for consideration and review at the meeting. To make a public comment at the meeting, please fill out the comment card and submit it to Corpus Christi MPO staff 10 minutes before the meeting starts. All Public Comments submitted shall be placed into the record of the meeting.

The **DRAFT FY 2025 and FY 2026 UPWP** is being released to the public on June 6, 2024, and public input is invited through July 11, 2024, at the following public meetings:

June 6, 2024, 2:00 p.m.*
Corpus Christi MPO Transportation Policy Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

June 20, 2024, 9:00 a.m.*
Corpus Christi MPO Technical Advisory Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

July 11, 2024, 2:00 p.m.*
Corpus Christi MPO Transportation Policy Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

**Meeting location and time subject to change, check MPO website for final location and time.*

www.corpuschristi-mpo.org

For more information, please visit http://www.corpuschristi-mpo.org or contact us at ccmpo@cctxmpo.us for any questions.

Agenda Item 4A - Attachment 1

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date:	May 13, 2024
To:	Technical Advisory Committee (TAC)
From:	Craig Casper, Senior Transportation Planner
Through:	Robert MacDonald, Transportation Planning Director
Subject:	Item 5A: DRAFT FY 2025-2028 Transportation Improvement Program (TIP)
Action:	Review, Discuss, Receive Public Comments and Possible Action

Summary

The DRAFT FY 2025-2028 Transportation Improvement Program (TIP) is being provided again to the TAC since the TPC meeting last Thursday was cancelled due to lack of a quorum. The TPC is attempting to hold a special meeting later in May prior to their Regular Meeting on June 6th to release the document for a one-month public comment period (see Attachment 1). The TAC is being asked today to provide additional comments on the DRAFT TIP document. One specific consideration is the proposed changes to the TIP projects identified by the TxDOT-CRP District on May 8th.

The current approval process is necessary to meet the TxDOT scheduled adoption of the FY 2025-2028 Statewide Transportation Improvement Program (STIP). The TxDOT HQ must receive the final approved TIPs from all MPOs no later than June 10th, 2024. This means that the Corpus Christi MPO must approve the Corpus Christi MPO DRAFT FY 2025-2028 TIP at the June 6th TPC meeting. TAC is likely to need a special meeting after the TPC Special Meeting in May and before the Regular TPC meeting in June.

The current FY 2025-2028 TIP/STIP Timetable is provided as Attachment 2 and illustrates the process flow of activities leading to the FY 2025-2028 TIP/STIP approval. The Corpus Christi MPO's TIP timetable will coincide with both the TxDOT 2025 UTP and FY 2025-2028 STIP development processes as these companion efforts are being developed in unison.

As part of the joint TIP/STIP planning efforts, the Corpus Christi MPO must conduct a performance-based scoring process and selecting transportation projects for funding Categories 2, Category 7, Category 9 and Category 10 CR. TxDOT is an active participant in these funding category selection processes eventually approved by the TPC. The Corpus Christi MPO must also coordinate with TxDOT on their scoring and selecting projects for Category 4.

Additionally, the Corpus Christi MPO and TxDOT Corpus Christi District will coordinate on other funding categories to ensure consistency of projects and any funding that contributes to the improvements of the regional transportation systems. As described in the TxDOT 2025 UTP process, the projects selected for the first four years of the 2025 TxDOT UTP are also likely to become part of the TxDOT FY 2025-2028 STIP. These first four years of projects and programs correspond to the Corpus Christi's FY 2025-2028 TIP. Finally, the Texas Transportation Commission must authorize the projects selected for Categories 2 and 4 in order to secure the local match required.

FY 2025-2028 TIP/STIP Funding Estimates for the Corpus Christi MPO

The current funding estimates are included in the DRAFT FY 2025-2028 TIP document for use in the Corpus Christi MPO area. A summary table of the estimates are on the next page. The TIP must be fiscally constrained, that is,

the funds programmed cannot exceed the funds that are reasonably expected to be available. The funding estimate was developed by TxDOT and the Corpus Christi MPO concurs that it is a reasonable estimate. The first four fiscal years are the FY 2025-2028 TIP years and are shaded yellow in the following table.

TxDOT 2025 UTP and FY 2025-2028 TIP/STIP Funding for Corpus Christi MPO

The funding levels for developing the FY 2025-2028 TIP are based on the current estimate for 4 and 10 years of funding available to the Corpus Christi MPO area, created by TxDOT and shown in the table below. The Corpus Christi MPO concurs that it is a reasonable estimate.

	Category 2	Category 4	Category 7	Category 9	Category 10 CR[1]	
Agency Lead*	MPO	TxDOT	MPO	MPO	MPO	
Coordinated Agency	TxDOT	MPO	TxDOT	TxDOT	TxDOT	**Subtotal**
10-Years	***$132,693,989***	***$101,053,278***	***$110,920,569***	***$12,895,674***	***$12,411,911***	**$369,975,421**
2025	$23,636,520	$15,653,858	$11,293,811	$1,309,555	$1,211,830	$53,105,574
2026	$18,016,794	$15,956,104	$11,519,702	$1,335,747	$1,236,067	$48,064,414
2027	$15,419,855	$11,510,093	$11,013,382	$1,281,296	$1,245,851	$40,470,477
2028	$14,187,810	$8,847,261	$11,013,382	$1,281,296	$1,245,452	$36,575,201
2029	$11,058,290	$8,867,572	$11,013,382	$1,281,296	$1,245,452	$33,465,992
2030	$8,584,451	$9,841,825	$11,013,382	$1,281,296	$1,245,452	$31,966,406
2031	$9,932,593	$8,047,943	$11,013,382	$1,281,296	$1,245,452	$31,520,666
2032	$8,372,011	$6,830,126	$11,013,382	$1,281,296	$1,245,452	$28,742,267
2033	$8,673,063	$7,372,007	$11,013,382	$1,281,296	$1,245,452	$29,585,200
2034	$14,812,602	$8,126,489	$11,013,382	$1,281,296	$1,245,452	$36,479,221

**Per TxDOT's 2025 Unified Transportation Program and Corresponding TIP/STIP Years of 2025-2028.*

1 *Note: The Category 10 CR is new for the Corpus Christi MPO.* The purpose of the Carbon Reduction Program (CRP) is to reduce transportation emissions through the development of State carbon reduction strategies and by funding projects designed to reduce transportation emissions (See 23 U.S.C. 175 as established by the Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58, also known as the "Bipartisan Infrastructure Law" (BIL)) (BIL § 11403).

Certain funding Categories (CATs) may have carryover funds from previous years, although the requirement to obligate the funds within 3 years of their available year still remains. The estimate of these carryover funds will be reported in the future as possible FY 2025-2028 TIP Amendments.

Attachment 3 is TxDOT's summary description of all funding categories (CATs) from the DRAFT 2025 UTP. These descriptions are included as part of the DRAFT FY 2025-2028 TIP document.

Eligible Projects List

The fiscally constrained list of projects shown in the adopted 2045 Metropolitan Transportation Plan (2045 MTP) as Table 14 is provided as an attachment (see Attachment 4). This list of projects contains all the projects previously prioritized as part of the 2045 MTP approval. Projects from this list are the only non-operations or safety projects that can be proposed for implementation with federal funds in the DRAFT FY 2025-2028 TIP list of projects. A new list of eligible projects, likely using updated scoring criteria, will be developed as part of the 2050 MTP.

Fiscal Impact Considerations

The process to determine fiscal constraint requires that year to year inflation is added on to the cost of projects during the years of the TIP. The level of inflation is currently 4% per year, although this has been exceeded in recent years. TxDOT does not add inflation onto projects that are included in years 5-10 of the DRAFT 2025 UTP. The latest version of the DRAFT 2025 UTP Project List was approved by the TPC at the March 7th Regular meeting. This is shown as Attachment 5.

The MPO staff and TxDOT-CRP District Staff met to review the funding allocations for the projects in the DRAFT 2025 UTP Project List. We agreed to allocate additional Category (CAT) 7 funds in place of CAT 2 or CAT 4 funds on select projects to ensure approximately $63 million of CAT 7 funds are used within the MPO region in the next 4 years so as to not be at risk of lapsing or reallocation in accord with TxDOT's new policy adopted by the Texas Transportation Commission.

In future TIPs and UTP development processes, CAT 7 funds and CAT 2/CAT 4 funds will continue to be allocated to projects within the MPO boundary eligible to use those funds.

Project Scoring and Selection Process

The Corpus Christi MPO staff proposes the following process to achieve the FY 2025-2028 TxDOT TIP/STIP schedule for prioritized projects for funding Categories 2, 4 and 7. The Category 9 project selection process is separate and will lead to projects being amended into the FY 2025-2028 TIP/STIP.

The Corpus Christi MPO staff proposes that the TAC, TPC, and the public use the fiscally constrained project list from the 2045 MTP as the source of possible projects to prioritize for the TxDOT 2025-2028 TIP/STIP in Categories 2, 4, 7, 9 and 10 CR. The projects listed in Table 12 are those projects that have been:

- Approved by the Corpus Christi MPO through the Transportation Policy Committee (TPC)
- Part of the approved fiscally constrained project list of the 2045 MTP
- Projects were scored, ranked, and ultimately selected to be the priority projects for the MPO for the 4-year (2023-2026 TIP), 10-year (FY 2025-2034) of the 2025 DRAFT UTP.

No New Projects for the DRAFT FY 2025-2028 TIP

As shown in Attachment 6, the Corpus Christi MPO staff proposes that no new projects be considered with this DRAFT FY 2025-2028 TIP/STIP selection process given the lack of current performance measures tools and information. Additionally, the TIP/STIP schedule has a short duration and the timing for a project application to be developed is challenging in the FY 2025-2028 TIP/STIP approval process. Attachment 7 illustrates the generalized schedule to have a project complete the required federal and state approval processes before receiving a notice to proceed to construction.

TxDOT Selection Process

The TxDOT CRP District Selection Process follows the TxDOT STIP process for performance-based project selection for funding Category 4 (CAT 4). The current DRAFT FY 2025-2028 STIP process is provided within the TxDOT 2025-2028 STIP Timetable (Attachment 2).

Recommendation

The Corpus Christi MPO staff recommends that the TAC recommend approval of the DRAFT FY 2025-2028 TIP document to the TPC. Since the last TAC meeting on April 18th, the following updates to the document were made:

- Table of Contents: Revised to Revised Page Numbers
- Page 2: Revised the Exhibit of the map
- Page 19: Revised Table
- Page 39: Revised projects in the Financially Constrained Project List to include the May 8th comments from the TxDOT-CRP District
- Page 39: Revised projects in the List of Carry-over Projects
- Page 40: Updated the CCRTA Projects List for FY 2025-2028
- Pages 41-45: Updated the eSTIP Reports of the highway and transit projects and programs,
- Appendix A: Public Notice #24-2
- Appendix B: Updated the public outreach activities
- Various minor word changes throughout document
- Page 46: Updated Highway Financial Summary – Year of Expenditure Table
- Page 48: Updated Transit Financial Summary – Year of Expenditure Table
- Appendix F: Revised Self Certification – Resolution #24-3

On May 8th, TxDOT-CRP District staff submitted comments on the project list. Attachment 9 is the information submitted by TxDOT. TAC members are asked to review and comment on the proposed changes. Corpus Christi MPO staff will provide comments at the TAC meeting.

Proposed Motion

Move to recommend the TPC release the DRAFT FY 2025-2028 TIP for the one-month public comment period with TAC updates.

Attachments

1. Public Notice #24-2 for the DRAFT FY 2025-2028 TIP and DRAFT FY 2023 and FY 2024 UPWP with Amendment 2
2. TxDOT 2025-2028 STIP Timetable
3. TxDOT 2025 UTP Full Funding Category Descriptions from DRAFT 2025 UTP
4. FY 2025-2028 TIP Eligible Project List (2020-2045 MTP Fiscally Constrained Project List) (For Illustration Purposes)
5. TxDOT DRAFT 2025 UTP: Corpus Christi District Project List
6. Corpus Christi MPO DRAFT FY 2025-2028 Fiscally Constrained Project List
7. TxDOT Project Initiation Tasks and Timeline for Federal Funded Projects
8. DRAFT FY 2025-2028 TIP (Pending TPC release for one-month public comment)
9. TxDOT-CRP Project List Comments May 8, 2024

PUBLIC NOTICE #24-2

MAY 24, 2024

The **Corpus Christi Metropolitan Planning Organization** (Corpus Christi MPO) is seeking public input and comments on the **DRAFT FY 2025 – 2028 Transportation Improvement Program (TIP)** and **DRAFT FY 2023 and FY 2024 Unified Planning Work Program (UPWP) with Amendment 2.**

The TIP identifies how the region plans to invest $509 million in transportation funds in the transportation system for the next four years. The UPWP serves as the scope of work for the Corpus Christi MPO and documents transportation-related planning activities conducted in the Corpus Christi MPO Planning Area. In accordance with the Corpus Christi MPO Public Participation Plan, the MPO is seeking to inform those who are interested in or affected by transportation decisions with opportunities to provide input on the **DRAFT FY 2025 – 2028 TIP** and **DRAFT FY 2023 and FY 2024 UPWP with Amendment 2**.

Public Comments may be provided in writing, limited to 1,000 characters, by emailing ccmpo@cctxmpo.us or by regular mail or hand-delivery to the Corpus Christi MPO offices at 602 N. Staples St., Suite 300, Corpus Christi, TX 78401, and MUST be submitted at least 1 hour before the start of a meeting in order to be provided for consideration and review at the meeting. To make a public comment at the meeting, please fill out the comment card and submit it to Corpus Christi MPO staff 10 minutes before the meeting starts. All Public Comments submitted shall be placed into the record of the meeting.

The **DRAFT FY 2025 – 2028 TIP** and **DRAFT FY 2023 and FY 2024 UPWP with Amendment 2** are being released to the public on May 24, 2024, and public input is invited through June 6, 2024, at the following public meetings:

May 24, 2024, 2:00 p.m.*
Corpus Christi MPO Transportation Policy Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

May ##, 2024, 9:00 a.m.*
Corpus Christi MPO Technical Advisory Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

June 6, 2024, 2:00 p.m.*
Corpus Christi MPO Transportation Policy Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

**Meeting location and time subject to change, check MPO website for final location and time.*

www.corpuschristi-mpo.org

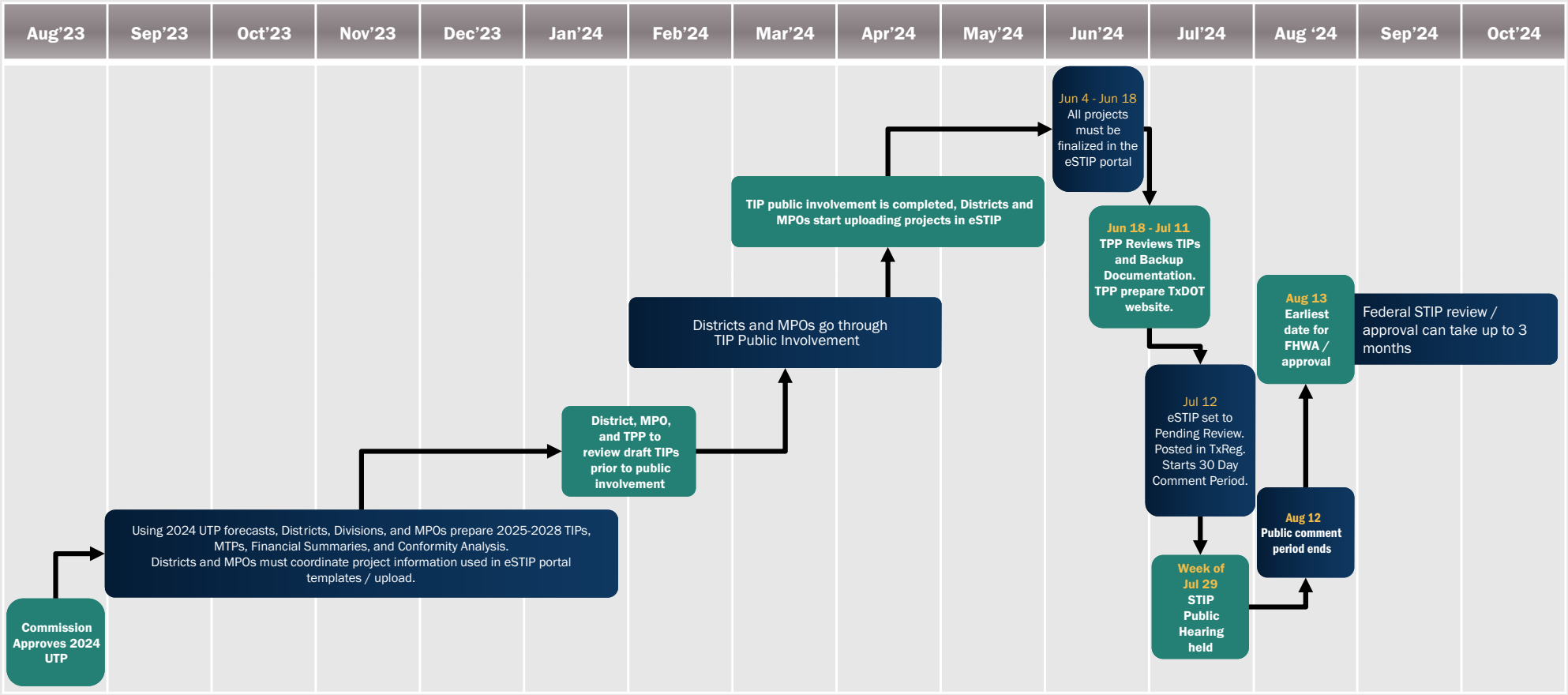
The **Corpus Christi Regional Transportation Authority (CCRTA)** hereby gives notice that coordination actions with the **Corpus Christi Metropolitan Planning Organization (Corpus Christi MPO)** have occurred to assure that the procedures established in the MPO's public participation plan, including public notice and times established for public review and comment on the TIP, satisfy the Requirement of public participation in the development of the program of projects and grant application requirements of the Federal Transit Administration (FTA) Urbanized Area Formula Program, Section 5307; and other formula funds. The public participation requirements of 49 U.S.C. Section 5307 (b) (1) through (b) (7) (as amended by the FAST Act) are integrated into the MPO's adopted "Public

Participation Plan". The CCRTA, therefore, is a participant with the Corpus Christi MPO in the public process for the **DRAFT FY 2025-2028 TIP**.

For more information, please visit http://www.corpuschristi-mpo.org or contact us at ccmpo@cctxmpo.us for any questions.

TxDOT 2025-2028 STIP Timetable

2025 - 2028 STIP Development Process Timeline



Agenda Item 5A - Attachment 2

TxDOT 2025 UTP Full Funding Category Descriptions from DRAFT 2025 UTP

Allowable Development Activities by UTP Authority

	UTP Authority	Cost Estimate*	Preliminary Engineering[1]	Environmental[1]	Right of Way & Utilities[1]	Plans, Specification and Estimate	Other Approvals
OUTSIDE THE UTP	**Candidate** *CANDPA*	Initial cost estimate	X No activities	X No activities	X No activities	X No activities	Initial discussion with TxDOT Rail Division (new construction large scale projects)
OUTSIDE THE UTP	**Plan Authority** *PLAN*	Development of planning level estimate	Preliminary engineering for schematics (internal and external (up to 100% schematic)	Begin preliminary environmental review *Environmental clearance 2, 3*	Preliminary utility investigations & coordination preliminary ROW scoping *Rare Exception: ROW may be acquired with direct Commission authorization*	X No activities	Begin formal railroad coordination
INSIDE THE UTP	**Develop Authority** *DDA, SWDA, 6DA, 8DA and UTP Categories 1-12*	Refine and monitor cost estimate and update at significant milestones or project changes	Preliminary engineering, schematic approval	Environmental clearance[2, 3]	Right of way acquisition and Utility relocations *(ENV clearance and legal descriptions is a prerequisite)*	Develop PS&E[4]	Continue railroad coordination
INSIDE THE UTP	**Construct Authority** *UTP Categories 1-12*	Refine and monitor cost estimate and update at significant milestones or project changes	N/A	Environmental clearance[2, 3]	Right of way acquisition, Utility relocations *(ENV clearance and legal descriptions is a prerequisite)*	Final PS&E[4]	Finalize federal/state requirements (FPAA), Local agreements (AFA), Finalize railroad agreements, and receive permits (USACE and USCG)

Complete programming guidance is available on the UTP Crossroads Site. Link to Crossroads here.

Link directly to programming guidance here

*Inflation is applied by TxDOTCONNECT. Cost estimates should be updated annually at a minimum.

1. In non-attainment areas, ROW and PE phases must be listed individually in the STIP. This is required for ROW or PE FPAA's to be processed in advance of the CST phase being listed in the TIP/STIP. The ROW and PE amounts listed do not impact the fiscal constraint tables in the STIP as that hits the District's ROW/PEPS budget.
2. MPO: (1) Individually listed for construction in MPO's MTP/RTP (unless the project will be grouped for STIP purposes) and (2) grouped or individually listed in STIP ("E," "R," or "C" are all ok), or if project is outside 4-year STIP window, listed in appendix of TIP for informational purposes.
3. Rural: Grouped or individually listed in STIP ("E," "R," or "C" are all ok). If a project is not fully funded in the 10-year UTP window, the project must be listed for informational purposes in statewide financials to the STIP (see "Rural Development Authority Project List").
4. Exception Design-Build (Alternative Delivery) projects where design is limited to 100% schematic.

As of January 23, 2024

2025 UTP Programming Guidance

Funding Category	Funding Program Purpose	Program Manager	Project Selection	Funding Approval	Project Scoring/Ranking
Category 1 Preventive Maintenance & Rehabilitation	**Addresses:** Preventive maintenance and rehabilitation of the existing state highway system Includes pavement, signs, traffic signals, and other infrastructure assets Supports each district's Pavement Management Plan and Safety Plan Can be used as an open funding line	Districts	**TxDOT districts, select projects:** a) using a performance-based prioritization process, assessing: district-wide maintenance and rehab needs district-wide safety needs.	Districts	District scoring/ranking methodologies
Category 2 Metropolitan & Urban Area Corridor Projects	**Addresses:** Mobility and added capacity projects on urban corridors within MPO boundaries Mitigates traffic congestion, traffic safety, and roadway maintenance or rehabilitation Must be located on the state highway system	MPO/District Collaboration	**MPOs and TxDOT districts collaborate to select projects:** using a performance-based process to determine priority projects deemed by the MPO within category 10-year planning targets constraint	Texas Transportation Commission via UTP Adoption	MPOs use a performance-based prioritization process that assesses mobility needs within the MPO boundaries. TPP additionally scores projects statewide to assign each project a tier ranking (1, 2, or 3) in the UTP document.
Category 3 Non-Traditionally Funded Transportation Projects	**Addresses:** transportation projects that qualify for funding from sources not traditionally part of the State Highway Fund state bond financing (such as Proposition 12 and Proposition 14) Texas Mobility Fund pass-through financing regional revenue and concession funds local funding Common project types include new-location roadways, roadway widening (both freeway and non-freeway), and interchange improvements.	Districts	Projects are determined by state legislation, Texas Transportation Commission-approved minute order, or local government commitments.	Varies	Varies
Category 3 Design-Build	**Addresses:** Non-construction costs associated with Design-Build projects fully funded, approved for contract, and within the constraints of project development LAR approval. Costs include those associated with design, utilities and other development costs approved in the Design-Build Guidance Document. Design-Build development fund sources are approved through FIN-Forecasting.	FIN-Forecasting	Projects selected for Design-Build are evaluated by ALD, selected and recommended by Administration. Once a project has been designated for Design-Build and is listed on the approved 2-year Design-Build schedule, it is eligible for Cat 3 Design-Build funds.	FIN-Forecasting	Scored and ranked by ALD Design-Build selection criteria
Category 4 Urban Connectivity	**Addresses:** Mobility on major state highway system corridors, which provide connectivity in urban areas. Projects must be located within the MPO boundaries on the designated highway connectivity corridor network that includes: The Texas Trunk System, National Highway System (NHS), Connections to major sea ports or border crossings National Freight Network Hurricane evacuation routes.	TPP-Unified Transportation Program	Districts select projects within the constraint of their category 10-year planning targets. Districts submit projects to TPP during the UTP Mobility Project Call.	Texas Transportation Commission via UTP Adoption	Districts use a performance-based prioritization process that assesses mobility needs on designated connectivity corridors within MPO boundaries. TPP additionally scores projects statewide to assign each project a tier ranking (1, 2, or 3) in the UTP document.
Category 4 Regional Connectivity	**Addresses:** mobility on major state highway system corridors, which provide connectivity between urban areas and other statewide corridors. Projects must be located outside of the MPO boundaries on the designated highway connectivity corridor network that includes: The Texas Trunk System, National Highway System (NHS), Connections to major sea ports or border crossings National Freight Network Hurricane evacuation routes.	TPP-Unified Transportation Program	Districts submit candidate projects to TPP through the annual UTP Mobility Project Call. Projects are recommended by TPP leadership and approved by the Commission.	Texas Transportation Commission via UTP Adoption	Districts use a performance-based prioritization process that assesses mobility needs on designated connectivity corridors outside MPO boundaries. TPP additionally scores projects statewide to assign each project a tier ranking (1, 2, or 3) in the UTP document.
Category 5 CMAQ	**Addresses:** Attainment of National Ambient Air Quality Standard in non-attainment areas (currently the Dallas-Fort Worth, Houston, San Antonio, and El Paso metro areas). Each project is evaluated to quantify its air quality improvement benefits. Funds cannot be used to add capacity for single-occupancy vehicles.	Districts/MPO Collaboration	MPOs select projects and must obtain District's concurrence on the project for which funds are to be used.	Districts	Local scoring/ranking methodologies

2025 UTP Programming Guidance

Funding Category	Funding Program Purpose	Program Manager	Project Selection	Funding Approval	Project Scoring/Ranking
Category 6 Structures Replacement and Rehabilitation (Bridge)	**Addresses:** Bridge improvements through the following sub-programs: **Highway Bridge Program:** For replacement or rehabilitation of eligible bridges on and off the state highway system that are considered to be in poor condition or near poor condition. A minimum of 15% of the funding must go toward replacement and rehabilitation of off-system bridges. **Bridge Maintenance and Improvement Program:** For rehabilitation and preservation of eligible bridges on the state highway system. **Bridge System Safety Program:** For the mitigation or elimination of higher risks on bridges such as deficient rails, documented scour or scour critical rating, documented history of debris, or steel or timber piling with advanced deterioration. Also for elimination of at-grade highway-railroad crossings through the construction of highway overpasses or railroad underpasses, and rehabilitation or replacement of deficient railroad underpasses on the state highway system.	Bridge Division	Districts submit candidate projects to BRG through the annual project call.	Bridge Division	**TxDOT's Bridge Division** selects projects using a performance based prioritization process. **Highway Bridge** projects are ranked first by condition categorization (e.g., Poor, Fair, Good) and then by extent of deterioration. **Bridge Maintenance and Improvement projects** are selected statewide based on identified bridge maintenance/ improvement needs. **Bridge System Safety** projects involving railroad grade separations are selected based on a cost-benefit analysis of factors such as vehicle and train traffic, accident rates, casualty costs, and delay costs for at-grade railroad crossings. Other system safety projects are selected on a cost-benefit analysis of the work needed to address the safety concern at bridges identified with higher risk features.
Category 7 Metropolitan Mobility and Rehabilitation	**Addresses:** Transportation needs within the boundaries of MPOs with populations of 200,000 or greater — known as transportation management areas (TMAs). This funding can be used on any roadway with a functional classification (FC) greater than a local road or rural minor collector (FC 6 or 7). Common project types include roadway widening (both freeway and non-freeway), new-location roadways, and interchange improvements.	Districts/MPO Collaboration	District and MPOs collaborate to select projects.	MPO Policy Board	Local scoring/ranking methodologies
Category 8 Safety	**Highway Safety Improvement Program (HSIP):** Federal aid program administered by Traffic Safety Division (TRF) to fund safety projects **on and off the state highway system,** with the purpose to achieve significant reductions in traffic fatalities and serious injuries on all public roads. Traffic projects must align with the emphasis areas in the Texas Strategic Highway Safety Plan (SHSP) such as roadway and lane departures, intersections, older road users, and pedestrian safety. TRF provides districts with funding projections for on-system targeted, on-system systemic, and off-system projects, and districts submit project proposals for review and concurrence by TRF. The funding remains allocated to and supervised by TRF. **Systemic Widening Program (SSW):** Statewide program to fund the widening of high risk narrow highways on the state highway system. *Completed Programs with no additional project calls/selections under Category 8: High Risk Rural Roads (HRRR), Safety Bond Program, and Road to Zero.*	Traffic Division	**HSIP:** Districts submit project selections for on-system targeted, on-system systemic, and off-system projects meeting TxDOT's HSIP Guidance. TRF reviews and approves projects submitted through annual program calls. **SSW:** Project locations are prioritized statewide and selected based on high risk factors and cost.	Traffic Division	**HSIP:** Projects are evaluated, prioritized, and selected at the district level based on three years of crash data (targeted funds) or systemic approved projects as outlined in the HSIP guidance. **SSW:** Projects are evaluated by roadway safety features for preventable severe crash types using total risk factor weights.

2025 UTP Programming Guidance

Funding Category	Funding Program Purpose	Program Manager	Project Selection	Funding Approval	Project Scoring/Ranking
Category 8 Rail	Rail-Highway Crossing Program (Federal Railroad Set-Aside): Funding set aside from HSIP for safety improvements to reduce fatalities, injuries, and incidents at on and off-system public at-grade crossings. Funds may also be used to mitigate blocked at-grade crossings.	Rail Division	Rail Division manages the selection and management of projects in line with the latest Rail Highway Operations Manual. Project review is based on project calls and to supplement existing HSIP or other traffic signal projects impacted by a railroad crossing.	Rail Division	Projects are evaluated using the railroad crossing index. Projects are ranked and rated based on criteria in the latest Rail Highway Operations Manual. Emphasis is placed on traffic signal preemption.
Category 9 Transportation Alternatives Set-Aside Program (TASA)	Addresses: Projects under the federal Transportation Alternatives (TA) Set-Aside Program such as: - Design and construction of bicycle and pedestrian infrastructure - Active transportation network plans - Improved access for bicycle, pedestrian, and transit users along divided highways - Safe routes to schools non-infrastructure programs - Other eligible activities consistent with federal guidelines outlined in rules adopted by MPOs for their TA programs.	MPO/District Collaboration > 200k Areas ---------- Public Transportation Division - Statewide	TxDOT allocates 59% of Category 9 funds to subareas of the state based on population. The other 41% is designated for statewide use, a portion of which may be available to transfer to other federal programs if certain conditions are met. MPOs with a population over 200,000, which are designated as TMAs, administer competitive calls for projects for TA funds suballocated to their areas. For these funds, MPOs select projects in consultation with TxDOT districts.	MPO Policy Boards - > 200k Areas ---------- Texas Transportation Commission - Statewide	Projects are evaluated against criteria developed by TxDOT and MPOs to advance regional and statewide transportation planning goals.
Category 10 Carbon Reduction	**Addresses:** Projects designed to reduce transportation emissions, defined as carbon dioxide (CO_2) emissions from on-road highway sources. Common types of projects include traffic management, congestion reduction technology, truck parking, energy efficient streetlights, traffic controls and options to reduce congestion through the use of alternatives to single-occupant vehicle trips, including public transportation, pedestrian and bicycle facilities, and shared/pooled vehicle trips.	TPP-Statewide Planning	TPP-Statewide Planning to coordinate use of non-MPO allocation.	TPP-Statewide Planning	*To be determined; additional guidance is forthcoming*
		MPO/District Collaboration	MPOs administer project selection for funds distributed based on population: urbanized area populations over 200,000 (known as Transportation Management Areas), area populations 50,000 to 200,000 (known as Metropolitan Planning Organizations), and small area populations under 50,000	District	Local scoring/ranking methodologies
Category 10 Ferry Boat Program	**Addresses:** The construction and capital maintenance and rehabilitation of ferry boat facilities along the Texas coast.	Maintenance Division	Ferry Boat projects are ranked based on level of need and selected by Maintenance Division in coordination with the Houston and Corpus Christi Districts.	Maintenance Division	Ferry Boat projects are ranked based on level of need and selected by Maintenance Division in coordination with the Houston and Corpus Christi Districts.
Category 10 Seaport Connectivity Program	Addresses: Projects that will improve connectivity, enhance safety, and relieve congestion in communities around the state's maritime ports. Formerly known as the Port Access Improvement Program.	Maritime Division	Projects are scored and recommended, through a competitive call for projects, to the Port Authority Advisory Committee (PAAC), before being recommended to the Texas Transportation Commission for the approval of project awards.	Texas Transportation Commission	Seaport Connectivity projects are scored based on their ability to increase connectivity and safety, their economic impacts, and project readiness. Projects are selected by the Port Authority Advisory Committee and for recommendation to the Commission for their approval.

2025 UTP Programming Guidance

Funding Category	Funding Program Purpose	Program Manager	Project Selection	Funding Approval	Project Scoring/Ranking
Category 10 Information Technology Systems (ITS)	**Addresses:** Improvements and upgrades to intelligent transportation systems across the state. Funding is distributed to the following divisions: **Information Technology Division (ITD):** Provides ITS equipment directly on the roadway - Work that will be incorporated into a current/future construction project - Work that supports a specific roadway project development stage - Project provides statewide data/technology solutions for the life-cycle of the transportation network. **Strategic Initiatives and Innovations Division (STR):** - The Cooperative and Automated Transportation (CAT) program is an initiative established by TxDOT to integrate Connected Vehicles (CV), Automated Vehicles (AV) and related emerging transportation technologies into the state's transportation system. CAT offers numerous potential benefits and improvements for safety and to accommodate rapidly growing transportation demands by using technology to maximize the transportation infrastructure's performance.	ITD/STR Divisions	ITD and STR Divisions select projects in coordination with TxDOT districts based on identified conditions and needs.	ITD/STR Divisions	ITD and STR Divisions select projects in coordination with TxDOT districts based on identified conditions and needs.
Category 10 Federal Lands Access Program	**Addresses:** Transportation facilities that are located on, are adjacent to, or provide access to federal lands.	TPP-Systems Planning	Project applications are scored and ranked by the Programming Decision Committee (PDC). PDC is made up of FHWA, local and TxDOT representatives.	TPP-Systems Planning	Project applications are scored and ranked by the Programming Decision Committee (PDC). PDC is made up of FHWA, local and TxDOT representatives.
Category 10 Texas Parks and Wildlife Department	**Addresses:** The construction and rehabilitation of roadways within or adjacent to state parks and other TPWD properties. Subject to memorandum of agreement between TxDOT and TPWD.	Texas Parks and Wildlife Department	Texas Parks and Wildlife Department (TPWD) selects State Park Roads projects in coordination with TxDOT districts.	Texas Parks and Wildlife Department	Texas Parks and Wildlife Department (TPWD) selects State Park Roads projects in coordination with TxDOT districts.
Category 10 Green Ribbon Program	**Addresses:** Projects that plant trees, plant material, and appurtenances that support the life of the plants to help mitigate the effects of air pollution in air quality non-attainment or near non-attainment counties.	DES-Landscape Section	Green Ribbon allocations are based on one-half percent of the estimated letting capacity for the TxDOT districts that contain or are near air quality non-attainment counties.	DES-Landscape Section	Green Ribbon allocations are based on one-half percent of the estimated letting capacity for the TxDOT districts that contain or are near air quality non-attainment counties.
Category 10 ADA Pedestrian Program	**Addresses:** Construction or replacement on system pedestrian facilities to make the system more accessible and safer for all pedestrians including those with disabilities.	DES-Landscape Section	ADA projects are selected statewide based on the identified conditions and needs.	DES-Landscape Section	ADA projects are selected statewide based on the identified conditions and needs.
Category 10 Landscape Incentive Award	**Addresses**: Joint landscape development projects in nine locations based on population categories in association with the Keep Texas Beautiful Governor's Community Achievement Awards Program. The awards recognize participating cities' or communities' efforts in litter control, quality of life issues, and beautification programs and projects.	DES-Landscape Section	Selection is through a competitive process sponsored by Keep Texas Beautiful.	DES-Landscape Section	Selection is through a competitive process sponsored by Keep Texas Beautiful.
Category 10 Railroad Grade Crossing and Replanking Program	Addresses: The replacement of rough railroad crossing surfaces on the state highway system (approximately 50 installations per year statewide).	Rail Division	TxDOT Rail Division in coordination with TxDOT districts selects Railroad Grade Crossing Replanking projects.	Rail Division	TxDOT Rail Division in coordination with TxDOT districts selects Railroad Grade Crossing Replanking projects.

2025 UTP Programming Guidance

Funding Category	Funding Program Purpose	Program Manager	Project Selection	Funding Approval	Project Scoring/Ranking
Category 10 Railroad Signal Maintenance Program	**Addresses:** the financial contributions to each railroad company in the state for signal maintenance.	Rail Division	TxDOT Rail Division selects railroad companies based on rail safety inspection fee payments and type of warning devices on public on-system at-grade crossings	Rail Division	TxDOT Rail Division selects railroad companies based on rail safety inspection fee payments and type of warning devices on public on-system at-grade crossings
Category 11 Border State Infrastructure	**Addresses:** TPP - International Trade Section is currently reviewing guidance on this program. They will coordinate with Districts on updates.	PP-International Trade	TPP - International Trade Section is currently reviewing guidance on this program. They will coordinate with Districts on updates.	TPP-International Trade	TPP - International Trade Section is currently reviewing guidance on this program. They will coordinate with Districts on updates.
Category 11 District Discretionary	**Addresses:** District transportation needs at the discretion of each TxDOT District. - should not be used for right of way acquisition - common project types include roadway maintenance or rehab, added passing lanes (Super 2), and roadway widening (non-freeway) - can be used as an open funding line	Districts	Districts select projects.	Districts	District scoring/ranking methodologies
Category 11 Energy Sector	**Addresses:** Safety and rehabilitation work on state highways impacted by the energy sector. - generally programmed on roadways most impacted by energy sector activity, outside of MPO boundaries - program should be reviewed on a quarterly basis to ensure funding is programmed to meet the needs of each energy play.	Districts	Districts select projects. Exceptions for projects outside the approved Energy Sector counties must be submitted to the TPP-UTP Director for consideration prior to programming.	Districts	Scored and ranked by districts
Category 11 Safety	**Addresses:** Safety needs at the district's discretion. Intended to be used on proven engineering safety countermeasures. TxDOT will put these funds toward standalone safety countermeasures that have been proven on a national or state level.	Districts	Districts select projects. Traffic Division will provide technical support in developing projects but does not participate in the management of the program.	Districts	District scoring/ranking methodologies
Category 11 Cost Overruns / Change Orders	**Addresses:** Cost overruns and change orders that have historically been covered by Category 1 Allocation distributed in FY 2024-2025 will provide additional funding for costs that are realized at letting and during construction.	Governance committee	Districts submit candidate projects to the governance committee for approval.	Governance committee	Not applicable
Category 12 Strategic Priority	**Addresses:** Projects with specific importance to the state, as determined by the Texas Transportation Commission (TTC), including those that improve: - Congestion and connectivity - Economic opportunity - Energy sector access - Border and port connectivity - Efficiency of military deployment routes or retention of military assets in response to the Federal Military Base Realignment and Closure Report - The ability to respond to both man-made and natural emergencies Common project types include roadway widening (both freeway and non-freeway), interchange improvements, and new-location roadways.	TPP-Unified Transportation Program	Districts submit candidate projects to TPP during the annual UTP Project Call. Projects are selected and approved by the TTC.	Texas Transportation Commission via UTP Adoption	Districts use a performance-based prioritization process to identify candidate projects for Category 12. TPP additionally scores candidate projects statewide and uses this score as a factor in recommending projects for funding authorization. The statewide scores are also used to assign each project a tier ranking (1, 2, or 3) in the UTP document.

2025 UTP Programming Guidance

Funding Category	Funding Program Purpose	Program Manager	Project Selection	Funding Approval	Project Scoring/Ranking
Category 12 Texas Clear Lanes	**Addresses:** Sub-program for large congestion projects in five TxDOT districts (AUS, DAL, FTW, HOU, SAT). These projects must be vetted through the Congestion Task Force and are selected at the Texas Transportation Commission's discretion.	TPP-Unified Transportation Program	Projects must be presented and vetted through the Congestion Task Force. Once vetted, districts submit projects to TPP during the annual UTP Project Call. Projects are selected and approved by the TTC.	Texas Transportation Commission via UTP Adoption	Districts use a performance-based prioritization process to identify candidate projects for Category 12. TPP additionally scores candidate projects statewide and uses this score as a factor in recommending projects for funding authorization. The statewide scores are also used to assign each project a tier ranking (1, 2, or 3) in the UTP document.
CANDPA - Candidate Plan Authority	Candidate Plan Authority (CANDPA) projects must be programmed outside of the 10-year UTP development window. CANDPA projects are not eligible for development activities (non-chargeable).	Districts	Districts select CANDPA projects.	District	District scoring/ranking methodologies
Feasibility Studies (FEAS)	A planning study for when a solution is unknown to evaluate possible alternatives and determine economical and environmental feasibility. Studies can be programmed within the 10-year UTP with the estimated let date as the study completion date and the associated costs representing the cost of the study.	TPP-Corridor Planning	Districts seek approval by submitting request through TxDOTConnect's Feasibility Study Request form. May be approved by TPP Corridor Planning Coordinator.	TPP-Corridor Planning	District scoring methodology and review/prioritization against statewide needs in coordination with TPP.
PLAN	Reserved for statewide initiatives and large, regionally impactful planning projects requiring long lead times for development and major funding commitments outside of the 10-year UTP window. It is prioritized for Interstate Highways, US routes, and State Highways. Refer to UTP authority programming for specific guidance on allowable development activities.	TPP-Corridor Planning	Districts seeks approval by submitting request through TxDOTConnect's Plan Authority Request form. May be approved by TPP Corridor Planning Coordinator.	TPP-Corridor Planning	District scoring methodology and review/prioritization against statewide needs in coordination with TPP.
DA - Develop Authority	**DA Target** = The amount of the district's non-programmed balance across allocated UTP categories DA Balance = The remainder of the UTP that has not yet been programmed on specific projects Programming Window: Within Years 5-10 of the UTP **Authorized Activities**: Early development activities, including schematic approval, environmental clearance, right of way acquisition, and the start of PS&E. **Sub-sets**: DDA: For mobility projects chosen by the district SWDA: For regionally significant projects likely to compete for statewide funding	TPP-Unified Transportation Program	**DDA** - District discretion subject to TPP review for constraint within set targets. DDA projects are eligible for eventual funding from any of the 12 categories but are primarily expected to be candidates for Categories 2 and 4U	TPP-Unified Transportation Program	District scoring methodology
			SWDA - Projects located on statewide connectivity corridors and are likely to compete for Category 4 Regional or Category 12 funding	TPP-Leadership	
	6DA: For potential Category 6 funding on bridge projects	Bridge Division	**6DA** - district submits request to Bridge	Bridge Division	
	8DA: For potential Category 8 funding on safety projects	Traffic Division	**8DA** - district submits request to Traffic	Traffic Division	

2025 UTP Authority Guidelines

UTP Authority	Work Program	Terminology	Approval	Estimated Let Date	Authorized Activities	End Point	Project Types/Comments
Plan	**CANDPA**	Candidate/Proposed Projects	District	Estimated let date outside the current UTP 10-year window	None. For planning purposes only. No resources can be assigned and no expenditures can be made. These projects were formerly classified as "900" CSJs in DCIS.	Project is prioritized to move to Develop Authority and initiate development activities	Any proposed project.
FS	**FEAS**	Feasibility Studies	TPP Corridor Planning Coordinator	Anticipated year of study completion	A planning study for when a solution is unknown that includes design concepts, general right-of-way requirements, alternative project solutions, traffic analysis, environmental fatal flaws, and planning-level cost estimates.	Completion of feasibility study	
Plan	**PLAN**	Planning Projects	TPP Corridor Planning Coordinator for statewide initiatives or large, regionally impactful planning projects	Estimated let date outside the current UTP 10-year window	Early-stage activities including corridor studies, route studies, preliminary engineering for schematics, preliminary environmental review, preliminary utility investigations and coordination, preliminary ROW scoping, and planning-level cost estimate for construction. Environmental clearance can occur once the planning project is listed in a regional MTP/RTP (20-year plan). Planning projects outside the MPO boundary will be handled on a case by case basis for consideration of PLAN Authority eligibility.	Project is prioritized for the UTP 10-year window to continue development activities	For future major projects requiring long-term development. Eligible candidates should be submitted through TPP.
Develop	**DDA**	District Develop Authority	TPP-UTP	Estimated let date within Years 5-10 of the current UTP	Preliminary engineering, schematic approval, environmental clearance, right of way acquisition, and the start of PS&E. Environmental review can begin once a project is developed enough to determine scope and limits. However, environmental clearance cannot occur until the project is listed in a regional MTP/RTP (20-year plan) and TIP/STIP (or, if outside of the 4-year window of the STIP, in an appendix to the TIP or in a rural area in an appendix to the STIP). Final design cannot occur until after environmental clearance.	Project is fully funded and ready to move to Construct Authority based on its stage of development. Once fully funded, projects can remain in Develop Authority if stage of development does not warrant a move into Construct Authority.	DA funds represent the balance of the UTP that has not yet been programmed on specific projects. Districts may collectively program DA up to the amount of the current UTP balance, which is subject to TPP-UTP review for constraint. DA targets, balances and programming levels can be viewed via the Tableau Engineering Operations DA Dashboard. This is updated twice every quarter. DA projects may be eligible for eventual funding from any UTP category but should not be maintenance projects. DA projects should be fully programmed to warrant development activities. Fully programmed means the combination of programming (category and DA funds) equals the current/latest construction estimate.
	6DA	Bridge Develop Authority	Bridge Division				
	8DA	Safety Develop Authority	Traffic Division				
	SWDA	Statewide Develop Authority	TPP leadership, for large strategic projects and future statewide initiatives				
Construct	**UTP Categories 1-12**	Construct Authority	Commission authorization for Categories 2, 4, and 12. Districts and Divisions decide other category programming as outlined in the UTP Programming Guidance specific to each funding category.	Estimated let date within Years 1-4 of the current UTP	Completion of all project development activities needed for letting, including ENV clearance, ROW acquisition, utility adjustments, and PS&E activities. Under Construct Authority, projects are finalizing Federal/state requirements in anticipation of letting (CBI, CMAQ, FPAA, railroad agreements, AFA). Environmental review can begin once a project is developed enough to determine scope and limits. However, environmental clearance cannot occur until the project is listed in a regional MTP/RTP (20-year plan) and TIP/STIP (or, if outside of the 4-year window of the STIP, in an appendix to the TIP or in a rural area in an appendix to the STIP). Final design cannot occur until after environmental clearance.	All development activities are complete and project goes to letting	Includes all 12 UTP Categories. Must be fully funded. No DDA/SWDA/etc. or partially funded projects. Projects on the 2-year Letting Schedule must be ready to let (RTL) or projected to be RTL by the scheduled letting date. Projects with Construct authority must also be approved within the 4-year STIP.

2025 UTP Programming Approval Guidelines

Approvals Required for Project Changes

Category	New Project Authorization	Increase to Authorized Project Amount	Decrease to Authorized Project Amount	Moving Project to another Year	Significant Project Scope or Limit Change	Division support
1	District	District	District	District	District	FIN
2	TTC	TTC*	TPP	ESC	TTC	TPP
3 LOCAL	District	District	District	District	District	FIN
3 PTF	TTC	TTC	TTC	FIN/PFD	TTC/PFD	PFD
3 TMF (PCI)	FIN	FIN	FIN	FIN	FIN	FIN
3 RTR	TTC	TTC	TTC	District	District	FIN/TPP
3 CONC	TTC	TTC	TTC	District	District	FIN/PFD
3 TOLREV	TTC	TTC	TTC	District	District	FIN/PFD
3 DB	FIN	FIN	District/FIN	ALD/ESC	ALD/ESC	ALD/FIN
4	TPP	TPP^	TPP	ESC	TPP	TPP
5	District	District	District	District	District	FIN/TPP
6	BRG	BRG	BRG	BRG	BRG	BRG
7	District	District	District	District	District	FIN/TPP
8	TRF	TRF	TRF	TRF	TRF	TRF
9**	Dist/PTN	Dist/PTN	Dist/PTN	Dist/PTN	Dist/PTN	FIN/PTN/TPP/MNT
10 Carbon	TPP/MPO	TPP/MPO	TPP/MPO	TPP/MPO	TPP/MPO	TPP
10 (CBI)	TPP/FHWA	TPP	TPP/District	TPP	TPP/FHWA	TPP
10 EARMARK	N/A	N/A	N/A	District	FIN/FHWA	FIN
10 TPW	TPW	TPW	TPW	District	TPW	FIN/DES/TPP
10 GR	DES	DES	DES	DES	DES	DES
10 LIA	DES	DES	DES	DES	DES	DES
10 RR	RAIL	RAIL	RAIL	RAIL	RAIL	RAIL
10 FLA	TPP	TPP	TPP	District	TPP	TPP
10 FB	MNT	MNT	MNT/District	District	MNT	MNT/TPP
10 BLD GRANT	FHWA	FHWA	FHWA	District	FHWA	FIN/FED
10 ADA	DES	DES	DES	DES	DES	DES
10 ITS	ITD/STR	ITD/STR	ITD/STR	ITD/STR	ITD/STR	ITD/STR
11	District	District	District	District	District	FIN/TPP
11 (ES)	ESP	ESP	District	TPP/ESP	ESP	TPP
11 (BSIF)	TPP/FHWA	TPP	TPP/District	TPP	TPP/FHWA	TPP
11 (Safety)	District	District	District	District	District	TRF/FIN/TPP
11 (CO/CO)	Committee	Committee	N/A	N/A	N/A	TPP
12	TTC	TTC	TPP	ESC	TTC	TPP
DDA	TPP	TPP	TPP	TPP	District/TPP	TPP
SWDA	TPP	TPP	TPP	TPP	TPP	TPP
6DA	BRG	BRG	BRG	BRG	BRG	BRG
8DA	TRF	TRF	TRF	TRF	TRF	TRF
CANDPA	District	District	District	District	District	FIN/TPP
PLAN	TPP	TPP	TPP	TPP	TPP	TPP

Additional Notes:

New funding allocations or distributions will be handled in the annual UTP update.

***Cat. 2:** TPP may approve an increase within 10% of the current authorized Cat. 2 amount or $500,000, whichever is greater.

^Cat. 4: Projects selected for Cat. 4 must be on the Connectivity Corridor Network. Changes to a district's overall Cat. 4 allocation require Commission action. With TPP approval, districts may shift allocated Cat. 4U funding between projects on the Connectivity Corridor Network within MPO boundaries or authorized Cat. 4R funding between projects on the same corridor within the same district. Districts may also increase authorized Cat. 4U project funding up to the district's Cat. 4U balance.

Cat. 2, 5, 7: Coordinate with MPOs for any changes to MPO-selected projects

****Cat. 9:** TMA projects - coordinate with MPOs for any changes to MPO-selected projects; non-TMA projects - coordinate with PTN; TAP Flex Coordination with TPP/MNT

Cat. 11: Rider 11B projects require approval through the Freight and International Trade Section of TPP.

Cat. 12: Administrative revisions are restricted to: (1) splitting a project into multiple CSJs with the ultimate project (scope, description and limits) and funding remaining the same or (2) shifting between CSJs associated by the same CCSJ and indicated as such in the project listing in the UTP document.

Agenda Item 5A - Attachment 3

ADA	Americans with Disabilities Act - Managed by DES (Pete Krause)
ALD	Alternative Delivery Division
BRG	Bridge Division
CBI	Coordinated Border Infrastructure (CBI) - Funds managed by TPP (Claudia Lagos) to coordinate FHWA approvals and programming with FIN.
CONC	SH 130 Concession Revenue (AUS/SAT) - Funds managed by FIN; District project Selection/recommendation; Commission approval for use of funds coordinated through TPP-Systems Planning
DB	Design Build (PE/ROW/Developer Costs) - Funds managed by FIN; District/ALD project selection/recommendation; Commission procurement approvals coordinated through ALD
BLD Grant	Build Grant Program - District coordination with FIN-Letting Management
District	District Transportation Planning & Programming Director
ESP	Energy Sector Program Manager
ESC	Executive Steering Committee Business Sponsor must review and approve
FB	Ferry Program - Managed by MNT (James Stevenson)
FHWA	FHWA must approve new CBI projects and major scope changes.
FIN	Financial Management Division
FLA	Federal Land Access - Managed by TPP (Carlos Calle)
GR	Green Ribbon Program - Managed by DES (Pete Krause)
LIA	Land Incentive Program - Managed by DES (Pete Krause)
PFD	Project Finance, Debt and Strategic Contracts
PTN	Public Transportation Division
PTF	Pass Thru Finance - Managed in coordination with FIN-Letting Management and PFD (Dallas Teston)
RR	Railroad Grade Crossing and Replanking Program - Managed by RRD (Robert Travis)
RTR	SH 121/161 Surplus Toll Revenue (DAL/FTW) - Funds managed by FIN; District project selection/recommendation; Commission approval for use of funds coordinated through TPP-Systems Planning
TMF (PCI)	Texas Mobility Fund (Port Capital Improvements) - MRD coordination with FIN
TOLREV	Toll Revenue - Funds managed by FIN with District project selection/recommendation and Commission approval coordinated through TPP Systems Planning
TPP	Transportation Planning and Programming Division
TPW	Texas Parks and Wildlife
TRF	Traffic Safety Division
TTC	Texas Transportation Commission annual UTP adoption

Table 11. FY 2025-2028 TIP Eligible Project List (2020-2045 MTP Fiscally Constrained Project List) (For Illustration Purposes)

	MTP ID	Project Name	Description	From Limit	To Limit	Sponsor	TxDOT System	Funding Category	Construction Cost	Total Construction Cost	Non-Construction Cost	Total Project Cost
TIP/STIP	MPO-001	SH 358 (SPID) Ramp Reversal	Ramp reversal Phase II-B	Nile Drive	Staples Street	TxDOT-CRP	On	2	$35.00	$35.00	$15.43	$45.43
	MPO-002	I-37	Widen freeway by constructing additional 2 travel lanes northbound and 1 additional travel lane southbound	Redbird Lane (Overpass)	Nueces River	TxDOT-CRP	On	2 4U 12	$12.00 $15.00 $33.00	$60.00	$17.88	$77.88
	MPO-003	US 181	Widen freeway by constructing 1 additional travel lane in each direction	North of FM 3296 (Buddy Ganem Drive)	FM 2986 (Wildcat Drive)	TxDOT-CRP	On	2 4U	$2.00 $12.00	$14.00	$4.17	$18.17
	MPO-004	US 181 Ramp Reversals	Reverse entrance and exit ramps in Northbound direction	FM 3296 (Buddy Ganem Drive)	FM 2986 (Wildcat Drive)	TxDOT-CRP	On	2	$4.00	$4.00	$1.19	$5.19
	MPO-005	SH 286 (Crosstown)	Extend 4-lane divided freeway by constructing mainlanes, overpasses, and frontage roads	FM 43 (Weber Road)	South of FM 2444 (Staples Street)	TxDOT-CRP	On	2	$41.58	$41.58	$12.38	$53.96
	MPO-006	FM 893 (Moore Avenue)	Upgrade from 2-lane roadway to 5-lane urban roadway by constructing additional 2 lanes and CLTL	CR 3685 (Stark Road)	0.2 miles West of CR 79 (Gum Hollow)	TxDOT-CRP	On	2	$7.00	$7.00	$2.09	$9.09
	MPO-007	Harbor Bridge Hike and Bike - Connectivity	Construct pedestrian and bike facilities	On various city streets from Coles High School	Williams Memorial Park	City of Corpus Christi	Off	7	$1.42	$1.42	$0.42	$1.84
	MPO-008	US 181 Harbor Bridge Voluntary Relocation Program	US 181 Harbor Bridge Voluntary Relocation Mitigation Program	N/A	N/A	MPO	Off	7 Local ROW	$36.00 $20.00 $15.00	$71.00	$21.15	$92.15
	MPO-009	Harbor Bridge Park Improvements	Park mitigation for Harbor Bridge	At various city parks including	Ben Garza, TC Ayers, and new location	City of Corpus Christi	Off	7	$4.80	$4.80	$1.43	$6.23
	MPO-010	Pedestrian and Bike	Pedestrian and bike facility improvements	At various Locations on Brewster Street	N/A	City of Corpus Christi	On	7	$1.42	$1.42	$0.42	$1.84
	MPO-011	Schanen Ditch Hike and Bike Trail: Phase IV	Construct and design Hike and Bike Trail	Killarmet Drive	Holly Road	City of Corpus Christi	Off	9	$0.39	$0.39	--	$0.39
	MPO-012	Region-wide Bike Boulevard Wayfinding Initiative	Designation of bicycle boulevards with pavement markings and signage	Various Locations in Corpus Christi and Portland	N/A	City of Corpus Christi	Off	9	$0.62	$0.62	--	$0.62
	MPO-013	Portland Bicycle Lanes	Construct one way cycle track and buffered bike lanes	At various locations in Portland	N/A	City of Portland	On	9	$0.36	$0.36	--	$0.36
	MPO-014	Dr Hector P Garcia Park Hike & Bike Trail: Phase II	Construct & design Hike & Bike Trail	At Garcia on Trojan Dr	Horne Road	City of Corpus Christi	Off	9	$0.70	$0.70	--	$0.70
	MPO-015	PR 22	Feasibility study: intersection improvements	At SH 361/PR 22 intersection	Zahn Road	TBD	On	7	$1.20	$1.20	$0.36	$1.56

Table 11. FY 2025-2028 TIP Eligible Project List (2020-2045 MTP Fiscally Constrained Project List)

	MTP ID	Project Name	Description	From Limit	To Limit	Sponsor	TxDOT System	Funding Category	Construction Cost	Total Construction Cost	Non-Construction Cost	Total Project Cost
10-Year	MPO-016	PR 22	Corridor upgrade for pedestrian and access management improvements without adding capacity	Aquarius Street	Whitecap Boulevard	TxDOT-CRP	On	2	$16.00	$16.00	$3.20	$19.20
	MPO-017	SH 361	Upgrade/add direct connectors	At SH 35 interchange	0.6 miles Southeast on SH 361	TxDOT-CRP	On	2	$38.50	$38.50	$7.70	$46.20
	MPO-018	SH 35	Upgrade/add direct connectors	FM 3284	0.23 North of SH 361	TxDOT-CRP	On	4U	$21.50	$21.50	$4.30	$25.80
	MPO-019	SS 544 (Agnes Street / Laredo Street)	Operational improvements without adding capacity	SH 286 (Crosstown)	Coopers Alley	City of Corpus Christi	Off	7	$5.50	$5.50	$1.10	$6.60
	MPO-020	Holly Road Travel Lanes	Construct Phase II by adding 2 additional travel lanes	SH 286	Greenwood Drive	City of Corpus Christi	Off	7	$4.73	$4.73	$0.95	$5.68
	MPO-021	Regional Parkway / Rodd Field Road Extension	NEPA Process for new location 4-lane roadway (Segment B) and Rodd Field Road	Yorktown Boulevard	SH 286 (Crosstown)	City of Corpus Christi	Off	7	$1.89	$1.89	$0.38	$2.27
	MPO-022	Regional Parkway	NEW Location: Construct Phase I consisting of 4-lane roadway (Segment B)	Rodd Field Road	SH 286 (Crosstown)	City of Corpus Christi	Off	7	$45.00	$45.00	$9.00	$54.00
	MPO-023	Rodd Field Road Extension	Construct Phase I consisting of 2-lane roadway with raised medians on new location	Yorktown Boulevard	Future Regional Parkway (South of Oso Creek)	City of Corpus Christi	Off	7	$25.00	$25.00	$5.00	$30.00
	MPO-024	Yorktown Boulevard	Construct 2 additional travel lanes with turn lanes. Elevate and widen bridge.	Rodd Field Road	Laguna Shores Road	City of Corpus Christi	Off	7	$39.41	$39.41	$7.88	$47.29
	MPO-025	Timon Boulevard / Surfside Boulevard	Rehabilitate without additional capacity, construct bicycle facilities	Beach Avenue	Burleson Street	City of Corpus Christi	Off	7	$20.00	$20.00	$4.00	$24.00
	MPO-026	Flour Bluff Drive	Upgrade to 5-lane urban roadway by constructing additional 2-lanes and CLTL	South of Don Patricio Road	Yorktown Boulevard	City of Corpus Christi	Off	7	$17.00	$17.00	$3.40	$20.40
	MPO-027	CR 72	Construct 2 additional travel lanes (CTWLTL)	FM 2986 (Wildcat Drive)	CR 2032	City of Portland	Off	7	$5.92	$5.92	$1.18	$7.10
	MPO-028	Joe Fulton International Trade Corridor (JFITC) Realignment	Corridor improvements	0.5 miles west of Navigation Boulevard	0.5 miles east of Navigation Boulevard	Port of Corpus Christi	Off	7	$5.00	$5.00	$1.00	$6.00
	MPO-029	US 181 Companion Drainage Project	Construction of the companion drainage project across the TxDOT right-of-way B) and Rodd Field Road	Sunset Road	FM 3239 (Buddy Ganem Drive)	TxDOT-CRP	On	Local	$7.00	$7.00	$1.40	$8.40
	MPO-030	Future Category 9 Projects	Projects selected through competitive process	N/A	N/A	TBD	On/Off	9	$12.43	$12.43	--	$12.43
Long Range	MPO-031	SH 358 (SPID) Ramp Reversal	Ramp Reversal Phase II-C (Braided ramps)	Airline Road	Everhart Road	TxDOT-CRP	On	2	$35.00	$35.00	$7.00	$42.00
	MPO-032	SH 286 (Crosstown)	Construct 2 additional travel lanes with turn lanes. Elevate and widen bridge.	SS 544 (Agnes Street / Laredo Street)	SH 358 (SPID)	TxDOT-CRP	On	2	$80.00	$80.00	$16.00	$96.00
	MPO-033	FM 624 (Northwest Boulevard)	Upgrade from 4-lane roadway to 6-lane roadway including raised medians	CR 69	FM 73	TxDOT-CRP	On	2 4U 7	$6.00 $10.00 $2.00	$18.00	$3.60	$21.60
	MPO-034	I-37 / SH 358 Interchange	Reconstruct Interchange to provide 2-lane direct connectors from SB I-37 to EB SH 358 and WB SH 358 to NB I-37	At I-37/SH 358 interchange	N/A	TxDOT-CRP	On	2 4U	$60.00 $40.00	$100.00	$20.00	$120.00
	MPO-035	FM 43 (Weber Road)	Upgrade to 5-lane roadway by constructing additional 2 lanes and CLTL	SH 286 (Crosstown)	FM 665 (Old Brownsville Road)	TxDOT-CRP	On	2 4U	$15.00 $25.00	$40.00	$8.00	$48.00
	MPO-036	SH 286 (Crosstown) Braided Ramp	Construct braided ramps northbound from Holly to SH 358	South of Holly Road	SH 358 (SPID)	TxDOT-CRP	On	2 4U	$25.00 $35.00	$60.00	$12.00	$72.00

TxDOT DRAFT 2025 UTP: Corpus Christi District Project List

TxDOT-CRP District and CCMPO 2025 UTP Candidate Project List

				AUTHORIZED IN THE 2024 UTP						2025 UTP CANDIDATES REQUESTED AMOUNTS			
CSJ	COUNTY	HWY	PROJECT DESCRIPTION	EST LET DATE RANGE	AUTHORIZED CONSTRUCTION FUNDING BY CATEGORY	FUNDING APPROVED & AUTHORIZED IN THE 2024 UTP	TOTAL AUTHORIZED IN THE 2024 UTP (Previous Estimate)	UPDATED CONSTRUCTION ESTIMATE	% Increase	PROPOSED EST LET DATE RANGE	FUNDING CATEGORY REQUESTED	TOTAL REQUESTED AMOUNT IN DRAFT 25 UTP (including inflation)	COMMENTS
0617-01-177	Nueces	SH 358	RAMP REVERSAL PHASE II-B	FY 2024-2027	CAT 2M	$50,000,000	$50,000,000	$44,000,000	-12%				Project scheduled to bid in 2024 so no requested amount in 2025 UTP.
0326-01-056	Nueces	SH 286	CONSTRUCT PHASE I FREEWAY EXTENSION BY UPGRADING EXISTING 2- LN RDWY TO 4-LN DIVIDED HIGHWAY	FY 2024-2027	CAT 2M	$60,000,000	$60,000,000	$70,000,000	17%				Project scheduled to bid in 2024 so no requested amount in 2025 UTP. Requested $35 million of Cat 7 to offset some of Cat 2 funding.
1209-01-030	San Patricio	FM 893	UPGRADE TO 5-LANE URBAN ROADWAY BY CONSTRUCTING ADDTNL 2 LANES AND CLTL	FY 2024-2027	CAT 2M CAT 1	$12,500,000 $500,000	$13,000,000	$12,500,000	-4%	FY 2025-2028	CAT 2 METRO	**$12,500,000**	Bid date pending City of Portland drainage project finalization.
0989-02-057	Nueces	FM 624	CONSTRUCT ADDITIONAL 2 TRAVEL LANES TO UPGRADE TO 6 LN BLVD WITH RAISED MEDIAN	FY 2024-2027	CAT 2M CAT 4U CAT 7	$11,640,000 $16,000,000 $2,000,000	$29,640,000	$34,650,000	17%	FY 2025-2028	CAT 2 METRO CAT 4 URBAN CAT 7	**$11,650,000** **$16,000,000** **$7,000,000**	Updated to current bid prices and including additional pedestrian/cycling elements and updated drainage costs.
0180-06-118	San Patricio	SH 35	UPGRADE/ADD ELEVATED SPUI	FY 2024-2027	CAT 4U	$36,400,000	$36,400,000	$56,538,000	55%	FY 2025-2028	CAT 4 URBAN CAT 7	**$36,400,000** **$4,400,000**	Updated to current bid prices and reallocated funding amongst the projects. High level of risk on accuracy of cost estimate due to complexity of the project. Previous Estimate Total = $112.5M Updated Estimate Total = $130.5M
0180-10-082	San Patricio	SH 361	UPGRADE/ADD ELEVATED SPUI	FY 2024-2027	CAT 2M CAT 4U --	$46,862,407 $12,497,593 --	$59,360,000	$71,280,000	20%	FY 2025-2028	CAT 2 METRO CAT 4 URBAN CAT 7	**$46,862,407** **$18,777,592** **$5,640,000**	
0180-11-016	San Patricio	SP 202	UPGRADE/ADD ELEVATED SPUI	FY 2024-2027	CAT 2M	$16,800,000	$16,800,000	$2,700,000	-84%	FY 2025-2028	CAT 2 METRO	**$2,700,000**	
0326-03-103	Nueces	SH 286	CONSTRUCT 1 ADDITIONAL TRAVEL LANE NORTHBOUND	FY 2024-2027	CAT 2M CAT 4U	$28,000,000 $5,600,000	$33,600,000	$34,843,000	4%	FY 2025-2028	CAT 2 METRO CAT 4 URBAN	**$29,243,000** **$5,600,000**	Updated to current bid prices and added 1 year (4%) of inflation.
0617-02-073	Nueces	PR 22	CORRIDOR UPGRADE FOR PEDESTRIAN AND ACCESS _MANAGEMENT IMPROVEMENTS WITHOUT ADDING CAPACITY	FY 2028-2033	CAT 2M TBD	$15,920,000 $2,000,000	$17,920,000	$16,000,000	-11%	FY 2029-2034	CAT 2 METRO	**$17,920,000**	Requesting project to be entirely funded with Cat 2. Project is outside of the TIP years, so no inflation has been added.
1069-01-042	Nueces	SH 357	IMPLEMENTATION OF TRAFFIC SAFETY AND OPERATIONAL IMPROVEMENTS ON RODD FIELD FROM SH 358 TO SARATOGA					$23,500,000		FY 2029-2034	CAT 2 METRO CAT 4 URBAN CAT 7	**$8,500,000** **$4,000,000** **$11,000,000**	New Candidate Project request Project is outside of the TIP years, so no inflation has been added.
1557-01-045	Nueces	FM 43	CONSTRUCT 2 ADDITIONAL TRAVEL LANES FOR 4 LN DIVIDED HIGHWAY					$44,800,000		FY 2029-2034	CAT 2 METRO CAT 4 URBAN Statewide DA	**$10,000,000** **$12,400,000** **$22,400,000**	New Candidate Project request Project is outside of the TIP years, so no inflation has been added.
0074-06-252	Nueces	IH 37	RECONSTRUCT INTERCHANGE AT IH 37/SH 358	*CANDIDATE PROJECT FOR FUTURE UTP REQUESTS*				$100,000,000					Defer project past 2034

2/28/2024

Table 12a. FY 2025-2028 TIP Fiscally Constrained Highway Project List (For Illustration Purposes) – June 6, 2024

TIP Fiscal Year	CSJ	MTP ID	Project Name	Description	From Limit	To Limit	Sponsor	TxDOT System	Funding Category	Construction Cost	Total Construction Cost	Non-Construction Cost	Total Project Cost ($, millions)
2025	0617-01-177	MPO-001	SH 358 (SPID) Ramp Reversal	Ramp reversal Phase II-B	Nile Drive	Staples Street	TxDOT-CRP	On	2	$35.00	$35.00	$15.43	$45.43
2025	0326-01-056	MPO-005	SH 286 (Crosstown)	Extend 4-lane divided freeway by constructing mainlanes, overpasses, and frontage roads	FM 43 (Weber Road)	South of FM 2444 (Staples Street)	TxDOT-CRP	On	2 7	$30.00 $35.00	$65.00	$13.00	$78.00
2025	1209-01-030	MPO-006	FM 893 (Moore Avenue)	Upgrade from 2-lane roadway to 5-lane urban roadway by constructing additional 2 lanes and CLTL	CR 3685 (Stark Road)	0.2 miles West of CR 79 (Gum Hollow)	TxDOT-CRP	On	2	$12.50	$12.50	$2.61	$15.11
2025	0916-35-195	MPO-007	Harbor Bridge Hike and Bike - Connectivity	Construct pedestrian and bike facilities	On various city streets from Coles High School	Williams Memorial Park	City of Corpus Christi	Off	7	$1.42	$1.42	$0.28	$1.70
2025	0916-35-196	MPO-009	Harbor Bridge Park Improvements	Park mitigation for Harbor Bridge. +$3.5 million local funding from Bond 2014. Former Washington Elementary School site, TC Ayers Park, Ben Garza Park, Dr. HJ Williams Memorial Park (Hill Crest Park). Construct hike and bike trail connections and develop park to appropriate level of service based on community input.	At various city parks including	Ben Garza, TC Ayers, Hill Crest Park, and new location	City of Corpus Christi	Off	7 10 Local	$7.00 $5.50 $11.20	$21.50	$3.67	$25.17
2025	0989-02-057	MPO-033	FM 624 (Northwest Boulevard)	Construct additional two travel lanes to upgrade existing four lane rural roadway to an urban six lane boulevard with raised median.	CR 69	FM 73	TxDOT-CRP	On	2 4 7	$11.65 $16.00 $7.00	$34.65	$6.93	$41.58
2026	0916-00-282	MPO-049	Holly Rd. Train Trestle to Tourism Trail	The project will construct a 15-foot wide shared-use path and a new pedestrian bridge across Oso Bay. The project will renovate the existing train trestle bridge and connect Holly Road and Flour Bluff Drive shared-use paths.	End of Holly Road across Oso Bay	Holly Road to Flour Bluff Drive	City of Corpus Christi	Off	9	$13.03	$13.03	$1.68	$14.71
2027	0180-10-082	MPO-017	SH 361	Upgrade/add direct connectors	At SH 35 interchange	0.6 miles Southeast on SH 361	TxDOT-CRP	On	2 4 7	$48.86 $18.78 $5.64	$73.28	$11.90	$73.28
2027	0180-06-118	MPO-018	SH 35	Upgrade/add direct connectors	FM 3284	0.23 North of SH 361	TxDOT-CRP	On	4 7	$52.14 $4.40	$56.54	$7.31	$63.85
2027	0180-11-016	MPO-078	SS 202	Construct Single Point Urban Intersection	Ave H in Gregory	SH 35 northbound frontage rd	TxDOT-CRP	On	2	$2.70	$2.70	$3.39	$6.09
2028	0326-03-103	MPO-079	SH 286	Construct 1 additional travel lane northbound. Phased from MTP long range project MPO-032 (CSJ 0326-03-098).	SH 358	Horne Road	TxDOT-CRP	On	2 4	$29.24 $5.60	$34.84	$6.24	$41.08
2028	1069-01-042	MPO-080	SH 357 (Rodd Field)	Implementation of Traffic Safety and Operational Improvements. Construct raised medians and upgrade sidewalks.	SH 357 (Saratoga Boulevard)	SH 358 (SPID)	TxDOT-CRP	On	2 4 7	$8.50 $4.00 $11.02	$23.52	$4.40	$23.52

TxDOT's Project Development Process

Planning/ Feasibility Study	Environmental Study	Right-of-Way Acquisition, Utility Relocations, and Final Design	Construction
1+ years	**1 to 3 years**	**1 to 3 years**	**2+ years**
▪ Purpose and need ▪ Environmental setting ▪ Route options development, evaluation and screening ▪ Identification of route option(s) to be advanced ▪ Stakeholder/ public involvement throughout	▪ Build and no-build alternatives analysis ▪ Schematic development ▪ Environmental effects ▪ Public input throughout ▪ Environmental decision	▪ Offers and negotiations with property owners ▪ Right-of-way acquisition ▪ Utility relocations ▪ Detailed design ▪ Plans, specifications, and estimates ▪ Bid ready	▪ Contract award ▪ Construct facility ▪ Open to operations

Timelines are estimates. The timeframe to complete all phases of work are estimates and span approximately 8-12 years, depending on funding availability.

Texas Department of Transportation

TxDOT - CRP Public Comment on FY 2025 - 2028 TIP Fiscally Constrained Project List

CHANGES	TIP FY	CSJ	MTP ID	Project Name	Description	From Limit	To Limit	Sponsor	TxDOT System	Funding Category	Construction Cost	Total Construction Cost	Non-Construction Cost	Total Project Cost ($, millions)
Add	2025	0916-35-195		Harbor Bridge Hike and Bike -						7	$1.42	$1.42	$0.28	$1.70
Add, updated funding	2025	0916-35-196		Harbor Bridge Park Improvements						7 10 Local	$4.80 $5.50 $11.20	$21.50	$3.67	$25.17
Updated funding	2025	0989-02-057	MPO-033	FM 624						2 4 7	$11.65 $16.00 $7.00	$34.65	$6.93	$41.58
No change	2025	0326-01-056	MPO-05	SH 286						2 7	$30.00 $35.00	$65.00	$15.86	$80.86
Updated funding & FY	2025	1209-01-030	MPO-06	FM 893						2	$12.50	$12.50	$2.61	$15.11
Correct csj	2026	0916-00-282	MPO-049	Holly Rd						9	$13.03	$13.03	$1.68	$14.71
REMOVE	remove	0617-02-073		PR 22	still don't have scope or info associated with this project, not showing it in stip years									
Updated funding & FY	2027	0180-06-118		SH 35						4 7	$52.14 $4.40	$56.54	$7.31	$63.85
Updated funding & FY	2027	0180-10-082		SH 361						2 4 7	$48.86 $18.78 $5.64	$73.28	$11.90	$73.28
Add, updated funding & FY	2027	0180-11-016		SS 202						2	$2.70	$2.70	$3.39	$6.09
Add, updated funding	2028	0326-03-103		SH 286						2 4	$29.24 $5.60	$34.84	$6.24	$41.08
New	2028	1069-01-042		SH 357	Construct raised medians and upgrade sidew	Saratoga B	SH 358	TxDOT	On	2 4 7	$8.50 $4.00 $11.02	$23.52	$4.40	$23.52

Table 15a. FY 2025-2028 TIP Fiscally Constrained Highway Project List (For Illustration Purposes) – June 6, 2024

TIP Fiscal Year	CSJ	MTP ID	Project Name	Description	From Limit	To Limit	Sponsor	TxDOT System	Funding Category	Construction Cost	Total Construction Cost	Non-Construction Cost	Total Project Cost ($, millions)
2025	0617-01-177	MPO-001	SH 358 (SPID) Ramp Reversal	Ramp reversal Phase II-B	Nile Drive	Staples Street	TxDOT-CRP	On	2	$35.00	$35.00	$15.43	$45.43
2025	0989-02-057	MPO-033	FM 624 (Northwest Boulevard)	Construct additional two travel lanes to upgrade existing four lane rural roadway to an urban six lane boulevard with raised median.	CR 69	FM 73	TxDOT-CRP	On	2 4U 7	$9.28 $10.00 $2.00	$21.28	$10.00	$25.54
2026	0326-01-056	MPO-005	SH 286 (Crosstown)	Extend 4-lane divided freeway by constructing mainlanes, overpasses, and frontage roads	FM 43 (Weber Road)	South of FM 2444 (Staples Street)	TxDOT-CRP	On	2 7	$30.00 $35.00	$65.00	$13.00	$78.00
2026	1209-01-030	MPO-006	FM 893 (Moore Avenue)	Upgrade from 2-lane roadway to 5-lane urban roadway by constructing additional 2 lanes and CLTL	CR 3685 (Stark Road)	0.2 miles West of CR 79 (Gum Hollow)	TxDOT-CRP	On	2	$7.00	$7.00	$2.09	$9.09
2026	0916-022-282	MPO-049	Holly Rd. Train Trestle to Tourism Trail	The project will construct a 15-foot wide shared-use path and a new pedestrian bridge across Oso Bay. The project will renovate the existing train trestle bridge and connect Holly Road and Flour Bluff Drive shared-use paths.	End of Holly Road across Oso Bay	Holly Road to Flour Bluff Drive	City of Corpus Christi	Off	9	$13.03	$13.03	--	$13.03
2028	0617-02-073	MPO-016	PR 22	Corridor upgrade for pedestrian and access management improvements without adding capacity	Aquarius Street	Whitecap Boulevard	TxDOT-CRP	On	2	$16.00	$16.00	$3.20	$19.20
2028	0180-10-082	MPO-017	SH 361	Upgrade/add direct connectors	At SH 35 interchange	0.6 miles Southeast on SH 361	TxDOT-CRP	On	2	$38.50	$38.50	$7.70	$46.20
2028	0180-06-118	MPO-018	SH 35	Upgrade/add direct connectors	FM 3284	0.23 North of SH 361	TxDOT-CRP	On	4U	$21.50	$21.50	$4.30	$25.80

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date: May 13, 2024
To: Technical Advisory Committee (TAC)
From: Craig Casper, Senior Transportation Planner
Through: Robert MacDonald, Transportation Planning Director
Subject: Item 5B: FY 2023 and FY 2024 Unified Planning Work Program (UPWP) with Amendment 2
Action: Review, Discuss, Receive Public Comments and Possible Action

Summary

The DRAFT Amendment 2 to the FY 2023 and FY 2024 Unified Planning Work Program (UPWP) is being provided again to the TAC since the TPC meeting last Thursday was cancelled due to lack of a quorum. The TPC is attempting to hold a special meeting later in May prior to their Regular Meeting on June 6th to release the document for the required one-month public comment period by the TPC.

This Amendment 2 is requested by TxDOT as part of their April 8, 2024 Work Order Letter 2 for FY 2024 that specifies the requirement for the Corpus Christi MPO to have specific language in the current Unified Planning Work Program related to the federal requirement to spend a minimum of 2.5% of the MPO's Federal Planning funds (PL) on planning activities "*…to increase safe and accessible options for multiple travel modes for people of all ages and abilities,…*"

The following table (Exhibit 2) from the UPWP Amendment 2 document identifies the change in title of Subtask 3.3 to "2.5% Set-Aside for Increasing Safe and Accessible Transportation Options." Additionally, a minor reallocation of funds is proposed to ensure compliance with the 2.5% minimum funding levels for the Subtask.

Excerpt of Exhibit 2. Corpus Christi MPO FY 2023 and FY 2024 UPWP Financial Summary (continued)

	TASK AND SUBTASK TITLE	FY 2023	FY 2024	2-Year Total
2.7	Environmental Resource / Linkages Model Development and Implementation	$16,400	$8,600	**$25,000**
2.8	HAZUS / Resiliency Model Development and Implementation	$19,500	$8,600	**$28,100**
2.9	Economic Analyses Model Development and Implementation	$12,900	$7,700	**$20,600**
TASK 3.0	**SHORT-RANGE PLANNING TOTAL**	**$197,800**	**$134,200**	**$332,000**
3.1	Transportation Improvement Program (TIP) Update	$21,100	$13,900	**$35,000**
3.2	CMP/TSMO/ITS Architecture Plan	$22,700	$7,700	**$30,400**
3.3	2.5% Set-Aside for Increasing Safe and Accessible Transportation Options	$20,900	$16,000	**$36,900**
3.4	Regional Multimodal Freight and Urban Goods Planning	$11,200	$10,500	**$21,700**
3.5	Equity and Justice40 Planning	$18,700	$11,100	**$29,800**
3.6	Economic Analyses of Projects and Portfolios	$12,200	$17,300	**$29,500**
3.7	Infrastructure Lifecycle Analysis and Reporting	$13,500	$8,600	**$22,100**
3.8	Crash Analyses and Regional Safety Planning	$21,300	$9,200	**$30,500**
3.9	Region 20 Coordinated Transit Planning	$17,100	$14,500	**$31,600**

3.10	Regional Resiliency and Climate Crisis Planning	$19,200	$9,200	**$28,400**
3.11	Planning and Environmental Linkages	$19,900	$16,200	**$36,100**
TASK 4.0	**METROPOLITAN TRANSPORTATION PLANNING TOTAL**	**$70,100**	**$219,000**	**$289,100**
4.1	Refine Vision and Goals	$16,600	$5,500	**$22,100**
4.2	Refine Performance Measures and Evaluation Criteria	$15,000	$6,300	**$21,300**
4.3	Identify Needs and Deficiency Locations	$15,200	$9,800	**$25,000**
4.4	Develop a Financial Plan of Reasonable Available Funding	$0	$13,500	**$13,500**
4.5	Develop, Analyze, and Refine Scenarios for Analysis and Investment	$23,300	$73,800	**$97,100**
4.6	Document Plan and Processes	$0	$64,500	**$64,500**
4.7	Evaluate Impacts and Develop Mitigation	$0	$24,500	**$24,500**
4.8	Planning and Programming Process Evaluation and Debrief	$0	$12,800	**$12,800**
4.9	Process Documentation and Enhancement	$0	$8,300	**$8,300**
TASK 5.0	**SPECIAL STUDIES TOTAL**	**$0**	**$0**	**$0**
5.1	To Be Determined	$0	$0	**$0**
5.2	To Be Determined	$0	$0	**$0**

Fiscal Impacts

None at this time. The FY 2023 and FY 2024 UPWP maintains the same total funding levels.

Additional Changes

Other changes in Amendment 2 to the FY 2023 and FY 2024 UPWP include:

- Cover Page: Change proposed approval dates and added federal disclaimer language
- Changed page-footers to indicate Amendment 2
- Pages 4, 9, 33, 35, 37: Renamed Subtask 3.3 to "2.5% Set-Aside for Increasing Safe and Accessible Transportation Options." And modified funding allocations.
- Appendix A: Updated TAC and TPC members
- Appendix H: Added Public Notice #24-3

Recommendation

The Corpus Christi MPO staff recommend that the TAC recommend approval of the DRAFT Amendment 2 to the DRAFT FY 2023 and FY 2024 Unified Planning Work Program to the TPC.

Proposed Motion

Move to recommend the TPC to approve the DRAFT Amendment 2 to the FY 2023 and FY 2024 UPWP.

Attachments

1. Public Notice #24-2 for the DRAFT FY 2025-2028 TIP and the DRAFT FY 2023 and FY 2024 UPWP with Amendment 2
2. TxDOT Work Order #2 Letter for FY 2024
3. DRAFT FY 2023 and FY 2024 UPWP Amendment 2 (Pending TPC release for one-month public comment)

PUBLIC NOTICE #24-2

MAY 24, 2024

The **Corpus Christi Metropolitan Planning Organization** (Corpus Christi MPO) is seeking public input and comments on the **DRAFT FY 2025 – 2028 Transportation Improvement Program (TIP)** and **DRAFT FY 2023 and FY 2024 Unified Planning Work Program (UPWP) with Amendment 2.**

The TIP identifies how the region plans to invest $509 million in transportation funds in the transportation system for the next four years. The UPWP serves as the scope of work for the Corpus Christi MPO and documents transportation-related planning activities conducted in the Corpus Christi MPO Planning Area. In accordance with the Corpus Christi MPO Public Participation Plan, the MPO is seeking to inform those who are interested in or affected by transportation decisions with opportunities to provide input on the **DRAFT FY 2025 – 2028 TIP** and **DRAFT FY 2023 and FY 2024 UPWP with Amendment 2**.

Public Comments may be provided in writing, limited to 1,000 characters, by emailing ccmpo@cctxmpo.us or by regular mail or hand-delivery to the Corpus Christi MPO offices at 602 N. Staples St., Suite 300, Corpus Christi, TX 78401, and MUST be submitted at least 1 hour before the start of a meeting in order to be provided for consideration and review at the meeting. To make a public comment at the meeting, please fill out the comment card and submit it to Corpus Christi MPO staff 10 minutes before the meeting starts. All Public Comments submitted shall be placed into the record of the meeting.

The **DRAFT FY 2025 – 2028 TIP** and **DRAFT FY 2023 and FY 2024 UPWP with Amendment 2** are being released to the public on May 24, 2024, and public input is invited through June 6, 2024, at the following public meetings:

May 24, 2024, 2:00 p.m.*
Corpus Christi MPO Transportation Policy Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

May ##, 2024, 9:00 a.m.*
Corpus Christi MPO Technical Advisory Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

June 6, 2024, 2:00 p.m.*
Corpus Christi MPO Transportation Policy Committee
Corpus Christi Regional Transportation Authority
602 N. Staples Street, 2nd Floor Board Room
Corpus Christi, TX 78401

**Meeting location and time subject to change, check MPO website for final location and time.*

www.corpuschristi-mpo.org

The **Corpus Christi Regional Transportation Authority (CCRTA)** hereby gives notice that coordination actions with the **Corpus Christi Metropolitan Planning Organization (Corpus Christi MPO)** have occurred to assure that the procedures established in the MPO's public participation plan, including public notice and times established for public review and comment on the TIP, satisfy the Requirement of public participation in the development of the program of projects and grant application requirements of the Federal Transit Administration (FTA) Urbanized Area Formula Program, Section 5307; and other formula funds. The public participation requirements of 49 U.S.C. Section 5307 (b) (1) through (b) (7) (as amended by the FAST Act) are integrated into the MPO's adopted "Public

Participation Plan". The CCRTA, therefore, is a participant with the Corpus Christi MPO in the public process for the **DRAFT FY 2025-2028 TIP**.

For more information, please visit http://www.corpuschristi-mpo.org or contact us at ccmpo@cctxmpo.us for any questions.

TxDOT Work Order #2 Letter for FY 2024

Texas Department of Transportation

125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

April 8, 2024

Mr. Robert F. MacDonald, MPA, P.E.
Transportation Planning Director
Corpus Christi Metropolitan Planning Organization
602 N. Staples Street, Suite 300
Corpus Christi, Texas 78401

Dear Mr. MacDonald:

This letter, which is the second Work Order under the Consolidated Planning Grant Program, serves as notification of the second authorization of Corpus Christi Metropolitan Planning Organization (MPO) planning funds (PL) for FY 2024 (PL0024-005) in the total amount of $624,369.52.

Pursuant to the Infrastructure Investment and Jobs Act, each MPO is required to use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. The 2.5% amount for this year for your area is $15,658.79. Please reflect this amount as a separate subtask in your Unified Planning Work Program and label it "2.5% Set-Aside for Increasing Safe and Accessible Transportation Options."

The period of authorization for these funds is October 1, 2023 through September 30, 2024. Be advised that the PL-112 program is included in the Catalog of Federal Domestic Assistance (CFDA). Federal Highway Administration, 20.205-Highway Planning.

Current Authorization	Previous FY 24 Authorizations (Sec. 5303/PL-112)	Total Authorization	Contract	Charge Number
$624,369.52	$199,733.74	$824,103.26	50-24XF0001	50124110170

If you have any questions or need additional information, please contact Sara R. Garza at (956) 712-7780.

Sincerely,

DocuSigned by:
Humberto Gonzalez Jr
F7C3A305BEEB4F2...

Humberto Gonzalez, Jr., P.E., M.B.A.
Director, Transportation Planning and Programming Division

cc: Paula M. Sales-Evans, P.E., Corpus Christi, Transportation Planning and Development Director, TxDOT
Casey Wells, Transportation Planning and Programming Division, Systems Planning Section Director, TxDOT
Karrie Boedeker, Transportation Planning and Programming Division, Grants and Administration Section Director, TxDOT
Phillip R. Tindall, Transportation Planning and Programming Division, Metropolitan Planning Branch Manager, TxDOT
Sara R. Garza, Transportation Planning and Programming Division, Planner, TxDOT

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date:	May 13, 2024
To:	Technical Advisory Committee (TAC)
From:	Craig Casper, Senior Transportation Planner
Through:	Robert MacDonald, Transportation Planning Director
Subject:	Item 5C: 2025-2050 Metropolitan Transportation Plan (2050 MTP)
Action:	Review, Discuss and Provide Comments

Summary

The Corpus Christi 2050 MTP is scheduled for the 5-year update on February 6, 2025. There are several critical items that need adopting as soon as possible, including Vision, Goals, and Objectives. The 3 outcomes needed from this agenda item are: achieve consensus on a vision that can be brought to the TPC for discussion in June, determine if the 6 goals below are acceptable in number and subject so they can be recommended for public release during the June TAC meeting, and have a detailed discussion of the subject of the individual objectives that can also be recommended for public release during the June TAC meeting. A follow-on workshop, prior to the June TAC meeting, may be necessary. Additional information is available in Attachments 1, 2, 3 from previous TAC meetings.

In addition to an increase in funding for transportation, the passage of the Infrastructure Investment and Jobs Act (IIJA) brought additional areas of emphasis. The 11 areas of emphasis will likely become one or more objectives in the 2050 Metropolitan Transportation Plan. These areas of emphasis are:

- Emphasize the preservation of the existing transportation system.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Enhance travel and tourism.
- Improve transportation system resiliency and reliability.
- Increase accessibility and mobility of people and freight.
- 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.
- Promote efficient system management and operation.
- Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Reduce (or mitigate) the stormwater impacts of surface transportation.
- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

Background

In accordance with 49 U.S.C. 5303 (i) and 23 CFR 450.300, the Corpus Christi MPO is required to develop a fiscally constrained performance based MTP that identifies the multi-modal transportation system including pedestrian, bicycle, public transit, motor vehicles, and freight. The MTP describes the locally developed and adopted goals for the region, lists the locally developed performance measures that will be used to

evaluate potential projects, and specifies the interventions (both policies and projects) that will be implemented to achieve these goals. It also describes the formal process that will track the region's change in performance over time. An MPO MTP must also be coordinated with the plans from the state Department of Transportation (TxDOT) and the designated recipient of federal transit funds (CCRTA).

Development of 2050 MTP Vision

As discussed last month, visioning can increase the effectiveness of planning by extending the reach beyond conventional 10 to 25-year planning horizons and by addressing dynamic relationships among social, economic, educational, environmental, and technological factors, as well as mobility, accessibility, and system performance. The Laredo MPO Vision Statement was mentioned as a good example during the April TAC meeting.

***Laredo MPO Vision**: Develop a transportation system that offers safe, efficient, affordable travel choices for people and goods, while supporting economic development and long-term quality of life.*

Below are the same conceptual vision statements provided in April.

Vision Statement Alpha: The Corpus Christi Metropolitan regional multi-modal transportation system is a safe system with coordinated and efficient interventions that provides access for all residents, visitors and goods to destinations and activities that improve the regional economy and quality of life.

Vision Statement Bravo: The Corpus Christi Metropolitan regional multi-modal transportation system is a well-maintained multi-modal system that connects people and freight with destinations in a cost effective and environmentally sensitive manner.

Vision Statement Charlie: The Corpus Christi Metropolitan regional multi-modal transportation system supports and enhances the economic and cultural conditions along the Gulf Coast. The roads and bridges resiliently respond to extreme weather and the transit system utilizes the newest technologies to allow people to easily access destinations.

Vision Statement Delta: The Corpus Christi Metropolitan regional multi-modal transportation system is renowned for resiliently providing effective and efficient movement of people and goods now, while preparing for a competitive and evolving future.

Vision Statement Echo: The Corpus Christi Metropolitan regional multi-modal transportation system supports a strong economy and a high quality of life in an environmentally responsible and safe manner.

Vision Statement Foxtrot: Investment in the Corpus Christi Metropolitan regional multi-modal transportation system eliminates deaths and reduces life-cycle costs while increasing return on infrastructure investments and enhancing the quality of life for residents and visitors.

Vision Statement Golf: Investments in the Corpus Christi Metropolitan regional multi-modal transportation system increases the resiliency of the infrastructure while also enhancing the ability of the system to adapt to changes in the regions; society, economy, and environmental conditions.

Vision Statement Hotel: The Corpus Christi Metropolitan region has a well-maintained multi-modal transportation system that affordably provides access for all residents, visitors, and goods to destinations and activities which leverages our unique attributes to ensure a high-quality of life and regional economic success.

Vision Statement India: The Corpus Christi Metropolitan area is a dynamic, thriving region dedicated to improving the quality of life for residents and visitors through high quality economic development and by operating and maintaining the regional multi-modal transportation system in a fiscally and environmentally responsible manner.

Vision Statement Juliet: The Corpus Christi Metropolitan regional multi-modal transportation system will provide context-sensitive, multi-modal transportation choices that support economic growth and social equity while protecting natural resources and promoting public health and safety.

Development of 2050 MTP Goals

Goals are the compass for transportation investment. They provide broad aims or direction and purpose, helping decision-makers prioritize projects and allocate resources effectively. Without well-defined goals that articulate the desired reasons for investing it is more difficult to allocate resources where they will have the most significant impact.

Development of 2050 MTP Objectives

Objectives translate the broad goals into specific and measurable targets. They answer the "how much" or "to what extent" questions, providing concrete benchmarks for success. One objective may support more than one of the adopted goals. Performance measures that quantify attainment of the objectives will be developed as the process advances. Several of these objectives will likely be framed by current Corpus Christi MPO policies.

Initial Preliminary Draft Goals and Several Objectives for Discussion Purposes

Conceptual Safety Goal (PM-1): Eliminate fatalities and reduce injuries using proven infrastructure countermeasures, technology applications, policy adjustments, and education.

- Objective A for the Safety Goal: By 2050 (2024-2050): Eliminate all traffic fatalities and reduce serious injuries by 50% compared to the YEAR baseline.
- Objective B for the Safety Goal: By 2035 (2024-2035): Achieve a 50% reduction in all fatalities and a 25% reduction in serious injuries compared to the YEAR baseline.
- Objective C for the Safety Goal: By 2026 (2024-2026): The percentage of safety funding invested in reducing Vulnerable Road User crashes will be proportionate to the percentage of Vulnerable Road User fatalities/serious injury crashes in the region.
- Objective D for the Safety Goal: By 2030 (2024-2030): Reduce the freeway lane closure duration due to incidents by 25% compared to the 2023 baseline.
- Objective E for the Safety Goal: By 2026 (2024-2026): All safety projects in the Corpus Christi Metropolitan Region that request federal funds are analyzed and selected based on crash diagnosis software results reported to the Corpus Christi MPO Transportation Policy Committee.

Conceptual Asset Management Goal (PM-2): Maintain, preserve, and modernize transportation infrastructure through targeted rehabilitation, restoration, and replacement.

- Objective A for the Asset Management Goal: By 2028: Maximize the return on investment of federal funds in roads, bridges, and ITS equipment by using life-cycle cost analysis for federal funds in order to choose the right improvements at the right time in an asset's lifecycle in order to sustain a desired level of performance in the most cost-effective way.
- Objective B for the Asset Management Goal By 2028 (2024-2028): include additional funding as part of preventive and routine maintenance to harden critical infrastructure identified during resiliency planning.
- Objective C for the Asset Management Goal: maintain the assets in the most efficient and cost-effective manner.
- Objective D for the Asset Management Goal

Conceptual System Performance Goal (PM-3): Enhance the multimodal movement of goods and people through targeted infrastructure and operational improvements.

- Objective A for the Conceptual System Performance Goal: Achieve a 20% reduction in average travel time during peak commute hours (?4:00 pm to 6:00 pm?) on the designated congestion management corridors by 2040.
- Objective B for the Conceptual System Performance Goal: By 2030 (2024-2030): Reduce the average freeway lane closure duration due to incidents by 25% compared to the 2023 baseline.
- Objective C for the Conceptual System Performance Goal: By 2050: Demonstrate enhanced integration and connectivity by increasing the percentage of trips within the metropolitan planning

area that utilize a multimodal combination (walking, biking, transit, carpooling) by 20% within the next 10 years.

Conceptual Transformation and Technology Goal 4: Leverage emerging technologies and innovations in transportation data and solutions to magnify the benefit of transportation interventions.

- Objective A: This will include things such as TSMO, V2X, ITS interconnections, ACES vehicles.

Conceptual Quality of Life Community and Ecology Goal 5: Protect and enhance the natural environment while enhancing transportation performance.

- Objective A: Example: EJ Equity objective - from Texas freight "Equitable distribution of the positive and negative impacts of freight movement across all Texans."
- Objective B: Topic: Habitat Conservation Objective possibly something from the adopted MPO policies on mitigation, must be consistent with USFWS and Texas wildlife plan.

Conceptual Economic Goal 6: Promote regional economic growth using strategic transportation interventions which reinforce regional assets and enhance competitive strengths.

- Objective A: Develop and maintain a resilient and secure multimodal system that can withstand and respond to various sources of disruption.
- Objective B: Must be consistent with the CEDS plan, possibly consistent with EDC and Chamber of Commerce goals/objectives.

Recommendation

Please review and discuss as well as provide comments to MPO staff for the updated version of the vision, goals and objectives.

Proposed Motion

None. Review, discuss and provide staff comments.

Attachments

1. Item 5A from the February 2024 TAC meeting
2. Item 5A from the March 2024 TAC meeting
3. Item 5A from the April 2024 TAC meeting.

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date: February 9, 2024
To: Technical Advisory Committee (TAC)
From: Craig Casper, Senior Transportation Planner
Through: Robert MacDonald, Transportation Planning Director
Subject: Item 5B: 2050 Metropolitan Transportation Plan (MTP) Updates: Goals and Objectives
Action: Information Item

Summary

During each Metropolitan Transportation Plan (MTP) development cycle, the Corpus Christi Metropolitan Planning Organization (Corpus Christi MPO) reviews and can revise its Vision, and associated Goals, Objectives, and Performance Measures. As part of developing the 2050 MTP, the MPO is updating several sub-plans, such as Safety, Resiliency, Active Transportation and Micromobility. In a performance-based planning and programming (PBPP) system, the goals of these subplans and the MTP Goals must be consistent. Staff is asking the committees, and will be asking the public, if the existing Goals and Objectives are broad enough to address the regions strategies, the state and national goals, and the concerns of the regional public.

Staff requests that the TAC provide feedback as we begin the process to collect ideas for subsequent discussions, to develop revised MPO 2050 MTP Vision, Goals, and Objectives, and then seek TPC approval to release these for public review and comment. The existing Corpus Christi MPO 2045 MTP Goals are:

1. Significantly reduce traffic fatalities and serious injuries on all public roads.
2. Manage regional transportation assets into a state of good repair.
3. Reduce congestion on the regional significant corridors.
4. Efficiently operate, and invest in, the surface transportation system.
5. Improve regional freight transportation facility performance.
6. Use transportation investments to improve the regional economy.
7. Protect and enhance communities, the natural environment, and historic and cultural resources.
8. Provide an equitable transportation system for all, regardless of age, ability, race, ethnicity, or income.

Background

As stated in FHWAs Performance Based Planning and Programming Guidebook, "…*the transportation planning process begins with the development of a vision and broad goals that provide a strategic direction for investment and policy decisions.*" The guidebook later states "… *it is important to establish goals and objectives with careful thinking about how they will be used as a foundation for developing performance measures and targets for investment decision-making and for measuring performance. Goals and objectives should be developed in conjunction with both internal agency and external stakeholders*."

In the transportation planning process, goals stem from the values inherent in the community's vision for the future. These outcome-oriented goals set the strategic direction for a performance-based planning and programming process. Goals should reflect agreed-upon system-wide priorities and should relate to outcomes that matter to the public, not just to the agency members.

In FHWAs web resource called **PlanWorks**, the first step in long-range transportation planning is a broad assessment of the available data, previous decisions and interagency relationships within the metropolitan area. The second step is "Reviewing and Updating the Vision and Goals." Step 2 is the first opportunity for public

stakeholders to provide their input into the formal MTP process. Key questions found in the PlanWorks that can frame Step 2 are:

- How are the national goals reflected in the vision and goals?
- Do the MTP goals reflect short- and long-term outcomes?
- Do the vision and goals of the plan reflect a broader community-wide vision and goals?
- How do the MTP goals reflect previously established vision and goals?
- How does available funding inform the vision and goals?
- Do the vision and goals support a multimodal transportation system?
- Is transportation safety sufficiently reflected in the vision and goals of the plan?
- What stakeholder input was received about the draft vision and goals?
- What stakeholder groups were represented in this input?
- Are there stakeholder groups not represented that need to be engaged?
- What do stakeholders value and need?
- How does stakeholder input compare to the proposed vision and goals?
- How was stakeholder input reflected in the adopted vision and goals?
- Which stakeholders are interested in being active participants in developing the MTP?
- How does bicycle and pedestrian accessibility influence the vision and goals?
- Is there a state, regional, or local complete streets policy to inform setting the vision and goals?
- Do the vision and goals reflect the bicycle and pedestrian network principles and goals?
- What existing economic/investment goals should the MTP recognize?
- What are the needs and goals of freight users?
- What is the impact on existing and future goods movement operations?
- Is there an existing freight plan with vision and goals for the freight system?
- What type of GHG information is needed to inform the goal setting process?
- How is the current transportation system affecting health outcomes?
- Are there opportunities for transportation decisions to improve health in the region?
- What information is available to health and community stakeholders on transportation-related health needs and goals in the region? This may include health disparities among populations, access to community resources and jobs, or other needs.
- What baseline data, tools, studies, or assessments can health stakeholders provide to improve understanding of transportation's relationship to health in the region?
- Are there any identified transportation-related health risks or issues in the region, such as obesity, asthma, crash-risk, pollution-related illness, or inequities in the access to health-promoting resources?
- Are there specific interests or goals for the human environment?
- What information is available about stakeholders representing the community and individual populations?
- Do any goals relate to improving the quality of life or equity in the region?
- What goals does the region have for travel time reliability and/or system operations and performance?
- Do the MTP goals reflect short- and long-term outcomes related to system performance and operations?
- Are there priority areas for conservation/mitigation that should be considered in the vision and goals?

It is important to keep performance measures and evaluation criteria in mind when developing goals and objectives. This will allow post-investment analyses to determine if the investments accomplished what they were selected to do. One part of this is using a format known as the S.M.A.R.T. format. This format establishes objectives that are: Specific, Measurable, Action-Oriented, Reasonable, and Time Bound. These are briefly described below.

- An objective is not general; it identifies exactly what the MPO wants to happen.
- A measurable objective is quantifiable and can detect changes over time.
- An action-oriented objective can be counted or observed.
- A reasonable objective is realistic and reachable, versus what is simply desired.
- A time-bound objective establishes a deadline.

The national goals and performance measures, as stated in 23 USC 150(b) are:

(a) DECLARATION OF POLICY.—

Performance management will transform the Federal-aid highway program and provide a means to the most efficient investment of Federal transportation funds by refocusing on national transportation goals, increasing the accountability and transparency of the Federal-aid highway program, and improving project decision-making through performance-based planning and programming.

(b) NATIONAL GOALS.—

It is in the interest of the United States to focus the Federal-aid highway program on the following national goals:

1. **SAFETY** — To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **INFRASTRUCTURE CONDITION** — To maintain the highway infrastructure asset system in a state of good repair.
3. **CONGESTION REDUCTION** — To achieve a significant reduction in congestion on the National Highway System.
4. **SYSTEM RELIABILITY** — To improve the efficiency of the surface transportation system.
5. **FREIGHT MOVEMENT AND ECONOMIC VITALITY** — To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **ENVIRONMENTAL SUSTAINABILITY** — To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **REDUCED PROJECT DELIVERY DELAYS** — To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

U.S. Department of Transportation FY 2022- 2026 Strategic Plan Goals

Safety
Make our transportation system safer for all people. Advance a future without transportation-related serious injuries and fatalities.

Economic Strength and Global Competitiveness
Grow an inclusive and sustainable economy. Invest in our transportation system to provide American workers and businesses reliable and efficient access to resources, markets, and good-paying jobs.

Equity
Reduce inequities across our transportation systems and the communities they affect. Support and engage people and communities to promote safe, affordable, accessible, and multimodal access to opportunities and services while reducing transportation-related disparities, adverse community impacts, and health effects.

Climate and Sustainability
Tackle the climate crisis by ensuring that transportation plays a central role in the solution. Substantially reduce greenhouse gas emissions and transportation-related pollution and build more resilient and sustainable transportation systems to benefit and protect communities.

Transformation
Design for the future. Invest in purpose-driven research and innovation to meet the challenges of the present and modernize a transportation system of the future that serves everyone today and in the decades to come.

Organizational Excellence
Strengthen our world-class organization. Advance the Department's mission by establishing policies, processes, and an inclusive and innovative culture to effectively serve communities and responsibly steward the public's resources.

U.S. Federal Highway Administration 2022-2026 Strategic Plan Goals

In 2022 the Federal Highway Administration published the 2022-2026 Strategic Plan with goals derived from the US DOT Strategic Goals. These goals are:

- Safety: Make our transportation system safer for all people. Advance a future without transportation-related serious injuries and fatalities.
- Economic Strength and Global Competitiveness: Grow an inclusive and sustainable economy. Invest in our transportation system to provide American workers and businesses reliable and efficient access to resources, markets, and good jobs.
- Equity: Reduce inequities across our transportation systems and the communities they affect. Support and engage people and communities to promote safe, affordable, accessible, and multimodal access to opportunities and services while reducing disparities, adverse community impacts, and health effects.
- Climate and Sustainability: Tackle the climate crisis by ensuring that transportation plays a central role in the solution. Substantially reduce greenhouse gas emissions and transportation-related pollution and build more resilient and sustainable transportation systems to benefit and protect communities.
- Transformation: Design for the future. Invest in purpose-driven research and innovation to meet the challenge of the present and modernize a transportation system of the future that serves everyone today and in the decades to come.
- Organizational Excellence: Strengthen our organization. Advance the Department's mission by establishing policies, processes, and an inclusive and innovative culture to effectively serve communities and responsibly steward the public's resources

TxDOT Goals from the Texas Transportation Plan 2050 Plan

The TxDOT Objectives for the first 3 goals are listed below.

Promote Safety

- Work with stakeholders to identify and develop proven and data-driven strategies, countermeasures and programs [Evaluation]
- Reduce crashes and lessen crash severity by implementing engineering solutions [Engineering]
- Use education and outreach to promote safe driving, bicycling and pedestrian activities Encouragement/Education]
- Coordinate with first responders to improve incident response times [Enforcement]

Preserve Our Assets

- Preserve integrity of bridges and highway structure
- Provide roads that are smooth and structurally sound
- Keep other assets and technological devices operating
- Reduce long-term costs
- Mitigate asset risks

Optimize System Performance: Movement of People and Goods

- Reduce congestion through both traditional and alternative strategies
- Enable reliable travel times
- Increase travel options and connections
- Ensure freight can move efficiently
- Increase access to jobs, services and activity centers
- Leverage transportation assets to support economic growth and vitality

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date:	March 14, 2024
To:	Technical Advisory Committee (TAC)
From:	Craig Casper, Senior Transportation Planner
Through:	Robert MacDonald, Transportation Planning Director
Subject:	Item 5A: 2050 Metropolitan Transportation Plan (MTP) Update: Vision, Goals and Objectives
Action:	Discussion Only

Summary

The Corpus Christi MPO staff is seeking input into the number and topic of goals for use in developing the 2050 Metropolitan Transportation Plan (MTP). During each MTP development cycle, the Corpus Christi Metropolitan Planning Organization (Corpus Christi MPO) reviews and can revise its Vision, and associated Goals, Objectives, and Performance Measures. It is essential that the vision and policies advocated in the Regional Long Range Transportation Plan be consistent with the visions, goals, and transportation policies in subplans (safety plan, congestion management plan, etc.) and partner agencies' plans. These are found in Attachment 1. It is also useful to see previously adopted goals from earlier Metropolitan Transportation Plans. These are found in Attachment 2. The Corpus Christi MPO Transportation Policy Committee also provided guidance to develop a Vision Statement for the 2050 MTP. Partner agency vision statements are found in Attachment 3.

Background

The current federal transportation legislation, Infrastructure Investment and Jobs Act (IIJA), has 11 areas of emphasis to help guide development of goals and objectives. These are listed below.

- Emphasize the preservation of the existing transportation system.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Enhance travel and tourism.
- Improve transportation system resiliency and reliability.
- Increase accessibility and mobility of people and freight.
- 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.
- Promote efficient system management and operation.
- Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Reduce (or mitigate) the stormwater impacts of surface transportation.
- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

Attachments:

1. Partner Agency Plan Goals
2. Previous Corpus Christi MTP Goals
3. Partner or similar Agency Vision Statements

PARTNER AGENCY PLAN GOALS

Transportation Related Goals from Various Plans

Texas DOT Strategic Plan

- Promote Safety
- Deliver the Right Projects
- Focus on the Customer
- Foster Stewardship
- Optimize System Performance
- Preserve our Assets
- Value our Employees

Texas DOT Multimodal Freight Network Plan

- Improve the safety, efficiency and performance of the TMFN.
- Improve the performance of the TMFN to enhance the contribution of transportation infrastructure to economic competitiveness, productivity, and development throughout the state.
- Maintain, preserve and modernize assets on the TMFN to support multimodal movement of goods and people.
- Reduce congestion and improve system efficiency and performance on the TMFN.
- Improve urban and rural system connectivity between all freight modes and all industry sectors to regional, statewide, national and international markets.
- Develop and maintain a resilient and secure multimodal system that can withstand and respond to various sources of disruption.
- Encourage equitable distribution of the positive and negative impacts of freight movement across all Texans.
- Manage environmental and agency resources responsibly, and foster accountability and transparency in decision-making.
- Identify sustainable funding sources for all freight transportation modes.

Texas Transportation Asset Management Plan

- Deliver the Right Projects
- Foster Stewardship
- Optimize System Performance
- Preserve our Assets

Corpus Christi Regional Transportation Authority Goals from Various Plans

- The most recent CCRTA plan, the 2022 Fleet Forward Long Range System Plan, does not list goals. It references goals from long-term service found in the Vamonos! Long Range System Plan.

Texas DOT *Connecting Texas 2050* DRAFT **Goals**

Texas DOT Rail Plan

- Improve multimodal transportation safety especially with regard to safety at at-grade rail crossings
- Maintain and preserve infrastructure assets using cost-beneficial treatment especially on those assets owned by TxDOT
- Reduce congestion and improve system efficiency and performance including rail freight and passenger travel time reliability
- Provide transportation choices and improve system connectivity by providing both freight and passenger choices by improving the rail system and enhancing intermodal and multimodal connectivity
- Manage environmental and TxDOT resources responsibly and be accountable in decision making
- Understand and incorporate citizen feedback in decision-making processes and be transparent in all TxDOT communications
- Identify sustainable funding sources for all freight transportation modes
- Improve the contribution of the Texas freight transportation system to economic competitiveness, productivity, and development by selecting projects that strengthen Texas' position as a trade and logistics hub in the global transportation network, and those that support existing industries and attract new industries

Corpus Christi Regional Transportation Authority (CCRTA) 2012 Vamonos! Plan

Policy goal: The CCRTA operates a family of services that is designed to be consistent throughout the service area. While the service area is diverse in its needs and demand for transit services, the goal of this policy is to ensure equitable treatment throughout the service area. Decisions on services provided or modifications to services provided are to be based on conditions that exist relevant to the services provided. These standards address when, where, and how the RTA obligates itself to provide transit services to the community it serves.

- Implementing a systems approach with more emphasis on how all routes work together to increase mobility for customers, rather than simply evaluating route performance as independent units.
- Maintain current service coverage, but reduce service duplication and route complexity.
- Introduce flexible, or on call services in appropriate markets.
- Rationalize service structure, concentrating service in fewer corridors and reducing out-of direction deviations. To the extent possible, serve neighborhood areas via nearby arterials and collectors.

- Improve effectiveness of transit centers by connecting low frequency routes with high frequency and long-haul routes.
- Augment quality and reliability of service through better scheduling and on-time performance. This may require setting different route running times for peak times, particularly for routes that cross SPID where the heaviest peak traffic congestion is observed.
- Reduce passenger wait times and travel times by providing more effective connections at transit centers, improving frequencies, and reducing delays on traffic hot-spots to the extent possible.
- Reduce transfers as possible by reducing route segmentation and creating interlines of routes with high transfer exchange rates.

Coastal Bend Regional Coordination Plan

The current, still draft, version of the Regional Coordination Plan, does not list goals.

Coastal Bend Economic Development District Comprehensive Economic Development Strategy

- Catalyze Resilient Economic Development
- Strengthen Resilient Infrastructure Investments
- Promote Workforce Agility
- Support Community Well-Being

Texas General Land Office Coastal Bend Economic Resilience Action Plan

- Strengthen organizational capacity and regional partnerships that enhance resilience to climate hazards and economic disruptions and expand market access.
- Promote regional growth through strategic infrastructure projects which build on unique regional assets and competitive strengths.
- Sustain housing investment and support workforce growth by maintaining affordability, leveraging existing building stock, and mitigating climate risks and impacts.
- Foster regional resilience through strategies which encourage economic inclusion and diversification to provide stability during downturns and in response to natural disasters.
- Encourage quality of life improvements through placemaking and environmental enhancements in order to attract families to visit and reside within the region.

Texas Statewide Historic Preservation Plan

- Survey and Online Inventory – Texans undertake a comprehensive survey of the state's diverse historic and cultural resources resulting in a publicly accessible online inventory.
- Emphasize Cultural Landscapes – Communities are active in the identification, protection and interpretation of cultural landscapes.
- Implement Policies and Incentives – Cities, counties, the state, federal agencies and tribes implement preservation policies and incentives to effectively protect historic and cultural assets.
- Leverage Economic Development Tools for Preservation – Communities leverage preservation-based and traditional economic development tools to revitalize historic areas.
- Learn and Experience History Through Place – Texas residents and guests of all ages learn and experience the state's diverse history through formal education, recreation and everyday interactions with historic places.
- Connect Preservation to Related Fields – We connect and integrate preservation into related fields and activities, building a broader, stronger and more diverse community.
- Build Capacity of the Preservation Community – The existing preservation community develops its organizational capacity to strengthen and expand preservation skills.

City of Corpus Christi Historic Preservation Plan

- Build City Capacity for Historic Preservation
- Enable Community-Driven Historic Preservation
- Support Historic Preservation as an Economic Development Tool

Texas Wildlife Conservation Action Plan

- Practice, Encourage and Enable Science-Based Stewardship of Natural and Cultural Resources
- Increase Access to and Participation in the Outdoors
- Educate, Inform and Engage Texas Citizens in Support of Conservation and Recreation
- Employ Efficient, Sustainable and Sound Business Practices

PREVIOUS CORPUS CHRISTI MTP GOALS

Adopted Goals from the 2045, 2040 and 2030
Corpus Christi MPO Metropolitan Transportation Plans

From the 2045 MTP

1. Significantly reduce traffic fatalities and serious injuries on all public roads.
2. Manage regional transportation assets into a state of good repair.
3. Reduce congestion on the regional significant corridors.
4. Efficiently operate, and invest in, the surface transportation system.
5. Improve regional freight transportation facility performance.
6. Use transportation investments to improve the regional economy.
7. Protect and enhance communities, the natural environment, and historic and cultural resources.
8. Provide an equitable transportation system for all, regardless of age, ability, race, ethnicity, or income.

From the 2040 MTP

1) Reduce congestion by maximizing the capacity and efficiency of the existing major highways and streets.
2) Improve the safety of our transportation network through improved efficiency and effectiveness of major road and highway facilities.
3) Provide new facilities improved facilities and transportation services that expand the economic opportunities in the area.
4) Provide new facilities improved facilities and transportation services that will support the maintenance of our attainment status and improve air quality.
5) Provide new facilities improved facilities and transportation services that will increase the value of transportation assets.
6) Provide frequent, direct, efficient, reliable, and safe transportation services to residents and visitors.
7) Ensure financial resources are available to provide services and facilities to support mobility needs minimize vehicle impact on the metropolitan areas environment so that minimum acceptable air quality levels established by the NAAQS are maintained.
8) Coordinate with agencies to provide accessibility to jobs for economically disadvantaged residents.
9) Encourage private nonprofit agencies to meet mobility needs of the elderly and disabled citizens.
10) Explore innovative ways to encourage bicycling as a cost-effective and efficient transportation alternative by providing infrastructure in areas of employment schools enforcement of traffic laws to reduce the potential of bicycle accidents and promotional campaigns offering information and maps of current routes.
11) Ensure safe accessible and convenient mobility for pedestrians and bicycle riders.
12) Encourage residents and visitors to walk or bike for trips of reasonable length.
13) Provide adequate financial resources for the expansion and maintenance of pedestrian and bicycle facilities.
14) Provide for the safe and efficient movement of trucks within the region.
15) Assure that freight and trucking companies and other stakeholders are part of the regional coordination and planning efforts.
16) Identify and enhance routes and corridors that would provide connectivity for trucks particularly as it relates to critical freight facilities such as the La Quinta Trade Gateway, the Robstown Inland Port of the Americas, and the Joe Fulton International Trade Corridor.
17) Coordinate railway facilities with other transportation modes and adjoining land uses to encourage desirable development patterns.
18) Promote safe and efficient movement of hazardous cargo and general freight within the study area.
19) Coordinate the freight planning process with the Port of Corpus Christi particularly as it relates to the strategic deployment of military cargo and the La Quinta Trade Gateway

20) Improve access to MPO area attractions.
21) Increase collaboration with public and private sector decision makers to improve and establish intermodal connections for recreational travel needs.
22) Promote cooperation among regional state and local interest groups to integrate land use and transportation for providing attractive tourism environment.
23) Adopt and promote environmentally friendly design standards for roadways bikeways and walkways.

From the 2030 MTP

1) Reduce congestion by maximizing the capacity and efficiency of the existing major highways and streets to better handle traffic demands.
2) Improve the safety of our transportation network.
3) Improve the efficiency of major street and highway facilities to meet the needs of existing and projected vehicle traffic.
4) Provide for circulation to and from significant traffic generators into, out of, and within the metropolitan area.
5) Locate and design transportation facilities which will minimize traffic hazards.
6) Provide transportation facilities and services which foster desirable patterns of development and are compatible with surrounding land use patterns.
7) Develop and implement A phased program of low-cost improvements to enhance the efficiency of the system and encourage the conservation of energy.
8) Use intelligent transportation systems and other technologies to improve the effective use of the capacity of streets and highways.
9) Provide new facilities improved facilities and transportation services that expand the economic opportunities in the area.
10) Provide new facilities improve facilities and transportation services that will support the maintenance of our attainment status or improve air quality.
11) Provide new facilities improved facilities and transportation services that will increase the value of transportation assets.
12) Provide efficient reliable and safe transportation services to all the residents and visitors including those who are elderly and disabled.
13) Ensure that adequate financial resources are available to provide services and facilities to support mobility needs.
14) Minimize the impact of vehicles on the metropolitan areas environment so that minimum acceptable air quality levels established by the NAAQS are maintained.
15) Coordinate with other agencies in providing accessibility to all jobs especially to economically disadvantaged residents in the MPO area.
16) Encourage private nonprofit agencies to meet mobility needs of the elderly and disabled citizens.
17) Ensure safe accessible and convenient mobility for pedestrians.
18) Encourage residents and visitors to walk for trips of reasonable length.
19) Provide adequate financial resources for the expansion and maintenance of pedestrian facilities.
20) Encourage bicycling as a safe and viable mode of transportation.
21) Make bicycle use a more acceptable mode of transportation in the Corpus Christi metropolitan area.
22) Provide adequate financial resources for the expansion and maintenance of bicycle facilities.
23) Coordinate rebuy facilities with other transportation modes and adjoining land uses to encourage desirable development patterns.
24) Promote safe and efficient movement of hazardous cargo and general freight within the study area.
25) Coordinate the freight planning process with the Port of Corpus Christi authority particularly as it relates to the strategic deployment of military cargo and the La Quinta Intermodal Facility.

26) Provide for the safe and efficient movement of trucks in the metropolitan area.
27) Engage trucking companies and other stakeholders in regional coordination and planning efforts.
28) Identify and enhance routes and corridors that would provide connectivity for trucks particularly as it relates to the La Quinta intermodal facility the Robstown Inland Port of the Americas and the Joe Fulton International Trade Corridor.
29) Promote and encourage the diversification and further development of infrastructure improvements at the port of Corpus Christi to include the deepening widening and extension of select reaches of the Corpus Christi ship channel and the La Quinta channel along with the completion of the Joe Fulton International Trade Corridor.
30) Actively pursue the establishment of intermodal terminal facilities at the La Quinta trade gateway container terminal project site.
31) Encourage establishment of new water dependent manufacturing industries near the harbor.
32) Follow strategic planning principles and iterative approach to airport master planning.
33) Maximize the [*Corpus Christi International*] airport as a major regional economic asset in support of the continued growth in population and employment of the region both private and military.
34) Enhance the competitive advantage of the [*Corpus Christi International*] airport relative to other major airports that residents in the Corpus Christi region may be using by increasing jet service and identifying potentially profitable nonstop markets.
35) Improve [*Corpus Christi International*] airport passenger comfort and service by maintaining level of service criteria to use in identifying areas for improvement in passenger customer service.
36) Provide multimodal freight storage and transfer facilities for easy movement of freight to and from aircraft trucks railroad cars and ships.
37) Recommend and establish meaningful staff user and general public participation processes.
38) Move access to the MPO area attractions such as historic scenic and recreational sites.
39) Increase collaboration with public and private sector decision makers to improve and establish intermodal connections for recreational travel needs.
40) Promote cooperation among regional, state, and local interest groups to integrate land-use and transportation for providing attractive tourism environments.
41) Adopt and promote environmentally friendly design standards for roadways, bikeways, and walkways.

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date:	April 12, 2024
To:	Technical Advisory Committee (TAC)
From:	Craig Casper, Senior Transportation Planner
Through:	Robert MacDonald, Transportation Planning Director
Subject:	Item 5A: 2025-2050 Metropolitan Transportation Plan (2050 MTP)
Action:	Information Only

Summary

Federal funds for transportation projects can only be programmed to projects that are contained within the MPOs Fiscally Constrained Metropolitan Transportation Plan (MTP). The Corpus Christi 2050 MTP must be updated at least every 5 years and was last adopted on February 6, 2020. Attachment 1 is the current 2050 MTP Timeline, based on information compiled from consultants aiding this endeavor, along with other timing information based on MPO staff experience.

In addition to an increase in funding for transportation, the passage of the Infrastructure Investment and Jobs Act (IIJA) brought additional planning requirements. Due to the completion of the Decennial Census, the Governor will need to approve updates to the MPO Boundary. This will begin after the Small Area Forecast is approved by the TPC. As part of the overall 2050 MTP update, several other plans or products are being updated or created new. All of the items listed below will need a formal approval from the TPC, either separately or as part of the overall 2050 MTP. TAC will provide their recommendation to the TPC.

Background

In accordance with 49 U.S.C. 5303 (i) and 23 CFR 450.300, the Corpus Christi MPO is required to develop a fiscally constrained performance based MTP that identifies the multi-modal transportation system including pedestrian, bicycle, public transit, motor vehicles, and freight. The MTP describes the locally developed and adopted goals for the region, lists the locally developed performance measures that will be used to evaluate potential projects, and specifies the interventions (both policies and projects) that will be implemented to achieve these goals. It also describes the formal process that will track the region's change in performance over time. An MPO MTP must also be coordinated with the plans from the state Department of Transportation and the designated recipient of federal transit funds.

The needed approvals, roughly in temporal order, are:

Small Area Forecast (SAF). The Corpus Christi MPO retained a consultant and is using the model *UrbanSim* to aid the allocation of people and jobs throughout the region through the year 2050. The actual regional population estimates that are allocated are developed by the Texas State Demographic Center. The SAF is a foundational input that is used to help with the MPO Boundary and forecasting future transportation needs. It is also a key determinant of transportation project scoring.

Federal Functional Classification. The Corpus Christi MPO retained a consultant to review and update the classification of roads in the region using federal parameters. This federal functional classification determines eligibility for federal funding and is a determinant in project scoring.

SUMMER

Regional Safety Action Plan (RSAP). The Corpus Christi MPO retained a consultant to develop this near-term comprehensive safety plan aimed at reducing and eliminating serious injury and fatal crashes. The RSAP is being developed using the crash diagnosis software *Vision Zero Suite* to identify both crash locations that are highly susceptible to improvement and which FHWA Proven Safety Countermeasures most effectively address the needs at each location. There are federal funds available exclusively for these projects.

2050 MTP Goals - Objectives - Performance Measures and Evaluation Criteria. Federally funded transportation agencies have been required to use performance-based planning and programming since 2012. A performance-based planning and programming decision-model necessitates developing goals for what the federal funds should accomplish, developing objectives that will achieve those goals, identifying and gathering baseline data on performance measures and committing to acquire future data to quantify project progress toward the objectives, and specifying evaluation criteria that are used to select projects that best improve performance.

The Bicycle and Pedestrian (Active Transportation) Plan. The Corpus Christi MPO retained a consultant to review the previous active transportation plan from 2016 and create a new plan using current conditions and considering future conditions. The Regional Active Transportation Plan is a blueprint for a safe and easy-to-use network of off-road trails, sidewalks, and bike lanes to access destinations and public transit. There are federal funds exclusively for these types of projects.

Regional Complete Streets Policy. This project is underway as part of the Active Transportation Plan consultant contract. The IIJA requires MPOs to use at least 2.5% of their federal funds to plan, implement and evaluate Complete Streets that prioritize safety, comfort, and connectivity to destinations for all people. Complete Streets serve pedestrians, bicyclists, public transportation users, children, older individuals, individuals with disabilities, motorists, and freight vehicles.

AUTUMN

Congestion Management Process (CMP) and Transportation System Management and Operations Plan (TSMO). The Corpus Christi MPO retained a consultant to review and update the current CMP. A CMP is a federally required 8-step process that identifies critical corridors, acceptable levels of congestion, and uses analytic tools to develop and select appropriate strategies to reduce congestion during the next 5 to 10 years. This includes identifying all roads that will use federal funds to add travel lanes. TSMO is a set of operational improvements that can maintain and even restore performance so that extra physical capacity (lanes) is not needed.

Regional Resiliency Plan. The Corpus Christi MPO retained a consultant to aid development of this plan. While there is no requirement for developing this plan, there are incentives in the form of specific federal funds identified for these projects, and in reduction in local match requirements from 20% to 10% if the project is in a Regional Resiliency Plan. This process is identifying critical infrastructure, types of vulnerabilities, and evaluating projects using USDOTs *RDR Tool Suite* to assess transportation resilience return on investment (ROI).

Regional Freight and Urban Goods Plan. The Corpus Christi MPO Regional Freight and Urban Goods Plan is distilled from the TxDOT Statewide Freight Plan, along with the Port of Corpus Christi Strategic Plan and the Corpus Christi International Airport Master Plan. It also includes the growth in online commerce and deliveries that are increasing the presence of trucks in residential areas. The value of these goods, and the trips that deliver them, are now a significant factor in the urban economy unaccounted for in other transportation planning efforts.

Regional Financial Plan. The Financial Plan is the tool that demonstrates that the 2050 MTP is financially constrained (there are sufficient funds to fully pay for every project included in the plan). The Financial Plan must include project costs using the year-of-expenditure costs (with inflation, currently 4% per year) to determine the total cost of the project. Federal requirements for developing this financial plan include mandating MPOs, public transportation operator(s), and the State DOT cooperatively develop the estimates of all financial resources from public and private sources that are reasonably expected to be available during at least the first 20 years of the MTP.

2024 Corpus Christi MPO Boundary. The Corpus Christi MPO staff is reviewing the procedures for getting approval of the Texas Governor for the updated 2024 Corpus Christi MPO Boundary. According to CFR 450.312, "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*..."

Regional Safe System Plan. The Corpus Christi MPO staff is developing a scope of work for consultant assistance on developing this plan. The USDOT has adopted the Safe System Approach which aims to eliminate fatal & serious injuries for all road users. It uses a 5-part approach to road safety that first anticipates human mistakes and second keeps impact energy on the human body at tolerable levels.

Environmental Mitigation. The Corpus Christi MPO is required to discuss the types of potential environmental mitigation activities and identify potential areas to carry out these activities as part of the 2050 MTP. This includes specifying activities that have the greatest potential to restore and maintain the environmental functions affected by the Metropolitan Transportation Plan.

Development of 2050 MTP Vision

Visioning is an optional exercise that provides an opportunity for participants to establish a common foundation for decision-making. Adopting a regional vision ensures that transportation plans and projects are advancing the values and opportunities that the community supports.

When used to support transportation planning, visioning often includes scenario planning. Visioning scenarios extend beyond conventional 10 to 25-year planning horizons and address dynamic relationships among social, economic, educational, environmental, and technological factors, as well as mobility, accessibility, and system performance. Below are conceptual vision statements that were developed by MPO staff to aid the development process. Attachment 1 contains adopted vision statements from related documents.

Vision Statement Alpha: The Corpus Christi Metropolitan regional multi-modal transportation system is a safe system with coordinated and efficient interventions that provides access for all residents, visitors and goods to destinations and activities that improve the regional economy and quality of life.

Vision Statement Bravo: The Corpus Christi Metropolitan regional multi-modal transportation system is a well-maintained multi-modal system that connects people and freight with destinations in a cost effective and environmentally sensitive manner.

Vision Statement Charlie: The Corpus Christi Metropolitan regional multi-modal transportation system supports and enhances the economic and cultural conditions along the Gulf Coast. The roads and bridges resiliently respond to extreme weather and the transit system utilizes the newest technologies to allow people to easily access destinations.

Vision Statement Delta: The Corpus Christi Metropolitan regional multi-modal transportation system is renowned for resiliently providing effective and efficient movement of people and goods now, while preparing for a competitive and evolving future.

Vision Statement Echo: The Corpus Christi Metropolitan regional multi-modal transportation system supports a strong economy and a high quality of life in an environmentally responsible and safe manner.

Vision Statement Foxtrot: Investment in the Corpus Christi Metropolitan regional multi-modal transportation system eliminates deaths and reduces life-cycle costs while increasing return on infrastructure investments and enhancing the quality of life for residents and visitors.

Vision Statement Golf: Investments in the Corpus Christi Metropolitan regional multi-modal transportation system increases the resiliency of the infrastructure while also enhancing the ability of the system to adapt to changes in the regions; society, economy, and environmental conditions.

Vision Statement Hotel: The Corpus Christi Metropolitan region has a well-maintained multi-modal transportation system that affordably provides access for all residents, visitors, and goods to

destinations and activities which leverages our unique attributes to ensure a high-quality of life and regional economic success.

Vision Statement India: The Corpus Christi Metropolitan area is a dynamic, thriving region dedicated to improving the quality of life for residents and visitors through high quality economic development and by operating and maintaining the regional multi-modal transportation system in a fiscally and environmentally responsible manner.

Vision Statement Juliet: The Corpus Christi Metropolitan regional multi-modal transportation system will provide context-sensitive, multi-modal transportation choices that support economic growth and social equity while protecting natural resources and promoting public health and safety.

Development of 2050 MTP Goals

Goals are the compass for transportation investment. They provide a clear direction and purpose, helping decision-makers prioritize projects and allocate resources effectively. Without well-defined goals that articulate the desired reasons for investing it is more difficult to allocate resources where they will have the most significant impact. Objectives that support each of the adopted goals, and performance measures that quantify attainment of the objectives will be developed as the process advances. Several of these objectives will likely be framed by current Corpus Christi MPO policies.

Conceptual Transportation Goal 1: Maximize the safety of the multi-modal transportation system.

Conceptual Transportation Goal 2: Use transportation investments to enhance the quality of life for residents and visitors.

Conceptual Transportation Goal 3: Augment regional prosperity using efficient and effective transportation investments.

Conceptual Transportation Goal 4: Leverage emerging technologies and innovations in transportation data and solutions to magnify the benefit of transportation interventions.

Conceptual Transportation Goal 5: Protect and enhance the natural environment while enhancing transportation performance.

Recommendation

None. Information-only Item.

Proposed Motion

None. Information-only Item.

Attachments

1. Related Vision Statements
2. Schedule for 2050 MTP Items
3. Link to 2045 MTP Plan

PARTNER OR SIMILAR AGENCY VISION STATEMENTS

Visions Related to the Corpus Christi MPO Metropolitan Transportation Plan

City of Portland Vision Statement: Portland is a dynamic and safe community, dedicated to maintaining and improving the quality of life for its citizens, supporting high moral values and ethical standards, and promoting excellence in education through high-quality economic development and orderly growth.

City of Corpus Christi Vision: In 2035…Corpus Christi is a thriving community with a strong, diversified economy, a high quality of life for individuals and families throughout the city, and a well-protected environment of natural beauty. Our unique combination of Gulf Coast bay and beach attractions, vibrant cultural life, economic opportunity, and a variety of housing choices supports long-established families and makes Corpus Christi a magnet for young professionals, entrepreneurs, retirees and visitors to the most distinctive destination on the Texas Gulf Coast.

Nueces County Public Works Vision: Support and enhance the area's economic development in an environmentally responsible manner and to protect the safety, health, and welfare of the citizens of Nueces County by managing and operating a progressive, proactive, effective and efficient Department of Public Works.

City of Corpus Christi Vision Zero Vision: Working together, we will take equitable and data driven actions that will eliminate deaths and serious injuries for all who share Corpus Christi streets and waterways by 2040.

TxDOTs *DRAFT* long range plan *Connecting Texas 2050* Vision: Create an innovative multimodal transportation system that safely and efficiently moves people and freight and supports future growth.

The (*Texas*) Statewide Multimodal Transit Plan will identify actions necessary to increase mobility and connectivity options for all Texans, support economic development, and address congestion in regional and intercity corridors through 2050. It will be inclusive of all current and emerging forms of public transportation, supporting technologies, and intersection with other modes.

Capital Area MPO Vision: Coordinate regional infrastructure and operations investments for better safety, connectivity, personal mobility and access that balances economic growth, stewardship of scarce resources and regional competitiveness.

El Paso MPO Vision: A seamless and reliable multimodal network which enables connectivity, promotes quality of life and economic wellbeing, and preserves the human environment.

Killeen MPO Vision: Preserve and enhance the KTMPO area by developing a fully-integrated, multi-modal transportation system focusing on moving people and freight.

Laredo MPO Vision: Develop a transportation system that offers safe, efficient, affordable travel choices for people and goods, while supporting economic development and long-term quality of life.

Permian Basin MPO Vision: Develop a sustainable multimodal transportation system that meets the future needs of all users.

San Angelo MPO Vision: Provide and manage a safe, well-maintained comprehensive and integrated transportation network that improves connectivity, equalizes transportation options and anticipates future demand to ensure all needs are met.

Texarkana MPO Vision: the Texarkana MPO planning area will be served by a reliable multimodal transportation system which ensures safety for all transportation system users, equitably enhances accessibility and connectivity within the region and beyond, preserves the environment, and promotes a high quality of life and economic well-being.

Tyler MPO Vision: Develop a safe, efficient, and economically feasible multimodal transportation system that will accommodate the mobility needs of all people and goods traveling within and through the Tyler Area over the next 25 years.

Wichita Falls MPO Vision: Work with area stakeholders, citizens, and other interested parties to build and maintain a safe and secure transportation system that promotes the unique character of its communities, neighborhoods and business districts, creates attractive and sustainable destinations, improves property values, preserves the environment, reduces traffic congestion and offers more transportation choices for everyone.

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

Date:	May 13, 2024
To:	Technical Advisory Committee (TAC)
From:	Craig Casper, Senior Transportation Planner
Through:	Robert MacDonald, Transportation Planning Director
Subject:	Item 9A: Resiliency Plan Critical Infrastructure Review
Action:	Review and Discussion

Summary

Technical memos describing the process to identify and classify critical transportation infrastructure and the threats to that infrastructure were distributed for review and comment as part of the November 2023 TAC packet. As part of the Regional Resiliency Plan, the Corpus Christi MPO staff is requesting feedback regarding how to parse among and between transportation infrastructure to determine which are the most critical and vulnerable.

Background

According to the Fixing America's Surface Transportation (FAST) Act, signed into law in December 2015, the nation's transportation system must be secure and resilient to a myriad of hazards. Resilience is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions. This requirement was continued in the Infrastructure Investment and Jobs Act (IIJA). As an incentive, the IIJA makes grant funding available (PROTECT) when a region has completed a resiliency plan. Following passage of the FAST Act, the Federal Highway Administration and the Federal Transit Administration updated the metropolitan and statewide transportation planning regulations to reflect these new requirements. The transportation planning rule includes:

- A new planning factor for states and metropolitan planning organizations (MPOs) to consider and implement improving the resiliency and reliability of the transportation system (23 CFR 450.206(a)(9) and 23 CFR 450.306(b)(9)).
- A recommendation for MPOs to consult with agencies and officials responsible for natural disaster risk reduction when developing a metropolitan transportation plan and the transportation improvement program (23 CFR 450.316(b)).
- A requirement that the metropolitan transportation plan assess capital investment and other strategies that reduce the vulnerability of the existing transportation infrastructure to natural disasters (23 CFR 450.324(f)(7)).

Attachment 1 is a technical memo describing the information and approach used. Attachment 2 is a link to an excel spreadsheet with 4 purple tabs. These purple sheets (roadways, bridges, culverts, and low water crossings) allow changes in relative weighting among the prioritization criteria. Attachment 3 is a link to an excel spreadsheet that has four orange tabs (roadways, bridges, culverts, and low water crossings.) These tabs are to aid prioritizing amongst exposure to different threats (flooding, expansive (plastic) soils, sea level rise, and extreme weather. Attachment 4 is a map showing the results of even weighting amongst the

criteria for Criticality. Attachment 5 is a map showing the results of even weighting amongst the criteria for Exposure.

Attachments:

1. Technical Memo 3: Criticality Framework
2. Table of Asset Criticality [**EXCEL WEBLINK**]
3. Table of Asset Exposure [**EXCEL WEBLINK**]
4. Resiliency Plan PowerPoint

Technical Memo 3: Criticality Framework

Corpus Christi MPO Regional Resiliency Improvement Plan - Phase 1

Project Context

The Corpus Christi Metropolitan Planning Organization (Corpus Christi MPO) and its region face a unique combination of natural hazards including a dry, non-freeze southern Texas climate and its location in 'hurricane alley' along the Gulf Coast. The ability to continue and or quickly restore transportation operations in the face of such hazards can save lives and protect critical and costly infrastructure investments and is therefore of central concern to the Corpus Christi MPO. As evidenced Hurricane Harvey in 2017 - which destroyed or severely damaged 80 percent of homes and buildings in Rockport, Fulton, Bayside, Aransas Pass, and Port Aransas [Texas A&M Corpus Christi, 2018] – there is a critical need for more resilient infrastructure in the region.

To proactively make the system more resilient and mitigate potential consequences of known environmental risks and hazards, the Corpus Christi MPO has contracted with the High Street Consulting Group (High Street) to make progress toward developing a regional Resiliency Improvement Plan by completing a Phase 1 analysis. Phase 1 will identify and prioritize an initial set of assets based on existing data related to their vulnerability to hazards and criticality. This in turn will help position the Corpus Christi MPO and its partner agencies to tactically pursue federal PROTECT grants that can help fund identified improvements to its vulnerable assets. The PROTECT Formula and Discretionary Grant Programs (1) provides formula funding to states for resilience improvements, (2) distributes competitive planning grants to enable communities to assess vulnerabilities to current and future weather events, natural disasters and changing conditions, and plan transportation improvements and emergency response strategies to address those vulnerabilities, and (3) distributes competitive resilience improvement grants to protect surface transportation assets, coastal infrastructure, natural infrastructure, and communities.

Task Overview

This Technical Memo 3: Criticality Framework (TM3) builds on the previous two technical memos. Tech Memo 1: Network Definition (TM1) analyzed existing regional resiliency work to identify assets generally considered in resiliency analyses. Tech Memo 2: Hazard Definition (TM2) incorporated the relevant natural hazards which have been included in similar resiliency planning efforts. TM3 details the criticality criteria that will be employed to prioritize the transportation assets in the Corpus Christi MPO region. The TM3 outline is as follows: **Resource Review**

,

Asset Type	Transit Facilities	Oil & Gas Pipelines	Culverts	Low Water Crossings	Ferry Facilities	ITS/Ancillary Assets
Total	**5**	**3**	**2**	**2**	**1**	**1**
Texas SRP		x	x			x
Statewide Freight Resiliency Plan		x				
Central Texas Extreme Weather and Climate Report	x					
Climate Change/Extreme Weather Risk Assessment						
Gulf Coast Study	x					
TCRS	x	x		x	x	
TCRMP	x					
Resilient Houston	x					
Broward MPO Memo						
HMAP						
Nueces Regional Flood Plan			x	x		

Hazard Summary

All 11 sources considered in the literature review discussed relevant hazards. **Error! Reference source not found.** provides the literature review hazard reference counts. Flood was referenced the most frequently, with each source mentioning it as a hazard (this includes sources that mention storm surge or specific types of floods, like riverine). Heat Waves and Wildfires are mentioned in half the resources with the other hazards being mentioned in fewer than half. Dam/Levee Failure, Lightning, and Expansive Soils were each mentioned once. Tables 3 and 4 display the hazard references for each individual source.

Table 3: Hazard Type Literature Review Reference Summary Table

Asset Type	Flooding	Heat Wave	Wildfire	Drought	Coastal Erosion
Total	**13**	**8**	**6**	**6**	**5**
Texas SRP	X	X	X	X	
Statewide Freight Resiliency Plan	X		X		
Central Texas Extreme Weather and Climate Report	X	X	X	X	
Climate Change/Extreme Weather Risk Assessment	X	X	X		
Gulf Coast Study	X	X			
TCRS	X				X
TCRMP	X				X
Coastal Texas Study	X				X
Extreme Weather Assessment	X	X	X	X	X
Resilient Houston	X	X		X	
Broward MPO Memo	X	X		X	
HMAP	X	X	X	X	X
Nueces Regional Flood Plan	X				

Table 4: Hazard Type Literature Review Reference Summary Table (Continued)

Asset Type	Strong Wind	Sea Level Rise	Land Subsidence/ Landslides	Lightning	Dam/Levee Failure	Expansive Soils
Total	**5**	**5**	**3**	**3**	**1**	**1**
Texas SRP						
Statewide Freight Resiliency Plan	X		X			
Central Texas Extreme Weather and Climate Report						
Climate Change/Extreme Weather Risk Assessment						
Gulf Coast Study		X				
TCRS	X					
TCRMP		X				
Coastal Texas Study		X				
Extreme Weather Assessment	X			X		
Resilient Houston	X	X	X	X		
Broward MPO Memo		X				
HMAP	X		X	X	X	X
Nueces Regional Flood Plan						

Data Assessment, **Criticality Framework**, and **Implementation Recommendations**. **Appendix II: Additional Resources** summarizes other topical but not directly relevant resources (which may be used in future stages of the analysis).

Asset Definitions

The definitions of the assets identified in this resource review and therefore included in the technical memorandum are listed below:[1]

Roadways: physical infrastructure designed and built to accommodate passenger and freight vehicular, bicycle, and pedestrian traffic. Roadway assets review covers roads on and off system as well as evacuation routes.

Railways: networks of tracks and associated structures that enable the movement of trains, which can carry passengers, freight, or both.

Airports: aviation facilities designed to accommodate the arrival, departure, and maintenance of aircraft. The review encompasses various types of aviation facilities including public airports, private airports, and heliports.

Bridges: structures built to span physical obstacles, such as rivers, valleys, or roads, providing a passage for vehicles, pedestrians, and sometimes railways. Bridges included in this document research include bridges that are part of the National Bridge Inventory (NBI), which have spans over 20 ft, and non-NBI bridges.

Seaports: areas along coastlines or navigable waterways where ships can dock to load and unload cargo and passengers. Seaports review covers maritime facilities, waterways, and ports facilities including both shallow and deep draft ports.

Large and Small Culverts: tunnels or pipes that allow water to flow under roads, railways, or other structures. The literature review sections below do not consistently distinguish culverts based on their sizes, so they are referred to as merely culverts. However, the data assessment sections report data availability for the two culvert categories, large and small, which have span greater than and less than or equal to 20 feet, respectively.

Oil and Gas Pipelines: systems for transporting petroleum products, natural gas, and other fluids. Oil and gas pipelines review includes pipelines carrying various commodities such as crude oil, anhydrous ammonia, natural gas, and refined liquid products.

Transit Facilities: stations and routes of the public transportation system that are used to move people from one place to another. Transit facilities cover various modes such as buses, subways, trams, and light rail.

Low Water Crossings: low-elevation roadways traversing over a body of water that stays dry above the water when the flow is low and are designed to be submerged under high-flow conditions, such as floods.

[1] Asset type nomenclature varies among plans and resources; the High Street Team grouped similar or analogous asset names together as illustrated in **Appendix I: Asset Type Crosswalk**.

Ferry Facilities: stations where ferries, which are vessels that transport passengers and vehicles across bodies of water, dock and embark/disembark passengers and vehicles. The ferry facilities review includes terminals and routes.

ITS/Ancillary Assets: Intelligent Transportation Systems (ITS) and ancillary assets refer to technologies and equipment used to improve transportation safety, efficiency, and coordination. This includes traffic signals, cameras, electronic signs, sensors, communication systems, and data management tools.

Hazard Definitions

The following relevant hazards and definitions were identified through the literature review:

Coastal Erosion: the loss of land, marshes, wetlands, beaches, or other coastal features within the coastal zone because of the actions of wind, waves, tides, storm surges, subsidence, or other forces**.**

Dam and Levee Failure: A dam is a barrier that is constructed to hold back water. A dam failure is a systematic failure of a dam structure resulting in the uncontrolled release of water, often resulting in floods that could exceed the 100-year floodplain boundaries. A levee is an embankment built to prevent overflow from a body of water. A levee failure is when a levee embankment fails, or is intentionally breached, causing the previously contained water to flood the land behind the levee.

Drought: a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length.

Expansive Soil: soils and soft rock that tend to swell or shrink due to changes in moisture content.

Extreme Heat/Heat Wave: a combination of very high temperatures and, usually, exceptionally humid conditions. When persisting over a period of time (generally more than two days), it is called a heat wave.

Flooding: the accumulation of water within a water body and the overflow of excess water into adjacent floodplain lands. Types of floods include:

> **Coastal Flooding/Storm Surge**: areas at risk of flooding when sea water surges inland from tropical storm events/an abnormal rise of water generated by a storm over and above the predicted astronomical tide.
>
> **Riverine Flooding:** areas at risk of flooding when rivers and creeks come out of their banks.

Land subsidence/Landslides: the loss of surface elevation due to the removal of subsurface support. It can range from broad, regional lowering of the land surface to localized, full-blown collapses. Land subsidence occurs in different areas for different reasons. A sinkhole is a category of subsidence.

Lightning: a massive electrostatic discharge between electrically charged regions within clouds, or between a cloud and the Earth's surface.

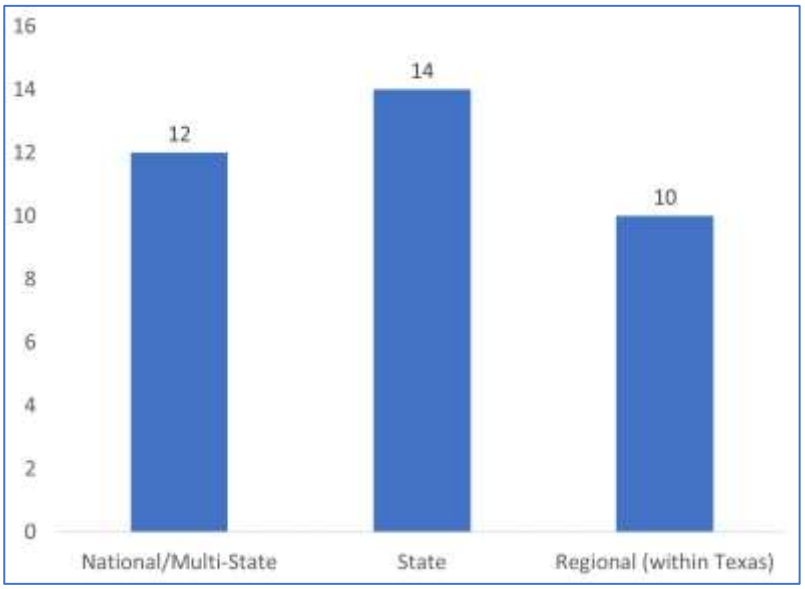
Sea Level Rise: an increase in the level of the world's oceans.

Strong Wind: a storm with high winds or violent gusts with little or no rain. The windstorm hazard excludes extreme wind events that occur with other wind-related natural hazards such as hurricanes, tropical storms, and tornados.

Wildfire: a sweeping and destructive conflagration and can be further categorized as wildland, interface, or intermix fires. Wildland fires are fueled almost exclusively by natural vegetation wildland/urban interface (WUI) fires include both vegetation and the built environment. The wildfire disaster cycle begins when homes are built adjacent to wildland areas.

Resource Review

Figure 1: Resources by Geographical Coverage



Resiliency is an emerging and important topic that has garnered increased attention and has new funding programs associated with it (such as PROTECT); as a result, agencies from federal to regional and local have developed resiliency plans, studies, and programs, as well as provide databases and GIS files ("resources"). Therefore, to understand which transportation assets and hazards the Corpus Christi MPO should consider including in its inaugural Resiliency Improvement Plan, the project team documented which asset types have been considered most frequently and has available data. The High Street team reviewed a total of 36 resources covering a range of geographies, as illustrated **Error! Reference source not found.**.

Literature Review

The literature review identifies which assets and hazards are considered in relevant plans, programs, and studies. There is sometimes overlap and agreement among resources, and they can often differ in their scope, methodology, terminology, and focus. The literature review covers the following:

- **resiliency plans and programs in Texas** such as the Regional Resilience Partnership for Coastal Bend regional counties, Texas Department of Transportation (TxDOT) Statewide Resiliency Plan, vulnerability assessment reports for the Austin and Dallas metropolitan areas; and
- **emergency plans** from Corpus Christi, Nueces County, and other research entities and government agencies.

The following section details the resources considered and summarizes the assets referenced. It also provides a foundation for further work on identifying hazard types and criticality criteria.

Resiliency Plans and Programs in Texas

TxDOT Statewide Resiliency Plan (SRP)

The Texas Statewide Resiliency Plan began in December 2022 and is slated to finish in the Summer of 2024. This ongoing effort aims to proactively manage and assess future transportation system disruptions due to extreme weather events. This includes identifying critical infrastructure and hazards, evaluating the vulnerability of these infrastructure assets to the hazards, and accordingly developing strategies to improve resilience. The SRP includes a balance of a science-based approach and stakeholder and public involvement. The SRP will satisfy Texas' Infrastructure Investment and Jobs Act PROTECT requirements and serve as a resource for state and local agencies to pursue further funding. The TxDOT SRP website lists the types of assets and hazards that will be analyzed in the plan.

Texas SRP

Assets	Hazards
❖ Roadways	❖ Flooding
❖ Railways	❖ Wildfire
❖ Airports	❖ Heat Wave
❖ Bridges	❖ Drought
❖ Seaports	
❖ Oil & Gas Pipelines	
❖ Culverts	
❖ ITS/Ancillary Assets	

TxDOT Statewide Freight Resiliency Plan, Stage 1: Prepare the Freight System

TxDOT developed the Statewide Freight Resiliency Plan to prepare, detect, respond to, and recover from events, which include natural disasters, terrorist incidents, or infrastructure failure. Specifically, the purpose of this study is to "assess the resilience of the strategic freight system in Texas when an event of extended duration limits freight mobility, resulting in prioritized infrastructure enhancements to keep freight moving." Stage 1 of the Plan, released in 2011, focuses on understanding the existing system's preparedness. The report identifies relevant freight infrastructure and hazards before analyzing resiliency. Stage 2, also released in 2011, primarily focuses on the freight communication network. The Statewide Freight Resiliency Plan analyzes the assets relevant to Texas' Freight System, which are included in the call-out box. Additionally, the Plan provides a matrix of hazards considered.

Statewide Freight Resiliency Plan

Assets	Hazards
❖ Roadways	❖ Flooding
❖ Railways	❖ Wildfire
❖ Airports	❖ Strong Wind
❖ Seaports	❖ Land Subsidence/ Landslides
❖ Oil and Gas Pipelines	

Central Texas Extreme Weather and Climate Change Vulnerability Assessment of Regional Transportation Infrastructure

This 2015 report was part of a series of Federal Highway Administration (FHWA) grant pilot studies meant to establish best practices for assessing transportation infrastructure vulnerability to climate change and extreme weather, as well as determine strategies for improving resiliency. Specifically, the Capital Area Metropolitan Planning Organization (CAMPO) and the City of Austin Office of Sustainability assess the potential vulnerability of a limited number of critical transportation assets in the CAMPO region to the effects of extreme weather and climate. The report

Central Texas Extreme Weather and Climate Report

Assets	Hazards
❖ Roadways	❖ Flooding
❖ Railways	❖ Wildfire
❖ Airports	❖ Strong Wind
❖ Bridges	❖ Land Subsidence/ Landslides
❖ Transit Facilities	

discusses the transportation data considered before assessing criticality, sensitivity, and vulnerability to natural hazards.

Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: The Gulf Coast Study, Phases 1 and 2 (Gulf Coast Study)

The Gulf Coast Study was produced by the U.S. Climate Change Science Program with funds from the U.S. Department of Transportation (DOT) in partnership with the U.S. Geological Survey. The Study Phases consider how changes in weather could affect the transportation infrastructure of the U.S. Gulf Coast between Galveston, Texas and Mobile, Alabama. The Phases aim to evaluate how changes in climate could impact design, construction, safety, operations, and maintenance of transportation infrastructure. Moreover, they focus on the decisions policy makers and managers can consider which increase safety and resiliency in the transportation system. Phase 1 (2008) takes a regional case study approach, while Phase 2 (2013) takes a more focused approach by analyzing specific infrastructure components and adaptation strategies. After elaborating on the importance of and risks to the Gulf Coast, the Phases analyze the potential climate impacts on different transportation modes, with Phase 1 analyzing the entire Gulf Coast and Phase 2 focusing on examples in Mobile, AL.

Gulf Coast Study	
Assets	Hazards
❖ Roadways ❖ Railroads ❖ Roadways ❖ Airports ❖ Seaports	❖ Flooding ❖ Heat Wave ❖ Sea Level Rise

Texas Coastal Resiliency Study (TCRS)

This report was created in 2016 for the Texas General Land Office to identify the critical coastal infrastructure assets that are most vulnerable to storms similar to Hurricanes Dolly and Ike. The report identified and ranked priority existing and future projects that could protect vulnerable assets. Through three phases, the report recommends the projects that would have the greatest impact on recovery and resiliency. The TCRS identifies the critical infrastructure considered, specifies the transportation assets, and then performs the risk analysis for identified hazards.

TCRS	
Assets	Hazards
❖ Roadways ❖ Railways ❖ Airports ❖ Bridges ❖ Seaports ❖ Transit Facilities ❖ Oil & Gas Pipelines ❖ Low Water Crossings ❖ Ferry Facilities	❖ Flooding ❖ Coastal Erosion ❖ Strong Wind

Texas Coastal Resiliency Master Plan (TCRMP)

The Texas Coastal Resiliency Master Plan (TCRMP), created by the Texas General Land Office (GLO), is a multi-part statewide plan to analyze and protect the natural environment and infrastructure along the Texas coast. The TCRMP outlines projects across four Gulf regions compiled by coastal and environmental experts that will help enhance resiliency along the state's coast. The most recent installment, TCRMP 2023, is an update to the 2019 report. Analysts were asked to assess the impact of eight vulnerabilities in 48 coastal subregions identified in the 2023 TCRMP through a Qualtrics Survey. The projects are ranked by economic and ecological measures to help communities determine which to implement. The report is accompanied by data and mapping resources, which are discussed in depth in the Data Assessment section. The TCRMP 2023 covers five hazards, which are most relevant to the coastal regions of Texas, and it distinguishes between riverine and coastal flooding.

TCRMP	
Assets	Hazards
❖ Roadways ❖ Railways ❖ Airports ❖ Bridges ❖ Maritime ❖ Seaports ❖ Transit Facilities	❖ Flooding ❖ Sea Level Rise ❖ Coastal Erosion ❖ Land Subsidence/ Landslides

Coastal Texas Protection and Restoration Feasibility Study Final Report (Coastal Texas Study)

The Coastal Texas Study was a collaboration between the US Army Corps of Engineers and the Texas General Land Office completed in 2021. In recognition of the economic and ecological importance of Texas, the authors created the report to identify feasible projects that can address natural hazard risks to the economy and public health, as well as restore ecosystems and improve coastal resiliency. The report focuses on mechanisms for mitigating the impact of storm surges and protecting communities. It does not discuss specific transportation assets.

Coastal Texas Study
Hazards ❖ Flooding ❖ Sea Level Rise ❖ Coastal Erosion

Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, 2021 Update (Extreme Weather Assessment)

The Extreme Weather Assessment was an update to a report created by the Texas A&M University, Office of the Texas State Climatologist. The report was sponsored by Texas 2036, a nonpartisan think tank. The report reviews historic trends in temperature, precipitation, and extreme weather in Texas to forecast trends out to 2036. The report acknowledges variation in the actual climate, but this provides scenarios that Texas can use to inform decision making. The report covers the entire state and hazards including coastal erosion, drought, flooding, wildfires, and a variety of storm types. The data employed in the report is not readily available but can provide methods for evaluating resiliency.

Extreme Weather Assessment
Hazards ❖ Flooding ❖ Heat Wave ❖ Wildfire ❖ Coastal erosion ❖ Strong Wind ❖ Drought ❖ Lightning

Climate Change/Extreme Weather Vulnerability and Risk Assessment for Transportation Infrastructure in Dallas and Tarrant Counties

Climate Change/Extreme Weather Risk Assessment	
Assets ❖ Roadways ❖ Railways ❖ Airports ❖ Bridges	Hazards ❖ Flooding ❖ Wildfire ❖ Heat Wave

The University of Texas Arlington created this report in 2015 for the North Central Texas Council of Government, a voluntary assortment of local governments and districts, and the MPO for the Dallas-Fort Worth metropolitan regions. The main objectives of this study are to assess how extreme weather events could affect the transportation infrastructure of North Central Texas, focusing on Dallas and Tarrant counties. It enables transportation planners to adapt and prepare future transportation infrastructure for extreme weather events. The assessment discusses the transportation infrastructure and hazards considered before assessing vulnerability. The assets and hazards considered are in the Climate Change/Extreme Weather Risk Assessment call-out box.

Resilient Houston

Resilient Houston	
Assets ❖ Roadways ❖ Transit Facilities	Hazards ❖ Flooding ❖ Heat Wave ❖ Sea Level Rise ❖ Drought ❖ Land Subsidence/ Landslides ❖ Strong Wind ❖ Lightning

Resilient Houston is a review of Houston with a consideration for resilience. It takes a detailed look at the neighborhoods and people; water infrastructure, including bayous; and assesses relevant the lasting and acute hazards. It provides a framework that the city can follow to improve their city's resilience to extreme weather, of which the area is expected to experience in a greater degree over the coming decades. The report advocates for local, regional, and national partnerships to achieve the community centric goals. It also includes a component of individual ownership to facilitate citizen buy-in. The report clearly outlines the relevant regional hazards. Resilient Houston does not focus on transportation, but assets referenced in detail are listed here.

Broward MPO Resilience Analysis Methodology Technical Memo (Broward MPO Memo)

Broward MPO Memo	
Assets ❖ Roadways ❖ Bridges	Hazards ❖ Flooding ❖ Heat Wave ❖ Drought ❖ Sea Level Rise

The Broward MPO Memo builds on two prior reports, the 2015 FHWA South Florida Climate Change Vulnerability Assessment and Adaptation Pilot Project and the 2016 Extreme Weather and Climate Change Risk to the Transportation System in Broward County Florida. This memo takes the findings of the prior two reports to develop a framework for evaluating network vulnerabilities and plan for preparedness. While the framework provides an inclusive list of potential assets and hazards, it only applies the hazards listed here to 8 corridors.

Local Hazard Resources and Emergency Plans

The Corpus Christi MPO identified a few regionally specific resources which provide important information for a local understanding of assets, hazards, and critical infrastructure. This subsection provides a summary of these resources.

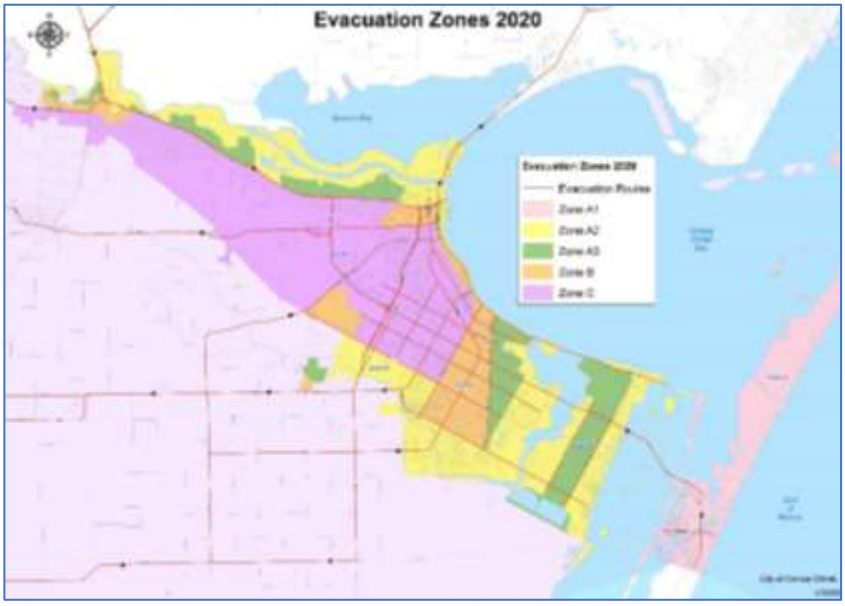
HMAP	
Assets ❖ Roadways ❖ Railways	Hazards ❖ Flooding ❖ Wildfire ❖ Heat Wave ❖ Coastal Erosion ❖ Drought ❖ Land Subsidence/ Landslides ❖ Strong Wind ❖ Expansive Soil ❖ Lightning ❖ Dam/Levee Failure

Nueces County Hazard Mitigation Action Plan (HMAP) Draft

The 2023 HMAP Draft is a 5-year update of the 2017 HMAP sponsored by the Coastal Bend Council of Governments. The goal of the Nueces County HMAP is to eliminate losses due to natural disasters and improve community resilience. The plan employs data analysis, stakeholder meetings, and public engagement to understand the assets and risks for the county and individual cities and districts. It provides valuable insights into the region's hazards and the public's perception towards their seriousness. For each identified hazard, the plan mentions the assets that could be harmed in the included parts of the county.

City of Corpus Christi Emergency Operations Center

Figure 2: City of Corpus Christi Evacuation Map



The City of Corpus Christi's website contains valuable information on emergency response, including resources for residents and information about the Emergency Operations Center (EOC). One such resource provided is an evacuation map with labeled routes (Figure 2). The city is separated into zones and the routes indicate which direction residents should evacuate. Operating as an evacuation route is an important criticality criterion for roadways. The EOC is assembled during an emergency to coordinate the efforts between local, regional, state, and national departments and agencies. Day-to-day EOC activities include receiving and communicating warnings and information, developing policies, and preparing for emergencies. During emergencies, the EOC leads the operations, analyzes information to recommend countermeasures, and communicates with residents, officials, and neighboring jurisdictions. The EOC operates in tandem with the City's Office of Emergency Management (OEM). Both the EOC and OEM contain experts on the City's assets, hazards, and critical infrastructure.

Corpus Christi Regional Transit Authority (CCRTA) Emergency Preparedness Policy

The CCRTA Emergency Preparedness Policy, updated 2023, outlines CCRTA employee responsibilities. During an emergency, CCRTA provides evacuation services for multiple cities and unincorporated areas in Nueces County. CCRTA receives instructions on evacuation procedures from the Nueces County Emergency Management Offices (EMO) when an emergency arises. CCRTA performs evacuation services while safety permits.

Nueces Regional Flood Plan

The Nueces Regional Flood Plan is updated by the Nueces Regional Flood Planning Group, one of 15 regions overseen by the Texas Water Development Board. The Nueces Regional Flood Plan focuses on determining hazards, exposure, and vulnerability to evaluate the current and future flood risk. This includes evaluating the region's susceptibility to flooding, determining what and who will be impacted, and identifying the most vulnerable communities and critical facilities. This Plan provides in-depth information pertaining specifically to flood risks and policy recommendations for mitigation. As part of the vulnerability analyses, it identifies roadways and roadway crossings (bridges, culverts, low water crossings), as well as hazards to the region.

Nueces Regional Flood Plan	
Assets ❖ Roadways ❖ Airports ❖ Bridges ❖ Culverts ❖ Low Water Crossings	Hazards ❖ Flooding ❖ Heat Wave ❖ Sea Level Rise

Summary of Findings

Asset Summary

Nine of the 10 sources in the literature review elaborated on asset types. **Error! Reference source not found.** provides the reference counts for each asset type; roadways, airports, and railways were mentioned most frequently. Table 1 and Table 2 provide the breakdown for which sources referenced which assets. For instance, the Texas Statewide Resilience Plan mentions eight of the 11 asset types.

Figure 3: Count of Asset Types References in the Literature Review

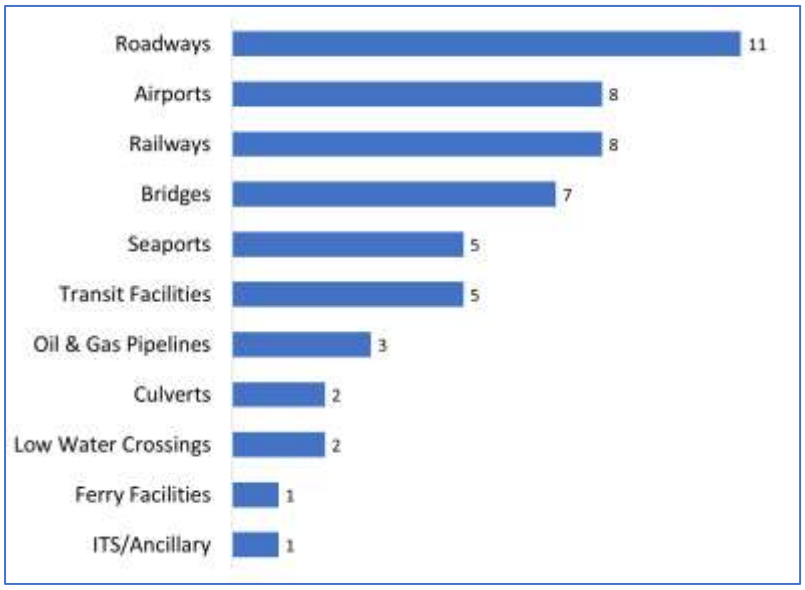


Table 1: Asset Type Literature Review Reference Summary Table

Asset Type	Roadways	Railways	Airports	Bridges	Seaports
Total	**11**	**8**	**8**	**7**	**5**
Texas SRP	x	x	x	x	x
Statewide Freight Resiliency Plan	x	x	x		x
Central Texas Extreme Weather and Climate Report	x	x	x	x	
Climate Change/Extreme Weather Risk Assessment	x	x	x	x	
Gulf Coast Study	x	x	x	x	x
TCRS	x	x	x		x
TCRMP	x	x	x	x	x
Resilient Houston	x				
Broward MPO Memo	x			x	
HMAP	x	x			
Nueces Regional Flood Plan	x		x	x	

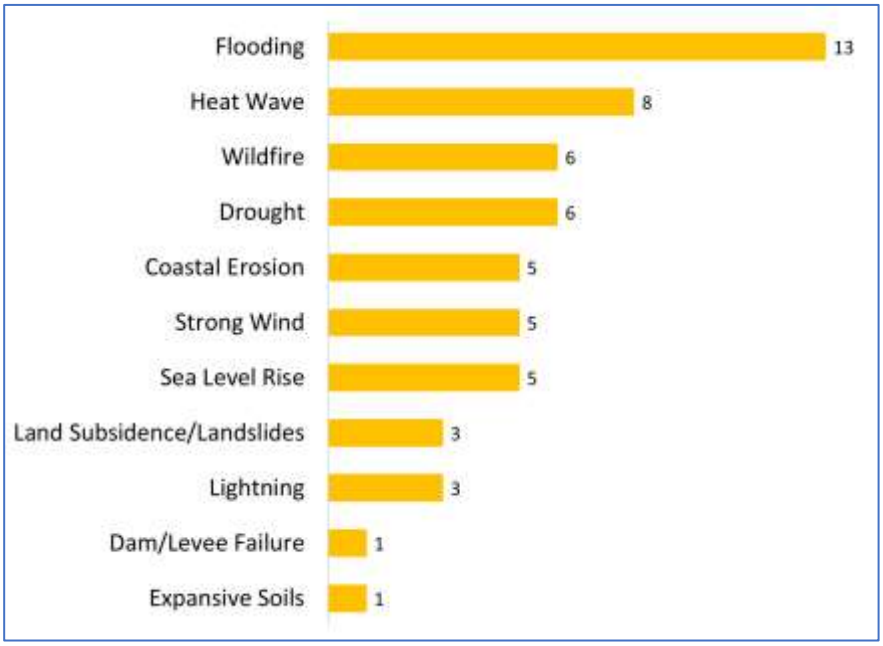
Table 2: Asset Type Literature Review Reference Summary Table (Continued)

Asset Type	Transit Facilities	Oil & Gas Pipelines	Culverts	Low Water Crossings	Ferry Facilities	ITS/Ancillary Assets
Total	**5**	**3**	**2**	**2**	**1**	**1**
Texas SRP		x	x			x
Statewide Freight Resiliency Plan		x				
Central Texas Extreme Weather and Climate Report	x					
Climate Change/Extreme Weather Risk Assessment						
Gulf Coast Study	x					
TCRS	x	x		x	x	
TCRMP	x					
Resilient Houston	x					
Broward MPO Memo						
HMAP						
Nueces Regional Flood Plan			x	x		

Hazard Summary

All 11 sources considered in the literature review discussed relevant hazards. **Error! R eference source not found.** provides the literature review hazard reference counts. Flood was referenced the most frequently, with each source mentioning it as a hazard (this includes sources that mention storm surge or specific types of floods, like riverine). Heat Waves and Wildfires are mentioned in half the resources with the other hazards being mentioned in fewer than half. Dam/Levee Failure, Lightning, and Expansive

Figure 4: Count of Hazard Types References in the Literature Review



Soils were each mentioned once. Tables 3 and 4 display the hazard references for each individual source.

Table 3: Hazard Type Literature Review Reference Summary Table

Asset Type	Flooding	Heat Wave	Wildfire	Drought	Coastal Erosion
Total	**13**	**8**	**6**	**6**	**5**
Texas SRP	X	X	X	X	
Statewide Freight Resiliency Plan	X		X		
Central Texas Extreme Weather and Climate Report	X	X	X	X	
Climate Change/Extreme Weather Risk Assessment	X	X	X		
Gulf Coast Study	X	X			
TCRS	X				X
TCRMP	X				X
Coastal Texas Study	X				X
Extreme Weather Assessment	X	X	X	X	X
Resilient Houston	X	X		X	
Broward MPO Memo	X	X		X	
HMAP	X	X	X	X	X
Nueces Regional Flood Plan	X				

Table 4: Hazard Type Literature Review Reference Summary Table (Continued)

Asset Type	Strong Wind	Sea Level Rise	Land Subsidence/ Landslides	Lightning	Dam/Levee Failure	Expansive Soils
Total	**5**	**5**	**3**	**3**	**1**	**1**
Texas SRP						
Statewide Freight Resiliency Plan	X		X			
Central Texas Extreme Weather and Climate Report						
Climate Change/Extreme Weather Risk Assessment						
Gulf Coast Study		X				
TCRS	X					
TCRMP		X				
Coastal Texas Study		X				
Extreme Weather Assessment	X			X		
Resilient Houston	X	X	X	X		
Broward MPO Memo		X				
HMAP	X		X	X	X	X
Nueces Regional Flood Plan						

Data Assessment

To understand what data is currently available to locate and potentially assess the criticality of the various asset types and hazards in Corpus Christi MPO, the project team reviewed relevant ESRI maps, dashboards, and data hubs. These data sources fall into three groups:

- National-level data sources
  - Homeland Infrastructure Foundation-Level Data (HIFLD)
  - United States Army Corps of Engineers (USACE) National Inventory of Dams (NID)
  - United States Department of Agriculture (USDA) Web Soil Survey (WSS)
  - USACE National Levee Database (NLD)
- Statewide data sources
  - TxDOT Open Data Portal
  - TxDOT Planning Map
  - Texas Railroad Commission Data
  - Texas Water Development Board
- Regional data sources for Corpus Christi MPO and Nueces County:
  - GeoRED Hazard Impact and Planning Tool

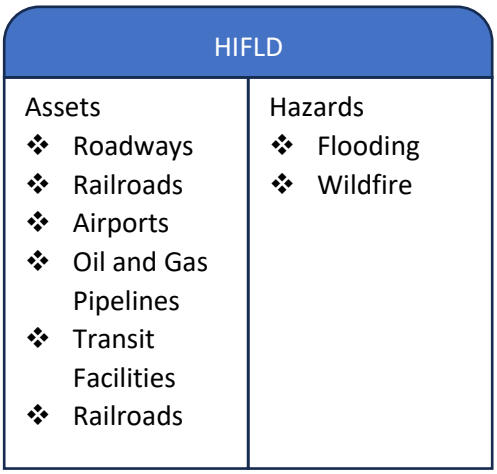
- The Coastal Bend Hurricane Evacuation Study Planning Atlas

The project team reviewed each data source to assess the availability of location and criticality information including ridership, demand, and condition. The review covered the 11 asset types: roadways, railways, airports, bridges, seaports, oil and gas pipelines, transit facilities, culverts, ferry facilities, ITS/ ancillary assets, and low water crossings.

The team also considered whether spatial data was available for each hazard type identified through the literature review. The following subsections provide full details of the information each data source covered for each asset and hazard type.

Homeland Infrastructure Foundation-Level Data (HIFLD)

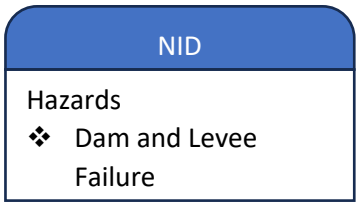
Homeland Infrastructure Foundation-Level Data (HIFLD) is a program within the United States Department of Homeland Security (DHS) that focuses on collecting, maintaining, and providing geospatial data related to critical infrastructure and key resources across the United States. The goal of HIFLD is to enhance the nation's understanding of its infrastructure and to support decision-making processes for emergency management, disaster response, and national security. HIFLD collects data from various federal, state, local, tribal, and private sector sources, and compiles this information into a comprehensive geospatial database. This database includes data about infrastructure such as transportation systems, energy facilities, communication networks, water resources, healthcare facilities, and more.



HIFLD covers six main asset types: roadways, railroads, airports, ferry facilities, transit facilities, and oil and gas pipelines. For roadways, HIFLD provides information about the locations of primary, secondary, and local roads. HIFLD includes the Federal Aviation Administration's aviation facilities dataset, providing precise airport locations. Railroads are also covered, offering insights into their locations. Ferry facilities are comprehensively detailed, revealing essential information such as ferry route locations, lengths, trip durations, passenger numbers, vessel types, and trip types. In terms of transit, HIFLD supplies data on national transit routes and stops. Additionally, the program extends its coverage to oil and gas pipelines, disclosing the locations of major natural gas transmission pipelines, including both interstate and gathering pipelines, as sourced from the U.S. Energy Information Administration.

National Inventory of Dams (NID)

The National Inventory of Dams is a database provided by the U.S. Army Corps of Engineers. The focus of the NID is to provide dam location, type, size, purpose, uses and benefits, date of last inspection, other structural and geographical information. The NID also models dam flood inundation to demonstrate what could occur during a dam-related flood. The NID also provides data from the HIFLD for various public works and critical infrastructure, including nuclear power stations, fire stations, and railway lines.



Web Soil Survey (WSS)

The Web Soil Survey is a product provided by the US Department of Agriculture Natural Resources Conservation Service. The WSS provides soil information and data collected through the Cooperative Sil Survey. The soil data was collected to provide information for agriculture purposes but can also be used to assess susceptibility to erosion, land subsidence, and expansive soils.

WSS

Hazards
- Coastal Erosion
- Land Subsidence /Landslides
- Expansive Soils

National Levee Database (NLD)

The U.S. Army Corps of Engineers maintains the National Levee Database. The NLD displays a map of levees across the nation with the levees risk (if screened), the area protected by the levee, and an estimate for the damage if the levee fails. The NLD includes four levees in the three counties encompassing Corpus Christi: Nueces County, San Patricio County, and Jim Wells County. The NLD outlines the area that would be impacted if the levees failed, which can be used to determine impacted assets.

NID

Hazards
- Dam and Levee Failure

TxDOT Open Data Portal

The TxDOT Open Data Portal is TxDOT's platform for exploring and downloading GIS datasets. It serves as the primary location for state transportation inventory data. It has a wide variety of datasets that are referenced and used in other tools and dashboards. This data source is unique because it includes both on-system and off-system roadway inventory. It also has the location and type of seaports and railroads, including their classification such as business lead, industrial lead, main line, side-track, and spur line. Furthermore, the TxDOT Open Data Portal provides access to the statewide oil and gas pipelines data provided by the Texas Railroad Commission.

TxDOT Open Data Portal

Assets
- Roadways
- Railroads
- Airports
- Bridges
- Seaports
- Oil and Gas Pipelines
- Large Culverts

TxDOT Statewide Planning Map

The TxDOT Statewide Planning Map is an Esri application designed to present a variety of TxDOT transportation geospatial data to facilitate planning operations within the organization. The mapping tool includes the geographic positions and types of seaports and railroads assets. Additionally, the map offers comprehensive details regarding bridges as reported to the National Bridge Inventory (NBI), such as their locations, condition ratings, ages, deck geometries, waterway sufficiency ratings, and lengths.

TxDOT Planning Map

- Roadways
- Bridges
- Railroads
- Seaports

The map also includes a wealth of data about roadway assets including locations, Average Annual Daily Traffic (AADT), Vehicle Miles Traveled (VMT), percentage of truck traffic, geometric characteristics, anticipated future traffic and truck percentages, presence within the Strategic Highway Network, locations of evacuation routes, the top 100 congested roads, as well as both State and National freight networks including critical urban and rural freight corridors.

Texas Railroad Commission

Texas Railroad Commission
Assets ❖ Oil and Gas Pipelines

The Railroad Commission (RRC) of Texas is the state agency that regulates the oil and gas industry, gas utilities, pipeline safety, safety in the liquefied petroleum gas industry, and surface coal and uranium mining. RRC publishes Esri maps that have information about oil and gas pipelines (also included in the TxDOT Open Data Portal described above) and wells. Pipelines data include location, diameter, commodity types, and status (active or abandoned). The TRC does not address hazards.

Texas Water Development Board (TWDB)

TWDB	
Assets ❖ Low Water Crossing	Hazards ❖ Flooding ❖ Dam & Levee Failure

The Texas Water Development Board (TWDB) is a state agency in Texas responsible for collecting and disseminating water-related data; assisting with regional water supply and flood planning that contributes to preparing the state water plan and state flood plan; and administering cost-effective financial programs for constructing water supply, wastewater treatment, flood control, and agricultural water conservation projects. The TWDB has an open data hub that has data covering the state's hydrological assets and only one transportation asset, which is the low water crossing. TWDB open data hub has the location of the low water crossing assets without information about their criticality. TWDB open data hub also includes data related to flooding and dam or levee failure.

GeoRED - Hazard Impact and Planning Tool

GeoRED	
Assets ❖ Roadways ❖ Railroads ❖ Airports ❖ Oil and Gas Pipelines ❖ Railroads ❖ Ferry Facilities	Hazards ❖ Flooding ❖ Sea Level Rise

The Regional Resilience Partnership (RRP) developed a GIS platform called the Geospatial Resilient Economic Development (GeoRED), which is a tool for building resilience to disaster and economic risks. The GeoRED online platform has multiple tools for local officials and experts to analyze and share data with other interested stakeholders. One of these tools is the Hazard Impact and Planning Tool, which is an Esri tool that contains data layers focused on hazard planning and response, such as critical infrastructure and facilities, storm surge, and FEMA's National Flood Hazard Layer (NFHL) 1% and 0.2% flood zones. This tool includes the locations of roadways, evacuation routes, airports, railroads, ferry facilities, and transit facilities. It also has spatial files for subsets of these assets that are in FEMA 1% and 0.2% annual flood risk. For oil and gas pipelines, this tool has data showing pipelines locations, diameters, commodity types, and activity status.

The Coastal Bend Hurricane Evacuation Study Planning Atlas

The Coastal Bend Hurricane Evacuation Study Planning Atlas is an ESRI map that has multiple data layers for the coastal bend region and is published as part of the Coastal Bend Hurricane Evacuation Study. These data layers cover:

Hurricane Planning Atlas	
Assets ❖ Roadways ❖ Railroads ❖ Airports	Hazards ❖ Flooding ❖ Sea Level Rise

- Administrative unit layers, including counties, places, school districts, coastal management zones, and coastal zones.
- Physical risks layers covering:
    - Historic wind and storm tracks.
    - Three sea level rise scenarios.
    - Storm surge models for tropical storms, and storm categories 1 through 5.
- Built environment and critical facilities:
    - Population.
    - Critical facilities including police stations; fire stations, local EOC, EMS, Urgent care, nursing homes, and hospitals.
    - Built environment including hotels, schools, mobile home units, buildings, and infrastructure.
- Social risk layers:
    - Social vulnerability index.
    - Childcare need.
    - Eldercare need.
    - Transportation need.
    - Shelter need.
    - Housing types.
    - Poverty status.
    - Limited English proficiency.
    - Unemployment.
    - Civic capacity.
    - Low to moderate income.
    - Education level.
- Evacuation zones and routes layers.

The Coastal Bend Hurricane Evacuation Study Planning Atlas provides data layers encompassing three primary transportation asset types: roadways, airports, and railroads. Within each of these asset types, users can access two key pieces of information: their respective locations and types. The roadway category includes various types such as major highways, US and state highways, farm roads, and city/county roads. Notably, the Atlas includes layers dedicated to evacuation routes, each representing distinct route types, including major evacuation routes, potential contraflow routes, and evacuation lanes. Moreover, the Atlas features surge-affected routes categorized by storm category.

Texas Geographical Information Office (TxGIO, previously TNRIS)

TxGIO	
Assets ❖ Low Water Crossing	Hazards ❖ Flooding

The Texas Geographic Information Office, previously the Texas Natural Resources Information System, is a division of the Texas Water Development Board. It is a geographical information systems resource. It contains maps and data captured by LIDAR, sensors, and imagery. Some data is region specific while others span the entire state. While TxGIO has extensive data for hazards including increased temperature and extreme heat, wind, wildfires, winter storms, and more, only data related for floods and storm surges covering Corpus Christi has been identified by the project team. Regarding assets, only Low Water Crossing data is available.

Climate Toolbox

Climate Toolbox
Hazards ❖ Wildfire ❖ Heat Wave ❖ Drought ❖ Strong Wind

The Climate Toolbox is a collection of web tools that visualize past and forecasted climate and hydrology for the contiguous US. The applications cover agriculture, climate, fire, and water. One such tool is the Climate Mapper which maps real-time conditions, current forecasts, and future projections of climate information across the United States to assist with decisions related to agriculture, climate, fire conditions, and water. The data employed in the maps is also available for download. Partners for this project include the Climate Impacts Research Consortium, Regional Integrated Sciences and Assessments, the US Department of Agriculture's Northwest Climate Hub, and other regional and national organizations and agencies.

Texas Coastal Resiliency Master Plan (TCRMP) and the Gulf of Mexico Research Initiative Information and Data Cooperative (GRIIDC)

TCRMP/GRIIDC
Assets ❖ Flooding ❖ Wildfire ❖ Heat Wave ❖ Drought

Both the TCRMP 2019 and 2023 installments provide data employed in the written reports. TCRMP 2019 provides an ESRI power map for Region 3, which covers Corpus Christi. The map includes data recording the potential impact of flooding from storm surges.

The data employed in the TCRMP 2023 is published on the GRIIDC. The Gulf of Mexico Research (GoMRI) Initiative is an independent research program funded by BP following the Deepwater Horizon spill to study the impacts of oil spills in the Gulf of Mexico. The GRIIDC is the data center that aims to provide data and information to promote and support research and awareness about the Gulf of Mexico ecosystem. The GRIIDC hosts data and reports from researchers studying the Gulf of Mexico. The GRIIDC satisfies the GoMRI requirement to ensure that relevant data from research is publicly available. The GRIIDC encourages researchers to use available data and share their own data to promote regional research.

Data Assessment Summary

Asset Summary

Figure 5 summarizes the findings of the data assessment. Table 5 details the asset data available for each source. For location data availability, roadway and railroads assets are at the top of the list followed by airports and pipelines. On the other hand, no location data were found for small culverts and ITS/ ancillary assets.

If a data source reports asset condition and/or traffic levels/ridership, it is considered to have criticality data for that asset. Furthermore, data sources with evacuation routes information are considered to have criticality data for roadway assets only. With this initial definition of criticality, roadway assets are covered by the largest number of data sources as expected. Bridges come next in order as they are covered by two data sources. On the contrary, none of the data sources have criticality data for seaports, small culverts, airports, railroads, transit facilities, and ITS/ ancillary assets. It is also important to highlight that vulnerability to FEMA 1% and 0.2% annual flood risk is available for roadways, airports, railroads, ferry facilities, and transit facilities, which fit into the hazards data that will be investigated in later tasks.

Regarding low water crossings, TWDB includes point data for low water crossings. The point data can be joined to roadway data from the TxDOT Open Data Portal to determine the criticality of the low water crossing.

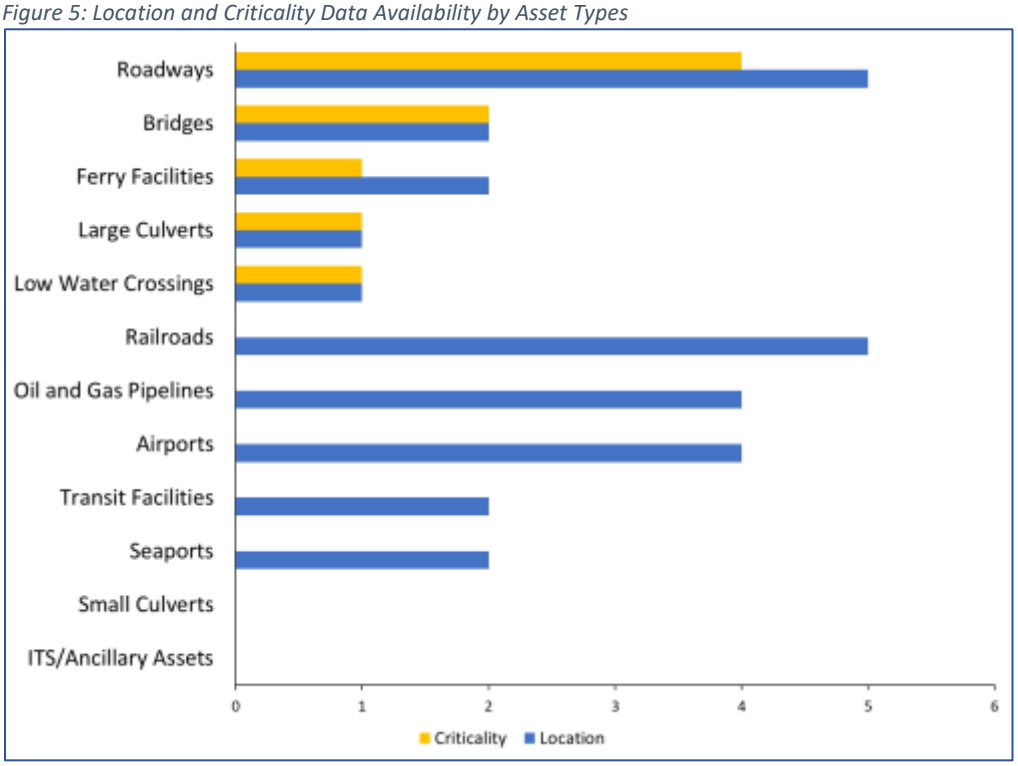
Table 5: Asset Data Assessment Reference Summary Table

Assets	HIFLD	TxDOT Open Data Portal	TxDOT Planning Map	Texas Railroad Commission	GeoRED	Hurricane Planning Atlas	TWDB
Roadways	📍	📍 !	📍 !		📍 !	📍 !	
Railroads	📍	📍	📍		📍	📍	
Airports	📍	📍			📍	📍	
Bridges		📍 !	📍 !				
Seaports		📍	📍				
Oil and Gas Pipelines	📍	📍		📍	📍		
Transit Facilities	📍				📍		
Large Culverts		📍 !					
Small Culverts							
Low Water Crossings		!					📍
Ferry Facilities	📍 !				📍		
ITS/Ancillary Assets							

📍 Asset Locations Available

! Some Criticality Information Available

Figure 5: Location and Criticality Data Availability by Asset Types



Hazard Summary

Error! Reference source not found. summarizes the hazard data. Notably, each hazard type has at least o ne data source. Some data hubs reference data from the same resources, for example flood data from FEMA. In a later stage of this project, the asset inventory will be assessed for susceptibility to hazards.

Table 6: Hazard Type Data Review Reference Summary Table

	RAPT	HIFLD	TWDB	GeoRED	Hurricane Planning Atlas	TxGIO	Climate Toolbox	TCRMP/ GRIIDC	Web Soil Survey	NID	National Levee Database
Flooding	✓	✓	✓	✓	✓	✓		✓			
Wildfire	✓	✓					✓				
Heat Wave	✓						✓				
Sea Level Rise	✓			✓				✓			
Coastal Erosion									✓		
Drought	✓						✓				
Land Subsidence /Landslides									✓		
Strong Wind	✓						✓				
Expansive Soils									✓		
Lightning			✓								
Dam and Levee Failure			✓							✓	✓

Criticality Framework

Criticality measures how important each asset is to the overall community; they allow transportation assets to be prioritized based on the impact or consequence of failure or disruption. In this Phase 1 analysis, Corpus Christi MPO is objectively evaluating criticality based on criteria from available data sources; future analyses may include opportunities to elicit and add stakeholder input to the criticality framework.

FHWA's Vulnerability and Adaptation Framework cites the USDOT Gulf Coast Study and recommends including criticality measures in three categories[2]:

- Socio-Economic Criteria:
- Use/Operational Criteria
- Health and Safety Criteria

Socio-Economic Criteria

Socio-economic criteria capture information about the communities surrounding an asset and estimate each community's ability to adapt to and/or recover from nearby assets' disruption or failure.

[2] https://www.fhwa.dot.gov/environment/sustainability/resilience/adaptation_framework/climate_adaptation.pdf

Social Vulnerability

More vulnerable communities may experience disproportionate negative impacts and may be less able to recover when hazards impact or disrupt nearby infrastructure assets. The Federal Emergency Management Agency's (FEMA) National Risk Index rates census tracts' social vulnerability from very low to very high based on the Social Vulnerability Index (SVI). The SVI is an estimate of the "susceptibility of social groups to the adverse impacts of natural hazards"[3] and comprises 16 factors measuring socioeconomic status, household characteristics, racial and ethnic minority status, and housing type and transportation. The SVI score indicates the relative level of social vulnerability in each census tract within Corpus Christ MPO. The SVI will be used to prioritize all assets; where an asset crosses more than one census tract, the weighted average SVI score will be applied to the asset.

Use/Operational Criteria

Use or operational criteria estimate how much each asset is used to transport people and/or freight. It is a measure of how important each asset is for mobility.

Average Annual Daily Traffic

Average annual daily traffic (AADT) provides a metric for determining the importance of roadway-related assets. AADT data is available through the TxDOT Open Data Portal and provides a continuous quantitative metric for establishing assets' importance based on average usage; high AADT indicates that an asset is used frequently and should therefore be prioritized above less heavily trafficked assets. AADT will be used to prioritize roadways, bridges, and low water crossing assets.

Ridership

Ridership counts, like AADT, provide quantitative count to determine the relative importance of ferry terminals. For each ferry terminal, a ridership count based on number of routes and average ridership for each route will be calculated and employed to prioritize ferry terminal assets. The HIFLD and GeoRED provide ferry station, ridership, and route data. Ridership will be used to prioritize ferry terminal assets.

Detour Length

The distance a user would need to travel to circumvent a closed bridge (detour length) is a useful indicator of how important each individual bridge is to the movement of people and goods. The National Bridge Inventory (NBI) includes an estimated detour length for each bridge. Detour length will be used to prioritize bridges; bridges with shorter detour lengths would be given lower priority than those with long detour lengths.

Health and Safety Criteria

Evacuation Routes

Evacuation routes are vital for emergency management during hazardous events to ensure that residents and visitors can safely leave the region if necessary. The evacuation route criterion offers a binary indicator to assess asset priority. Statewide evacuation route data is available on the TxDOT Statewide Planning Map.[4] Evacuation routes will be used to prioritize roadways, bridges, and low water crossing assets.

[3] https://www.fema.gov/sites/default/files/documents/fema_national-risk-index_technical-documentation.pdf

[4] Corpus Christi MPO stakeholders indicated that additional routes may serve as "unofficial" evacuation routes in the region; when data becomes available, these routes could be included in future criticality analyses.

Vicinity to Critical Infrastructure

Each asset's vicinity to emergency facilities serves as a proxy for estimating the asset's importance for access to non-transportation infrastructure that officials or residents may need to access during a hazardous event. Assets will be prioritized based on the count of critical infrastructure points within a 0.1 mile buffer radius. Corpus Christi MPO and its stakeholders selected the following types of critical infrastructure (locations drawn from GeoRED) for initial analyses:

- Police Stations
- Fire Stations
- Emergency Medical Facilities
- Schools

Vicinity to critical infrastructure points will be used to prioritize all assets.

Criticality Summary

Table 7 summarizes the criticality prioritization criteria and the asset classes to which they will be applied.

Table 7: Criticality Framework

Asset Class	Social Vulnerability	AADT	Ridership	Detour Length	Evacuation Routes	Critical Infrastructure
Roadways	✓	✓			✓	✓
Bridges	✓	✓		✓	✓	✓
Large Culverts	✓	✓		✓	✓	✓
Ferry Facilities	✓		✓			✓
Low Water Crossings	✓	✓			✓	✓

Implementation Recommendations

Asset Recommendations

Based on the literature review and data assessment, the project team developed recommendations for which assets should continue to be considered in subsequent steps of the Phase 1 Corpus Christi MPO regional resiliency improvement plan. Recommendations are based on whether each asset type i) is included in existing resiliency plans; ii) has location data readily available; and iii) has at least some criticality data readily available (Table 8). The list of assets may be narrowed further if data limitations are identified.

The project team recommends focusing on the following assets for the subsequent stages of this Phase 1 analysis:

Roadways are referenced by each of the eight resources which included assets in the literature review and have numerous data sources for both location and potential criticality criteria, which indicates that they are an important and relevant asset and data is likely to be available to execute the initial prioritization. Moreover, roadways connect to most other transportation assets and serve multiple

modes of travel including passenger and freight vehicles, emergency response vehicles, pedestrians, transit, and bicyclists.

Bridges are explicitly referenced in five of eight resources considered in the literature review; in addition, some sources included bridges as part of their definition of "roadway". Bridge location and criticality data are available through multiple TxDOT sources. Similar to roadways, the region's bridges serve multiple modes of travel.

Large Culverts were referenced in the literature review and location and potential criticality data related to large culverts is readily available. In some instances, from the literature review, large culverts are classified as bridges or as part of roadways.

Table 8: Recommendation Summary Table

Asset Class	Recommended	Literature Review	Location	Criticality
Roadways	✓	✓	✓	✓
Bridges	✓	✓	✓	✓
Large Culverts	✓	✓	✓	✓
Ferry Facilities	✓	✓	✓	✓
Low Water Crossings	✓	✓	✓	✓
Railways		✓	✓	
Airports		✓	✓	
Seaports		✓	✓	
Oil & Gas Pipelines		✓	✓	
Transit Facilities		✓	✓	
Small Culverts		✓		
ITS/Ancillary Assets		✓		

Ferry Facilities are relatively unique; while slightly outside of the Corpus Christi MPO boundaries, the Port Aransas ferry is one of only two ferry systems in Texas and provides connection to locations within the MPO boundaries. Ferry facilities were mentioned in the literature review and there are both location and criticality data available, so if desired, ferry facilities could be included in future analysis stages.

Low Water Crossings are not mentioned often, only two times in the literature review. Yet, there is location data available, and since they are sections of roadway, the criticality roadway can be employed to determine the criticality of the low water crossing.

Hazard Recommendations

Considering the hazards mentioned in the literature review and with data available per the data assessment, each hazard could be eligible for analysis. Indeed, employing reference and data availability criteria for inclusion would not remove any hazards from the analysis. Therefore, the High Street team recommends that all hazards be considered going into the next phase of the project. Subsequently, the project team will identify the most relevant hazards based on the number of impacted assets and the potential impact severity on the transportation assets identified in TM1 and above.

Criticality Recommendations

The relevant criticality criteria will be applied to each asset and then combined to calculate an overall criticality score for each asset. Using the asset prioritization spreadsheet, Corpus Christi MPO will be able to modify individual criticality criteria weights based on local knowledge or stakeholder input.

Appendix I: Asset Type Crosswalk

The literature review and data assessment produced a list of 29 distinct asset names, many of which were analogous or overlapping. For the purposes of this memorandum, High Street Team distilled the 29 asset names into a set of 11 as shown in **Error! Reference source not found.**.

Table A1: Asset Types and Assets Mentioned in Resources Crosswalk

Asset Types	Assets Mentioned in Resources
Airports	Airports Aviation
Bridges	Bridges Bridges and Culverts
Culverts, Large & Small	Bridges and Culverts Culverts
Ferry Facilities	Ferries Ferry Facilities
ITS/Ancillary	Intelligent Transportation Networks
Low Water Crossings	Low Water Crossings
Oil & Gas Pipelines	Oil and Gas Pipelines Pipelines
Railways	Rail Rail Transportation Railroad Lines Railroads Railway Facilities Railways
Roadways	Roads Roadways Evacuation Routes Streets
Seaport	Maritime Maritime Ports Ports Waterways Seaports
Transit Facilities	Transit Facilities Public Transportation

Appendix II: Additional Resources

The following resources and data sources did not discuss specific assets but may provide valuable hazard and criticality criteria that will be important for later analyses, technical memos, and reports.

Resilience and Disaster Recovery (RDR) Tool Suite

The Resilience and Disaster Recovery (RDR) Tool Suite was developed by the Volpe Center to help transportation agencies explore scenarios and evaluate the performance of resilience investments during long-range transportation planning. The tool suite utilizes established Robust Decision-Making concepts to address deeply uncertain future scenarios. Robust Decision-Making is a scenario-based decision-making tool that integrates with existing travel demand forecasting models. The RDR Tool Suite enables transportation agencies to assess transportation resilience return on investment (ROI) for specific transportation assets over a range of potential future conditions and hazard scenarios, which can then be considered during project prioritization processes The classic paradigm for transportation planning is to first, forecast what will happen in the future (e.g., trips in a region will increase 20%), and then act on that forecast (e.g., add transportation capacity). This paradigm breaks down when the future is highly uncertain, such as trying to predict storms, earthquakes, or other hazards. Under these conditions, the prediction of a single future is unlikely to be correct, and the resulting decisions may be grossly sub-optimal. An alternative approach is focusing on performance across a range of potential futures rather than selecting specific forecasts. With robust decision-making (RDM), the objective is not predicting the future, but rather, making decisions that produce good outcomes under a wide range of plausible futures. This alternative approach is especially appropriate for prioritizing which projects to include in long-range investment plans, as long-range investment planning tends to focus on which assets will be deployed or improved to provide the best return. The objective of the RDR Tool Suite is to help state Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) make informed infrastructure investment decisions by evaluating the performance of potential resilience investments across the set of uncertain future events of interest. It supports long-range investment analyses where agencies need to decide which assets to improve using general information about the options and future conditions. The RDR Tool Suite can be used whether agencies already have proposed projects or are simply exploring what potential assets they could improve. The outputs of the RDR Tool Suite are focused on total and net benefits of the project in terms of investment cost, repair cost, and network performance.

FEMA Resilience Analysis and Planning Tool (RAPT)

RAPT is a free, publicly available geographic information systems (GIS) tool developed by Federal Emergency Management Agency (FEMA) to help emergency managers and community partners of all GIS skill levels visualize and assess potential challenges to community resilience. RAPT has over 100 data layers covering buildings and hazards. RAPT is designed to help decision-makers understand the population and infrastructure at risk for forecasted extreme weather, identify at-risk infrastructure assets, prioritize areas for evacuation, with estimates of nursing home and hospital beds.

Establish TxDOT Transportation Resilience Planning Scorecard and Best Practices: Technical Report

This report was developed by the Texas A&M Institute and sponsored by FHWA and TxDOT. It contains an analysis on policies TxDOT can implement to improve resilience and mitigate the impact of natural hazards. The report performs literature review then implements analytical methods on the Texas road network's vulnerability and resilience. Moreover, it aims to provide a scorecard of best practices that Texas can use to evaluate and improve transportation resiliency. The report outlines an in-depth methodology for determining criticality for roadways.

NCHRP Research Report 1014: Developing a Highway Framework to Conduct an All-Hazards Risk and Resilience Analysis

This report, completed in 2023, was conducted by the Transportation Research Board as part of the National Cooperative Highway Research Program (NCHRP). This report presents a framework for performing quantitative risk and resilience evaluations that satisfy recent federal requirements. It includes economic analyses, project prioritization, performance management, and risk and resilience evaluation. Specifically, the study focuses on protecting and reinforcing the highway system.

Vulnerability Assessment Scoring Tool (VAST)

VAST is a tool created by the USDOT to aid transportation organizations such as DOTs and MPOs in evaluating the vulnerability of their assets. VAST uses asset characteristics as indicators of exposure, sensitivity, and adaptive capacity which are used to calculate assets vulnerability scores. VAST covers various asset types like rail, seaports, airports, pipelines, bridges, and roads, along with climate stressors such as temperature changes, floods, sea level rise, storms, wind, drought, wildfires, freeze/thaw and permafrost thaw. VAST, operating in Microsoft Excel, helps users document asset vulnerability by determining the scope of the vulnerability assessment, selecting appropriate indicators, collecting data about those indicators, and devising an approach to convert raw data about indicators into scores. This process facilitates ranking assets by vulnerability and improving transportation planning and adaptation strategies.

Texas Delivers 2050

Texas Delivers 2050 is an in depth TxDOT assessment of the Texas freight network. It covers many topics, from autonomous trucking to maritime and railway freight. The report includes a resilience section, but it does not cover resilience to natural hazards in depth. It discusses methods for creating a flexible network that can withstand a variety of changes, not specifically those related to the climate.

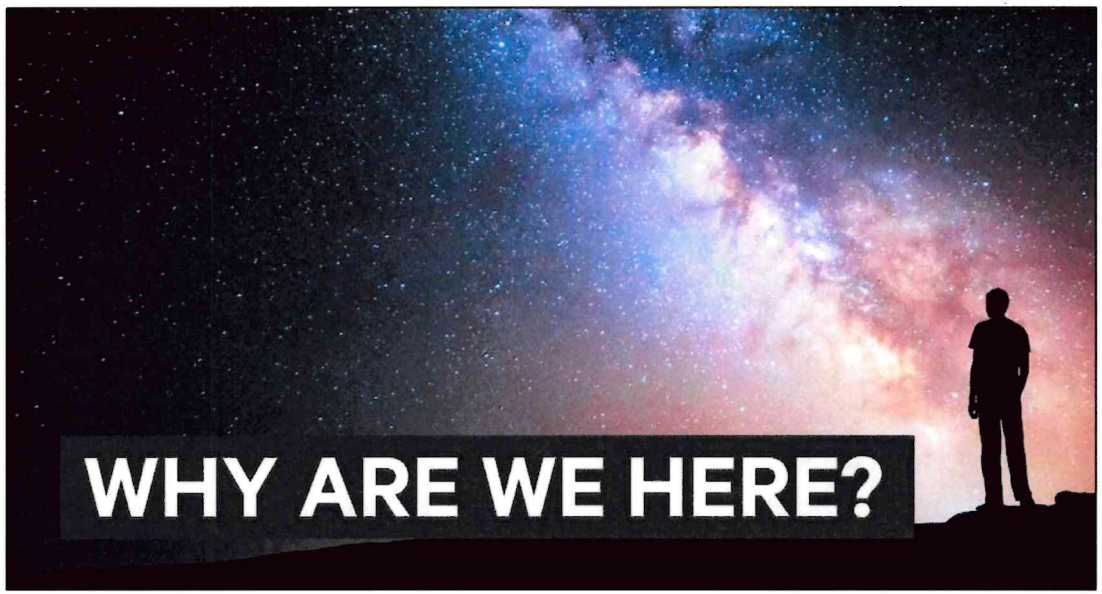

Resiliency Improvement Plan
TAC Workshop
CORPUS CHRISTI
MPO
METROPOLITAN PLANNING ORGANIZATION
May 16, 2024
HIGH STREET

AGENDA

01 Resilience Overview

02 Corpus Christi MPO's Approach

03 Scenario Feedback



Prioritize transportation assets in the Corpus Christi region to lay the groundwork for resilience improvements.

Overview

Resilience *means the ability to anticipate, prepare for, or adapt to conditions or withstand, respond to, or recover rapidly from disruptions.*

To strategically improve resilience in the regions' transportation network through its projects, Corpus Christi MPO first must evaluate which transportation infrastructure ("assets") are currently most at-risk from natural hazards ("exposure") and which are most important to the community ("criticality")

We are here!

- Create a transportation **asset inventory**
- Identify relevant hazards to calculate **exposure**
- Identify attributes to calculate **criticality**
- **Prioritize** critical assets at risk from hazards to eventually inform mitigation strategies

Resource Review - Sources

- TEMPO Resilience Working Group Meeting Resources
- Coastal Bend COG Regional Resilience Partnership – Geospatial Resilient Economic Development Platform (HRI)
- FEMA RAPT Tool – At Census Tract level
- Region 3 Coastal Resiliency Master Plan Tier 1 projects
- Region 3 Data Viewer
- Modeling Sea Level Rise and Storm Surge Impacts for Texas Coastal Resiliency Planning (AECOM/HRI)
- Texas Coastal Resiliency Master Plan (TAMU-CC, HRI)
- Geospatial Framework and Analysis for Coastal Resilience, South Texas Coastal Bend (TAMU-CC, HRI)
- Living with Sea Level Rise in the Texas Coastal Bend (TAMU-CC, HRI)
- Developing the Texas Coastal Resiliency Plan through Data Analysis, Modeling and elicitation
- Living with Sea Level Rise in the Texas Coastal Bend (NCCOS)
- Regional Resilience Partnership (RRP) – CBCOG and HRI
- TAMU-CC CREST Center for Geospatial and Environmental Informatics, Modeling, and Simulation
- TxDOT Transportation Resilience Planning
- TxDOT Statewide Resiliency Plan
- The Texas Department of Transportation (TxDOT) Statewide Freight Resiliency Plan
- Central Texas Extreme Weather and Climate Change Vulnerability Assessment of Regional Transportation Infrastructure
- Climate Change/Extreme Weather Vulnerability and Risk Assessment for Transportation Infrastructure in Dallas and Tarrant Counties
- Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: The Gulf Coast Study, Phases 1 and 2
- Texas Coastal Resiliency Study Final Report
- Texas Coastal Resiliency Master Plan
- Nueces County Hazard Mitigation Action Plan
- Nueces Regional Flood Plan
- Developing a Resilient Texas Transportation System
- TxDOT Transportation Resilience Planning Scorecard and Best Practices
- NCHRP Report 1014: Developing a Highway Framework to Conduct an All-Hazards Risk and Resilience Analysis
- City of Corpus Christi Emergency Operations Center
- Coastal Bend Hurricane Evacuation Study: Evacuation Zone Development Report
- Corpus Christi Regional Transit Authority (CCRTA) Emergency Preparedness Policy
- Homeland Infrastructure Foundation-Level Data
- Texas Railroad Commission Data
- TxDOT Open Data Portal
- TxDOT Statewide Planning Map
- Texas Water Development Board
- The Coastal Bend Hurricane Evacuation Study Planning Atlas
- Coastal Texas Protection and Restoration Feasibility Study Final Report (Coastal Texas Study)
- Vulnerability Assessment Scoring Tool (VAST)
- Texas Geographical Information Office
- Web Soil Survey (WSS)
- Climate Toolbox
- Gulf of Mexico Research Initiative
- National Inventory of Dams
- Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036
- Broward MPO Resilience Analysis Methodology Technical Memo
- Federal Emergency Management Agency National Risk Index
- Texas Delivers 2050
- National Levee Database

Assets

Assets
Create an asset inventory

- Validated assets referenced in literature review
- Focused on assets with available data supported by literature
  - Roadways
  - Bridges
  - Culverts
  - Low water crossings

Asset Class	Recommended	Literature Review	Location	Criticality
Roadways	✓	✓	✓	✓
Bridges	✓	✓	✓	✓
Large Culverts	✓	✓	✓	✓
Low Water Crossings	✓	✓	✓	✓
Railways		✓	✓	
Airports		✓	✓	
Seaports		✓	✓	
Oil & Gas Pipelines		✓	✓	
Transit Facilities		✓	✓	
Small Culverts		✓		
ITS/Ancillary Assets		✓		

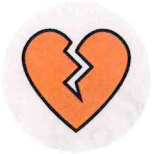
Exposure

Exposure
Identify hazards relevant to the inventory of assets

- Validated hazards referenced in literature review
- Consider which hazards differentiate among the selected assets
- Review the hazards with available data
  - Flooding
  - Sea level rise
  - Expansive soils
  - Strong winds

	Impacts Assets	Impact Severity	Perceived Risk	Localized Impact
Flooding	All assets	Large impact	Multiple references and local relevance	Localized impact with available data
Sea Level Rise	All assets	Large impact	Multiple references and local relevance	Localized impact with available data
Land Subsidence and Expansive Soils	All assets	Large impact	Local relevance	Localized impact with available data
Strong Wind	Some assets	Low to moderate impact	Multiple references and local relevance	Regional impact

Criticality

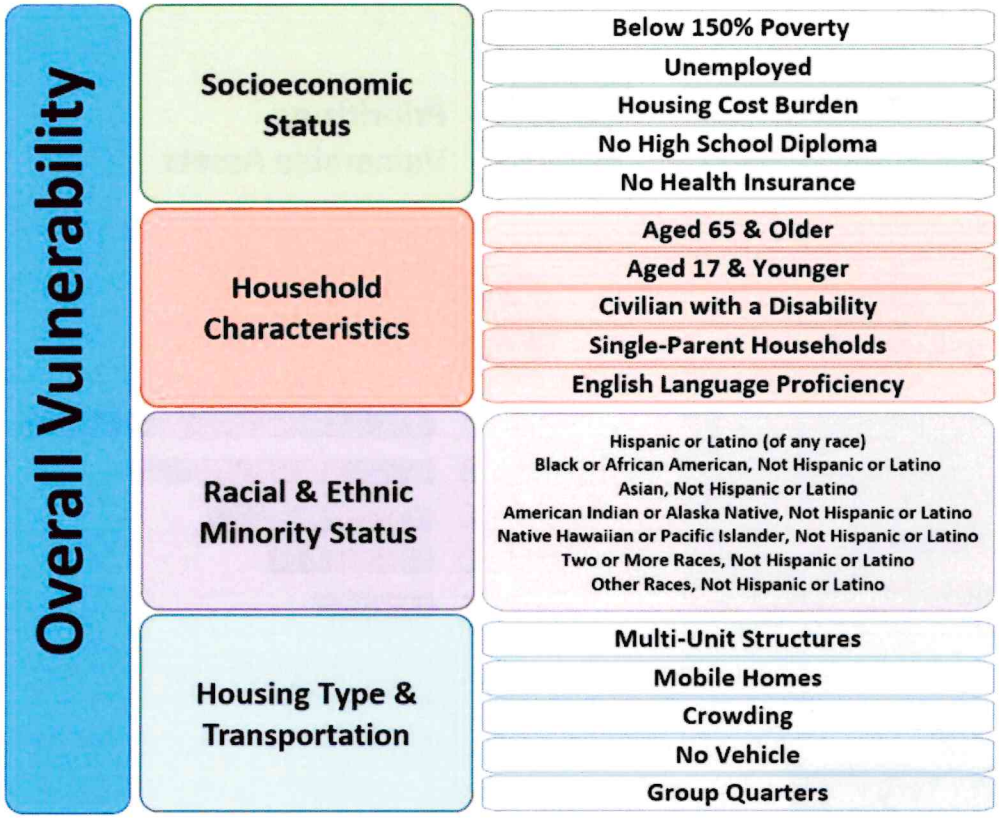


Criticality
Define criticality for the transportation assets

- Validated criticality metrics referenced in literature review
  - Social Vulnerability Index
  - AADT
  - Detour Length
  - Evacuation Routes
  - Proximity to Critical Facilities (medical, fire, schools, police)
- Determine which criticality metrics apply to each asset

Asset Class	Social Vulnerability	AADT	Detour Length	Evacuation Routes	Critical Infrastructure
Roadways	✓	✓		✓	✓
Bridges	✓	✓	✓	✓	✓
Large Culverts	✓	✓	✓	✓	✓
Low Water Crossings	✓	✓		✓	✓

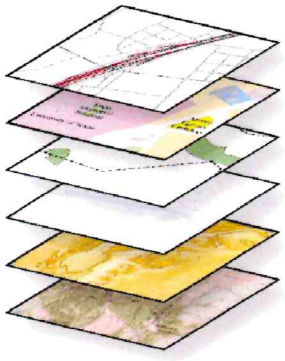
Criticality – Social Vulnerability



https://hazards.fema.gov/nri/map

Criteria Weighting

Joining Data to Asset Inventories



- Asset Inventories
- Hazard Maps
- Criticality Measures

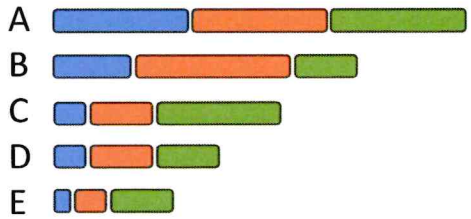
Weighting Criteria

Exposure 40%

Criticality 60%

Prioritizing Vulnerable Assets

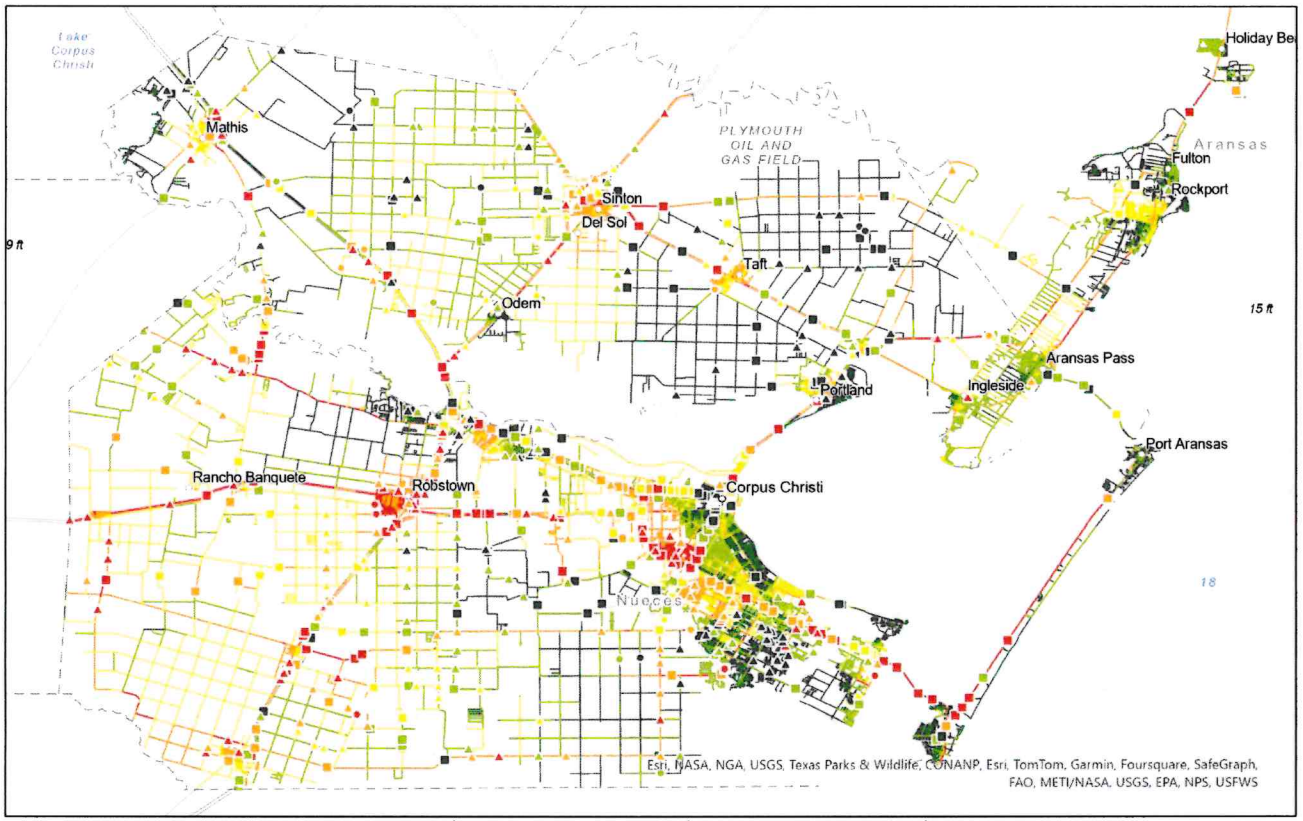
Asset Scores



Your input is key!

Baseline Weights

			Baseline			
		Criteria	Roadways	Low Water Crossings	Culverts	Bridges
Exposure	50%	Flooding	25%	25%	25%	25%
		Expansive Soils	25%	25%	25%	25%
		Sea Level Rise	25%	25%	25%	25%
		Strong Winds	25%	25%	25%	25%
Criticality	50%	Critical Facilities (medical, fire, schools, police)	25%	25%	20%	20%
		Evacuation Routes	25%	25%	20%	20%
		Social Vulnerability Index	25%	25%	20%	20%
		AADT	25%	25%	20%	20%
		Detour Length	n/a	n/a	20%	20%



Low Water Crossings	Culverts	Bridges	Roadways
Low	Low	Low	Low
Medium-Low	Medium-Low	Medium-Low	Medium-Low
Medium	Medium	Medium	Medium
Medium-High	Medium-High	Medium-High	Medium-High
High	High	High	High


Ingleside on the Bay
19 ft
Corpus Christi
Agnes St
Corpus Christi International Airport
Nueces
Oso Creek
Saratoga Blvd
State Highway 361
13 ft
Texas Parks & Wildlife, COMANP, Esri, TomTom, Garmin, Foursquare, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA
Low Water Crossings
Low
Medium-Low
Medium
Medium-High
High
Culverts
Low
Medium-Low
Medium
Medium-High
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Bridges
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Medium-Low
Medium
Medium-High
High
Roadways
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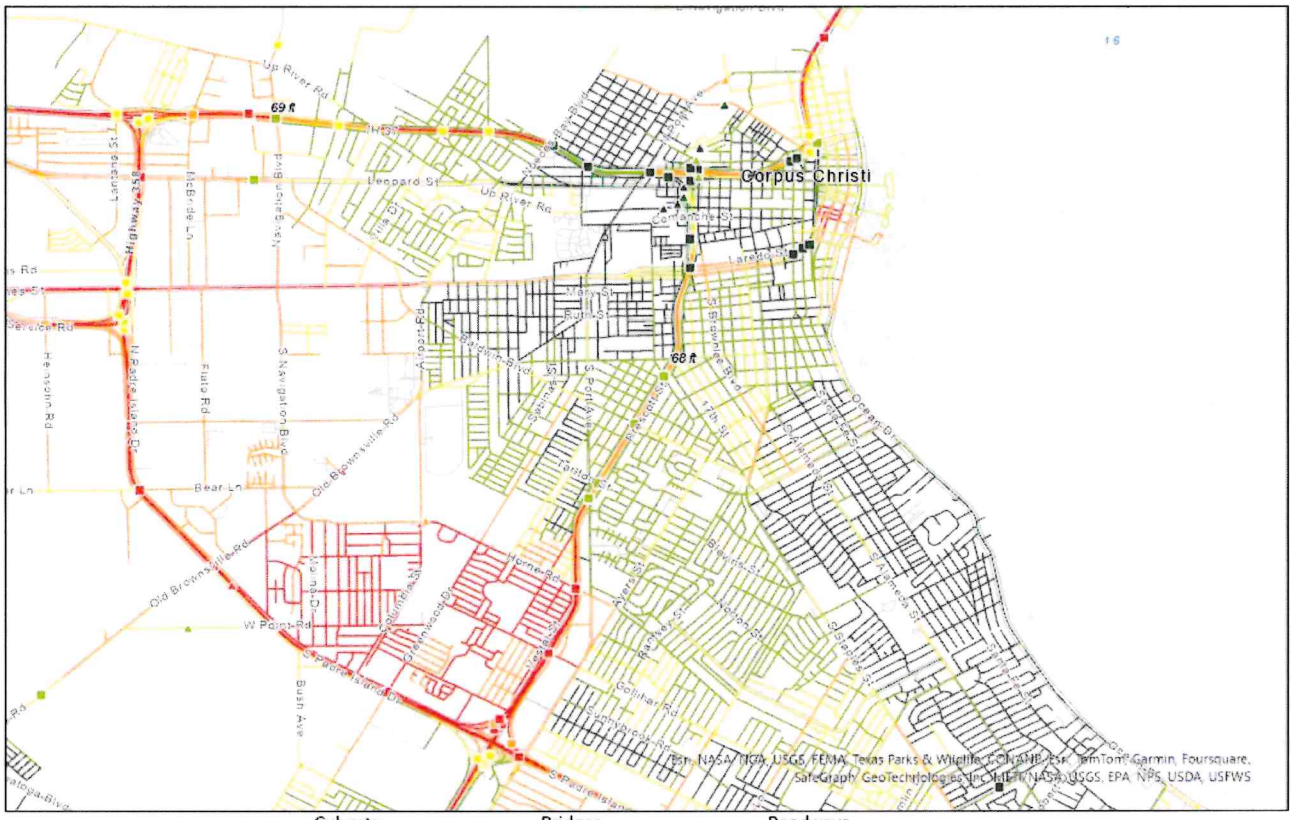
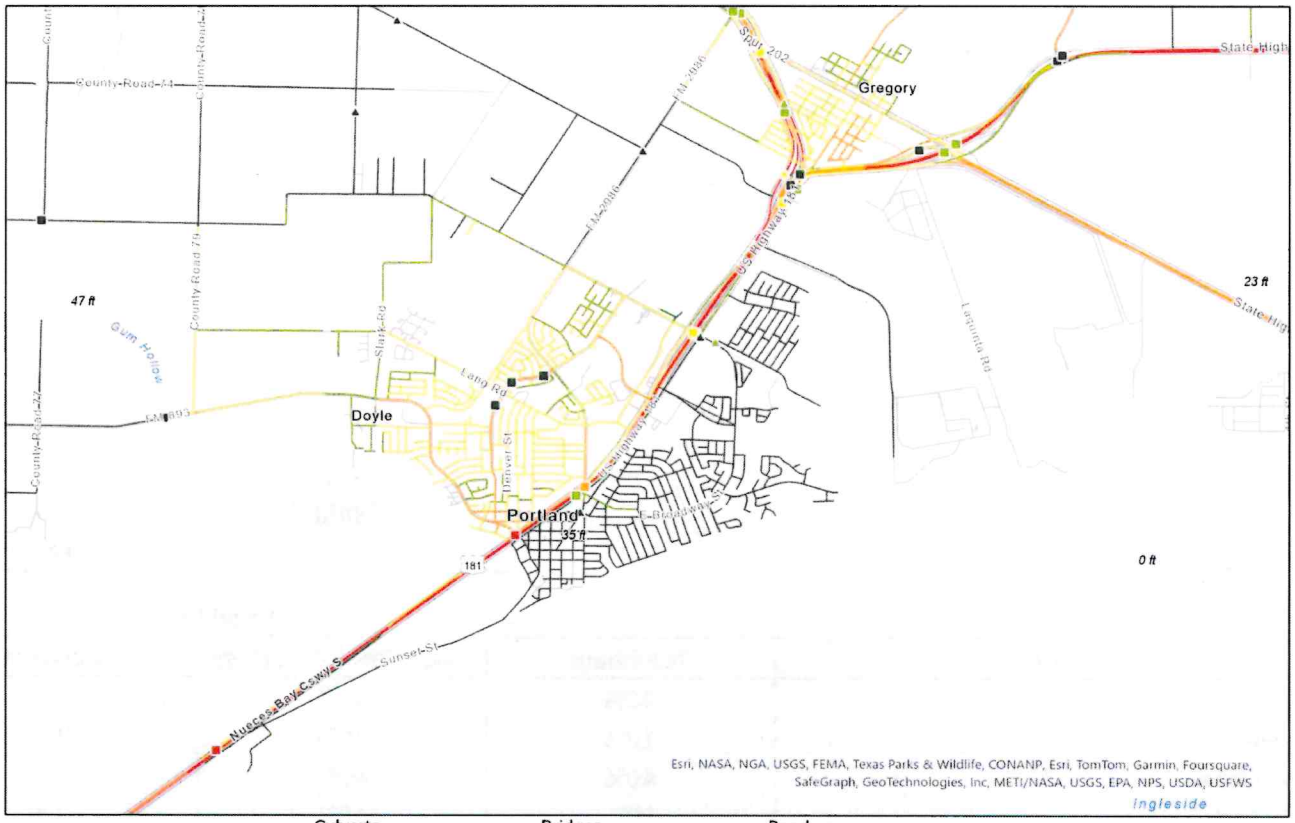
Medium-Low
Medium
Medium-High
High



Culverts	Bridges	Roadways
Low	Low	Low
Medium-Low	Medium-Low	Medium-Low
Medium	Medium	Medium
Medium-High	Medium-High	Medium-High
High	High	High



Culverts	Bridges	Roadways
Low	Low	Low
Medium-Low	Medium-Low	Medium-Low
Medium	Medium	Medium
	Medium-High	Medium-High
	High	High

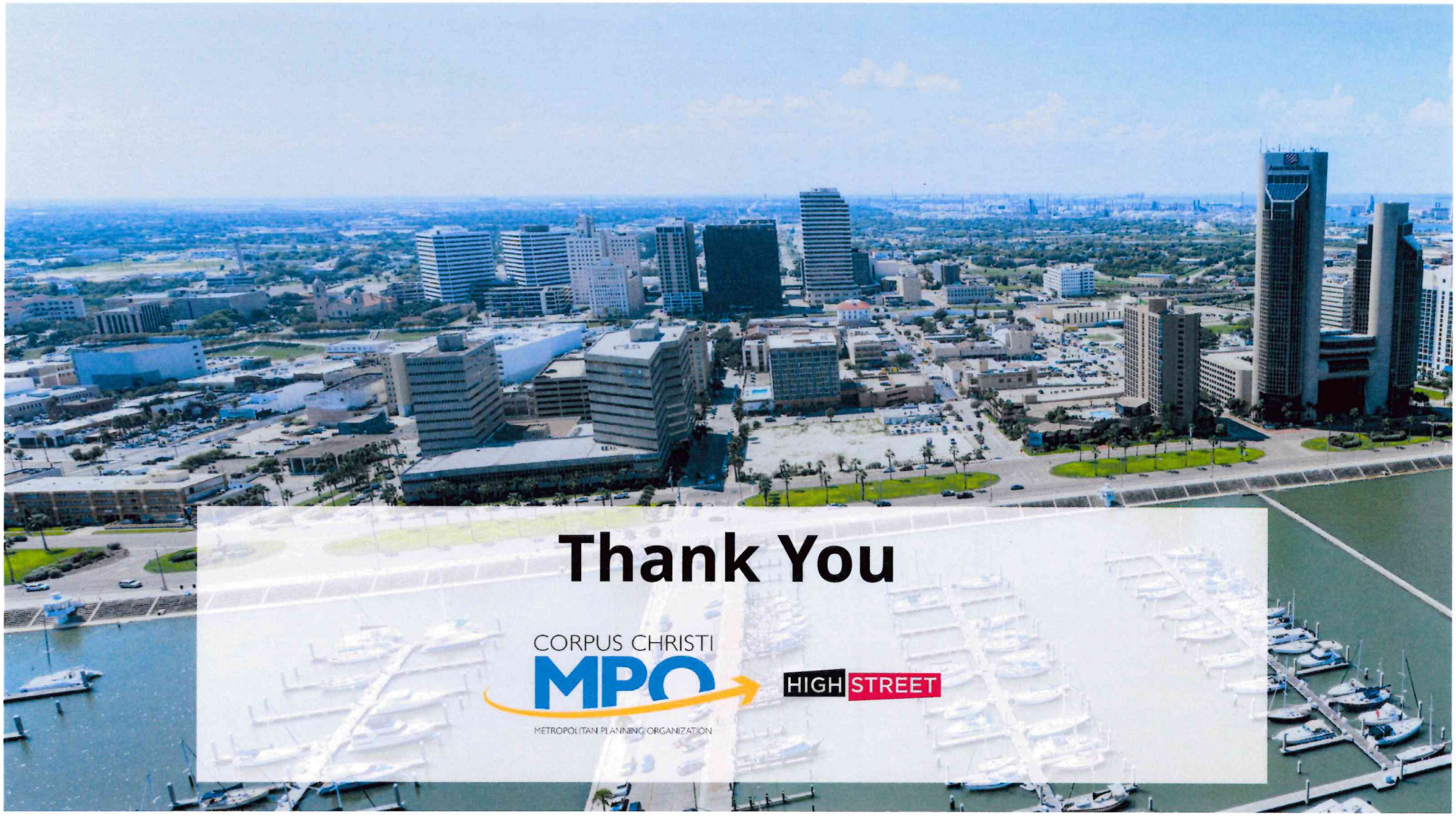
Scenario Weights

TxDOT Alignment

		Criteria	Roadways	Low Water Crossings	Culverts	Bridges
Exposure	**25%**	Flooding	25%	25%	25%	25%
		Expansive Soils	25%	25%	25%	25%
		Sea Level Rise	25%	25%	25%	25%
		Strong Winds	25%	25%	25%	25%
Criticality	**75%**	Critical Facilities (medical, fire, schools, police)	33%	33%	33%	33%
		Evacuation Routes	33%	33%	33%	33%
		Social Vulnerability Index	0%	0%	0%	0%
		AADT	34%	34%	0%	0%
		Detour Length			34%	34%

Local Impact

		Criteria	Roadways	Low Water Crossings	Culverts	Bridges
Exposure	**60%**	Flooding	40%	40%	40%	40%
		Expansive Soils	10%	10%	10%	10%
		Sea Level Rise	40%	40%	40%	40%
		Strong Winds	10%	10%	10%	10%
Criticality	**40%**	Critical Facilities (medical, fire, schools, police)	30%	30%	30%	30%
		Evacuation Routes	15%	15%	15%	15%
		Social Vulnerability Index	45%	45%	30%	30%
		AADT	10%	10%	5%	5%
		Detour Length			20%	20%


Thank You
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