TECHNICAL ADVISORY COMMITTEE MEETING

Monday, May 20, 2019
University Park, Suite 300
3300 N. IH 35, Austin, Texas 78705
2:00 p.m.

AGENDA

1. Certification of Quorum – Quorum requirement is 13 members…..….....Chair Mike Hodge

ACTION:

2. Approval of April 22, 2019 Meeting Summary .....Mr. Ashby Johnson, CAMPO
   Mr. Johnson will seek TAC approval of the April 22, 2019 meeting summary.

3. Recommendation for Adoption of 2020-2021 Unified Planning Work Program (UPWP)
   .....Ms. Theresa Hernandez, CAMPO
   Ms. Hernandez will seek TAC recommendation for adoption of the final Unified Planning Work Program for fiscal years 2020-2021.

4. Recommendation for Acceptance of Luling Transportation Study
   .....Mr. Nirav Ved, CAMPO
   Mr. Ved will seek TAC recommendation for acceptance of the Luling Transportation Study.

INFORMATION:

5. Discussion on Preliminary Results of Regional Arterials Study
   .....Mr. Kelly Porter, CAMPO
   Mr. Porter will provide an overview of the preliminary results of the Regional Arterials Study.

6. Discussion on Preliminary Results of MoKan/Northeast Subregional Plan
   .....Mr. Kelly Porter, CAMPO
   Mr. Porter will provide an overview of the preliminary results of the MoKan/Northeast Subregional Plan.

7. Discussion on Cancellation of 2021-2024 Transportation Improvement Program (TIP) Call for Projects .....Mr. Ryan Collins, CAMPO
   Mr. Collins will discuss the cancellation of the TIP Call for Projects.

8. Presentations on Existing Transportation Demand Management (TDM) Activities from City of Austin, Capital Metro and CAPCOG.....Mr. Chad McKeown, CAMPO
   Mr. McKeown will facilitate presentations to the TAC on efficacy of existing TDM Programs that were awarded funding from the last TIP Call for Projects.

9. Report on Transportation Planning Activities
   - Union Pacific

10. TAC Chair Announcements
    - Next TAC Meeting – June 24, 2019

11. Adjournment

Capital Area Metropolitan Planning Organization
Technical Advisory Committee
Meeting Summary
April 22, 2019

1. Certification of Quorum..... Chair Mike Hodge

The CAMPO Technical Advisory Committee was called to order by the Chair at 2:00 p.m.

A quorum was announced present.

Present:

	Member	Representing	Member Attending	Alternate Attending
1.	Stevie Greathouse	City of Austin	N	
2.	Cole Kitten	City of Austin	Y	Tien-Tien Chan
3.	Robert Spillar	City of Austin	Y	
4.	Tom Gdala	City of Cedar Park	Y	(via phone)
5.	Ray Miller	City of Georgetown	Y	
6.	Trey Fletcher	City of Pflugerville	Y	
7.	Gary Hudder	City of Round Rock	N	Gerald Pohlmeyer
8.	Laurie Moyer	City of San Marcos	N	Rohit Vij
9.	Julia Cleary	Bastrop County	Y	
10.	Amy Miller	Bastrop County (Smaller Cities)	Y	
11.	Greg Haley	Burnet County	Y	
12.	Mike Hodge	Burnet County (Smaller Cities)	Y	
13.	BJ Westmoreland	Caldwell County	Y	(via phone)
14.	Dan Gibson	Caldwell County (Smaller Cities)	Y	(via phone)
15.	Jerry Borcherding	Hays County	Y	
16.	Howard Koontz	Hays County (Smaller Cities)	N	

17.	Charlie Watts	Travis County	N	Cathy Stephens
18.	Amy Pattillo	Travis County (Smaller Cities)	Y	Alex Amponsah
19.	Bob Daigh	Williamson County	N	Anna Lan
20.	Sally McFeron	Williamson County (Smaller Cities)	Y	
21.	David Marsh	CARTS	N	Ed Collins
22.	Justin Word	CTRMA	N	Mike Sexton
23.	Todd Hemingson	Capital Metro	N	Joe Clemens
24.	Marisabel Ramthun	TxDOT	Y	Brandon Marshall

Other Participants Via Phone: There were no other participants via phone.

2. Approval of the March 25, 2019 Meeting Summary..... Chair Mike Hodge

Chair Hodge entertained a motion for approval of the March 25, 2019 meeting summary, as presented.

Mr. Robert Spillar requested that line four (4) of Agenda Item 5-Presentation on City of Austin's Draft Hazardous Materials Route is revised to read "Mr. Spillar noted that petrochemicals are the primary non-radioactive materials…" in the meeting summary. Mr. Spillar requested amendment of the meeting summary to reflect the noted revision.

Mr. Spillar later moved for approval of the meeting summary, as amended.

Mr. Trey Fletcher seconded the motion.

The motion prevailed unanimously.

3. A. Recommendation on Draft Regional Transportation Demand Management Plan .....Mr. Chad McKeown, Cambridge Systematics, Inc.

Mr. Chad McKeown provided a brief overview of the Regional Transportation Demand Management (TDM) Plan. Mr. McKeown informed the Committee that Cambridge Systematics and Freese & Nichols have worked with staff over the past three (3) months to develop a TDM Plan. Mr. McKeown informed the Committee that the purpose of the plan is to provide a regional framework of priorities and to identify cost effective and innovative projects, programs, and strategies.

Mr. McKeown reported that staff formed a TDM Steering Committee to guide the development of the TDM Plan. Mr. McKeown also provided a brief overview of its past discussions, summarized the plan's goals and objectives, and discussed the project selection criteria and scoring for TDM projects submitted. Question and answer with comments followed.

The Committee offered comment regarding its concerns about taking action on the document, as presented.

Mr. Robert Spillar and the Committee offered the following amendments to the Draft Regional TDM Plan in proceeding with approval of a recommendation to the Transportation Policy Board for approval:

1. Goal 4F - Simplify terminology to add the term "Managed Lanes" instead of Non-tolled, HOV, Diamond Lanes, etc.
2. Revise 5-year update of the plan to 2-year update
3. Include TDM as part of Project Selection Criteria and Evaluation
4. Include Cost Benefit for TDM with projects
5. Revise phrase to reflect "employers and other trip generators" to include community organizations, neighborhoods, chambers of commerce, etc.
6. Replace passive verb "consider" with an action verb

Following comments and discussion, Chair Hodge entertained a motion for approval of a recommendation for Transportation Policy Board approval of the Draft Regional Transportation Demand Management Plan.

Mr. Robert Spillar moved for approval of a recommendation to the Transportation Policy Board for approval of a portion of the Draft Regional Transportation Demand Management Plan with anticipated inclusion of amendments from the TDM Steering Committee and TAC, as noted.

Mr. Ed Collins seconded the motion.

The motion prevailed unanimously.

B. Recommendation on Proposed Transportation Demand Management Policy and Amendment of the 2040 Plan..... Mr. Ashby Johnson, CAMPO

Mr. Ashby Johnson, Executive Director of CAMPO discussed the following requests from Travis County:

1. 5% Set-aside
2. Revision to definition of Transportation Demand Management (TDM) activities
3. Allocation of remaining $498,720 to TDM Category funding recipients from last Call for Projects

Mr. Johnson informed the TAC that staff is not supporting the 5% Set-aside but staff is willing to consider a target that would be in keeping with the rest of the policy for the 2040 Plan.

Mr. Johnson informed the TAC that staff fully supports revision of the definition of TDM activities and are prepared to move forward with a recommendation to the Transportation Policy Board for approval.

Mr. Johnson informed the TAC that staff does not support allocation of the remaining $498,720 to TDM Category funding recipients from the last Call for Projects. Mr. Johnson added that staff recommends that the TAC finalize revisions to the current project selection criteria for TDM and TDM Category funding recipients resubmit applications in the fall Call for Projects. Question and answer with detailed discussion followed.

Ms. Cathy Stephens moved for approval of the proposed TDM Policy as revised with the exception of Attachment C.

Ms. Amy Pattillo seconded the motion.

The motion prevailed unanimously.

Ms. Cathy Stephens also moved for approval to amend 2040 Plan to include TDM Policy and carryover to the 2045 Plan.

Ms. Amy Pattillo seconded the motion.

The motion prevailed unanimously.

Ms. Cathy Stephens later moved for approval to award remaining $498,720 to current recipients of TDM Category funding and a presentation on efficacy of their existing TDM activities to the Transportation Policy Board for consideration of next year's funding.

Ms. Julia Cleary seconded the motion.

The motion prevailed unanimously.

4. Presentation of Draft 2020-2021 Unified Planning Work Program
.....Ms. Theresa Hernandez, CAMPO

Ms. Theresa Hernandez, Finance & Administration Manager provided a brief overview of CAMPO's Draft 2020-2021 Unified Planning Work Program (UPWP). Ms. Hernandez informed the Committee that the UPWP is a federally required document which identifies work tasks for two (2) fiscal years. Ms. Hernandez reported that planning studies were received from the City of Pflugerville, City of Austin, Capital Metro, and TxDOT. Ms. Hernandez also reported approximately $52 million in funding for FYs 2020 and 2021. A timeline for adoption of the final 2020-2021 UPWP was also presented. Question and answer followed.

5. Discussion on Spring Amendment Cycle and Requested Amendments
.....Mr. Ryan Collins, CAMPO

Mr. Ryan Collins, Short Range Planning Manager informed the Committee that the deadline for amendments was April 19, 2019 and reported that two (2) amendments were received. Mr. Collins further reported that one of two amendments was not ready for processing and the remaining amendment could be processed as an administrative amendment. Mr. Collins noted that it was not necessary to move forward with a spring amendment cycle. Question and answer with comments followed.

6. Presentation of Luling Transportation Study .....Mr. Nirav Ved, CAMPO

Mr. Nirav Ved, Special Assistant to the CAMPO Executive Director provided an overview of the Luling Transportation Study. Mr. Ved discussed the Luling Transportation Study's background information, goals, data collection , Near Term/Short Term options, and next steps. Mr. Ved also highlighted the timeline for Transportation Policy Board acceptance. Question and answer with comments followed.

7. Status Update on Project Connect.....Mr. Joe Clemens, Capital Metro

Mr. Joe Clemens, Deputy Project Manager of Capital Metro provided a brief overview of recent developments with Project Connect. Ms. Clemens reported that Project Connect was adopted unanimously by the Capital Metro Board on December 17, 2018. Mr. Clemens provided a video which addresses the challenges of transit and connectivity in the region through high capacity transit and Park 'n Rides.

Mr. Clemens later discussed the Long-Term Vision Plan and highlighted future-proof technology for Project Connect. Question and answer with comments followed.

8. Report on Transportation Planning Activities

There was nothing to report.

10. TAC Chair Announcements

Chair Hodge announced that the next TAC meeting is scheduled for May 20, 2019 at 2:00 p.m.

11. Adjournment

The April 22, 2019 meeting of the Technical Advisory Committee was adjourned at 4:01 p.m.

Date: May 20, 2019
Continued From: April 22, 2019
Action Requested: Recommendation

To: Technical Advisory Committee

From: Ms. Theresa Hernandez, Finance & Administration Manager

Agenda Item: 3

Subject: Recommendation for Adoption of 2020-2021 Unified Planning Work Program (UPWP)

RECOMMENDATION

Staff requests Technical Advisory Committee recommendation to the Transportation Policy Board (TPB) for adoption of the final FYs 2020 and 2021 Unified Planning Work Program (UPWP).

PURPOSE AND EXECUTIVE SUMMARY

The purpose of this item provides the TAC an opportunity to consider a recommendation to the TPB on the final FYs 2020 and 2021 UPWP. The TPB will consider approving the final FYs 2020 and 2021 UPWP at the June meeting.

FINANCIAL IMPACT

The budget for the FYs 2020-2021 UPWP is based on anticipated FHWA PL 112 and 5303 funds. In FY 2019, CAMPO received a total of $2,567,931 of Section 5303 and PL 112 funds. CAMPO has programmed these funds, along with other funds among the five main tasks.

BACKGROUND AND DISCUSSION

The UPWP **(Attachment A)** is the federally required document that identifies work tasks to be completed in the CAMPO region.

Funding Proposed in FYs 2020 and 2021 UPWP

FUNDING SOURCE	FY 2020	FY 2021	TOTAL
FHWA PL112 & 5303	2,563,298	2,563,298	5,126,596
FTA 5304	25,000	25,000	50,000
STBG	11,342,745	-	11,342,745
STATE	19,882,414		19,882,414
*LOCAL	16,115,686	-	16,115,686
GRAND TOTAL	49,929,143	2,588,298	52,517,441
*CAMPO and other agencies combined local funds			

SUPPORTING DOCUMENTS

Attachment A – *Final FYs 2020 & 2021 Unified Planning Work Program*

FY 2020 & 2021

UNIFIED PLANNING WORK PROGRAM

CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION

Approved by the Transportation Policy Board: Xx

Credit and Disclaimer Statement

Prepared in cooperation with the Texas Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

I. **INTRODUCTION** - The Federal Aid Highway Act of 1962 promulgated the requirement that all urban areas of 50,000 or more population develop and maintain a comprehensive, cooperative, and continuing (3-C) transportation planning process. The process would establish a transportation plan and provide the procedure by which it would be maintained and revised on a continuing basis.

A. **PURPOSE** - The Unified Planning Work Program (UPWP) provides descriptive details for the Capital Area Metropolitan Planning Organization (CAMPO) planning process for FYs 2020- 2021. This activity is required under federal law defining the responsibilities of Metropolitan Planning Organizations (MPO). The UPWP serves as the document for identifying ways to carry out the continuing, cooperative and comprehensive transportation planning process in the six-county Capital Area in Central Texas. An MPO is required to perform all planning tasks set forth in federal laws and regulations, many of which are conducted annually. However, some tasks require more than one year to complete and are carried forward from one UPWP to the next. To effectively identify all work tasks, CAMPO prepares this UPWP with input from federal, state and local jurisdictions and transportation providers in the CAMPO region.

The appendices contain the following:

Appendix A: Transportation Policy Board Membership
Appendix B: Metropolitan Area Boundary Map
Appendix C: Debarment Certification
Appendix D: Lobbying Certification
Appendix E: Certification of Compliance
Appendix F: Certification of Internal Ethics and Compliance

<u>FAST Act Planning Factors</u>

FAST Act contains ten broad planning areas that should be considered when developing plans and programs. The work tasks contained in the FYs 2018 - 2019 UPWP have considered the following ten areas, some more directly than others:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation; and
10. Enhance travel and tourism.

Further, the work tasks consider the federal performance goals in the following seven areas:

1. Safety
2. Infrastructure Condition
3. Congestion Reduction
4. System Reliability
5. Freight Movement and Economic Vitality
6. Environmental Sustainability
7. Reduced Project Delivery Delays

B. **DEFINITION OF AREA** - The CAMPO planning area includes all of Bastrop, Burnet, Caldwell, Hays, Travis and Williamson Counties (**Appendix B**) and the cities and villages in each of the six counties (a comprehensive list of these jurisdictions can be found at www.campotexas.org). By federal definition, CAMPO's planning area must at least include the urbanized area (as defined by the U.S. Bureau of the Census) and the contiguous area that may reasonably be expected to become urbanized in the next 20 years.

During the 2010 census, a very small portion of Guadalupe County was included as a part of the newly urbanized area of San Marcos. San Marcos intends to remain part of CAMPO. Therefore, an agreement was developed between CAMPO and the Alamo Area MPO (AAMPO) regarding the roles and responsibilities of each MPO concerning this portion of Guadalupe County. CAMPO agrees that staff will meet as needed to review progress of planning efforts to discuss key findings from program activities and to discuss the scope, plans, and implementation of activities. To help ensure continuity of federal and state funds, CAMPO agrees to abide by the methodology and process used to allocate funds to the respective MPOs. CAMPO agrees to abide by the methodology and process currently used to allocate federal transportation planning funds to the respective MPOs. CAMPO agrees to work with the AAMPO to identify the need for corridor projects that cross the CAMPO and AAMPO planning area boundary.

C. **ORGANIZATION** – The Transportation Policy Board (**Appendix A**), provides policy direction for CAMPO. The Policy Board consists of 20 elected and appointed county, city, Texas Department of Transportation (TxDOT) and Capital Metropolitan Transportation Authority (CMTA) officials.

The Policy Board also has several committees for which the CAMPO staff provides administrative support and technical assistance. Some of these committees have members who do not currently serve on the Policy Board but who represent stakeholders in the community:

- The Technical Advisory Committee (TAC) the committee's purpose is to advise the Transportation Policy Board in its development of the long-range metropolitan transportation plan; the Transportation Improvement Program, including review of and recommendations on candidate projects for the TIP; the Unified Planning Work Program; and other transportation planning activities, as directed by the Transportation Policy Board or CAMPO's Executive Director.
- The Executive Committee are members of the Transportation Policy Board who make recommendations on transportation planning issues, projects and the process as directed by the Transportation Policy Board.
- The Finance Committee was formed to become fully educated and explore long-term financing options for potential modal components of a comprehensive transportation system.
- The Transit Working Group (TWG) was formed to analyze and evaluate the potential for high capacity transit in Central Texas, and the optimal role for transit as part of the comprehensive regional transportation plan.
- The Budget, Audit and Finance Committee was formed to review and make recommendations to the Transportation Policy Board for the CAMPO annual planning budget.
- The SH 45 (SW) Committee was formed to analyze options for the future development of SH 45(SW) and address issues surrounding the further planning of the corridor.

Other committees, task forces or study groups may be formed from time-to-time throughout the year as necessary.

CAMPO currently operates with various professional staff positions. The professional staff covers the tasks listed in the UPWP. Depending on the budget and/or work tasks to be completed, CAMPO may employ a varying number of consultants, interns, permanent, or temporary personnel.

Functional Responsibilities of Planning Agencies

For the transportation planning process to function properly, the agencies involved must work together cooperatively. The Transportation Policy Board (TPB), the Transportation Department of Transportation (TxDOT), Central Texas Regional Mobility Authority (CTRMA), Capital Metro, Capital Area Rural Transportation System (CARTS) and the local governments within the planning area are responsible for carrying out the urban transportation planning process consistent with local agreements. This process includes planning for roadways, bicycling facilities,

pedestrian facilities, freight movement, passenger rail, and transit.

The following descriptions of functional responsibilities for each agency are not intended to limit the participation of any agency or local government in the study. Rather, they are brief descriptions of primary responsibilities.

Metropolitan Planning Organization - The MPO, in cooperation with the TxDOT, CTRMA, mass transit operators, planning agencies and local governments:

1) Is responsible for carrying out and maintaining the urban transportation planning process to include:
    a. Cooperative decision-making, principally, by elected officials of local governments.
    b. Unified Planning Work Program (UPWP),
    c. Transportation Improvement Program (TIP),
    d. Metropolitan Transportation Plan (MTP), and
    e. Congestion Management Process (CMP).
2) Executes contracts and/or agreements necessary to carry out the work outlined in the UPWP.
3) Develops and maintains transportation databases and analytical tools.

MPO staff has the following general responsibilities:

1) Provide staff support to the Transportation Policy Board (TPB), the Technical Advisory Committee (TAC), and committees of the Policy Board and TAC;
2) Review and report on items on the agenda(s) for the TPB, TAC, and appropriate committees;
3) Coordinate and perform the planning and data collection activities contained in the UPWP;
4) Prepare and submit an annual budget outlined in the UPWP for approval;
5) Receive and review all bills from consultants that the MPO has contracted with to perform work outlined in the UPWP;
6) Submit requests for reimbursement to the appropriate federal and/or state agencies for work performed according to the UPWP;
7) Prepare and submit grant applications for federal/other assistance in transportation planning, and related fields, as appropriate;
8) Prepare and submit the annual performance and expenditure report and annual project listing;
9) Coordinate the activities for the development and maintenance of the Unified Planning Work Program, the long-range metropolitan transportation plan and the Transportation Improvement Program;
10) Refine and maintain a process for engaging the public in the transportation planning process; and
11) Perform any other administrative duties as required by the

Transportation Policy Board; and,

12) Ensure compliance with Title VI Civil Rights, Environmental Justice and other federal requirements related to CAMPO's operations, activities and programs.

Texas Department of Transportation - The Texas Department of Transportation (TxDOT), within the realm of transportation planning, has the following varied responsibilities for the CAMPO planning area:

- Highway planning;
- Participating and lead agency in appropriate transportation studies and environmental documents;
- Review of all FTA Section 5307, 5310 and Section 5311 capital grant applications that may involve state funding; and

In addition, TxDOT maintains certain transportation database files and forecasting models, and coordinates its planning efforts with the MPO through the UPWP.

Capital Area Rural Transportation System (CARTS)
CARTS is the rural public transportation provider for this region and has primary responsibility for rural transit planning and operations in the study area.

Capital Metropolitan Transportation Authority (Capital Metro)

Capital Metro is a provider of public transportation in the region. Capital Metro has primary responsibility for conducting various short and long-range transit studies, maintaining all transit data, and is responsible for transit planning and operation in the urban portion of the study area.

Counties

Williamson County acts as our fiscal agent and provides support for human resources, benefits, accounting, and information technology.

The Counties of Bastrop, Burnet, Caldwell, Hays, Travis and Williamson have the primary responsibility for the planning of all roads outside incorporated areas that are not on the State system. This is done cooperatively with the State. The County coordinates its planning with TxDOT and incorporated areas in extraterritorial jurisdictional areas.

Cities

All jurisdiction cities in our planning area have the responsibility for the planning of all roads within their incorporated area or extraterritorial jurisdiction not on the state

system, and some have negotiated agreements with TxDOT to plan for roads on the state system as well in cooperation with TxDOT.

Public/Public and Public/Private Partnerships

Over the last few years, the CAMPO region continues partnerships with TxDOT, CARTS, CMTA, CAPCOG and its member jurisdictions and has actively pursued various partnerships with entities established to advance planning for and improve the area's transportation infrastructure. This includes partnerships with the area's Regional Mobility Authority (Central Texas Regional Mobility Authority).

D. **PRIVATE SECTOR INVOLVEMENT** – Consultants have been and will continue to be used on an as-needed basis in CAMPO's transportation programs and planning processes. In the past, CAMPO has used private sector consultants for a variety of services ranging from legal services to improvements to the regional travel demand model. These efforts will continue as well.

E. **PLANNING ISSUES AND EMPHASIS** – The Federal Highway Administration and Federal Transit Administration have jointly issued Planning Emphasis Areas (PEAs). The PEAs are planning topical areas for MPOs and State DOTs to develop and identify work tasks for FY 2020 and 2021. The Planning Emphasis Areas are:

1. MAP-21 Implementation - Transition to Performance Planning and Programming: although performance measures have not yet been adopted at the federal and state levels, the MPO identified performance indicators in the 2040 Metropolitan Transportation Plan Update and continues to monitor federal and state efforts. Updated requirements as outlined in the FAST Act will move towards implementation.

2. Regional Models of Cooperation - Ensure a regional approach to transportation planning by promoting cooperation and coordination across transit agency, MPO and state boundaries:
   CAMPO will continue to strive to improve the effectiveness of transportation decision making by working with regional partners to think beyond traditional borders and adopt a coordinated approach to transportation planning that supports common goals and capitalizes on opportunities related to project delivery, congestion management, safety, freight, livability, and commerce across boundaries. Improved multi-jurisdictional coordination promises to reduce project delivery time and enhance the efficient use of resources. Enhanced cross-jurisdictional communication will improve collaboration, policy implementation, technology usage, and performance management.

3. Ladders of Opportunity – Access to essential services:
   Through the transportation planning process, CAMPO will work with regional partners to identify connectivity gaps in accessing essential services, including

employment, health care, schools/education, and recreation. Staff will research analytical methods to identify gaps in the connectivity of the transportation system and identify infrastructure and operational solutions that provide the public, especially the traditionally underserved populations, with adequate access to essential services. Potential tasks include: evaluating the effectiveness of public transportation plans for engaging transportation disadvantaged communities in the transportation decision making process; updating the Section 5310 Coordinated Human Services Public Transportation Plan; assessing the safety and condition of pedestrian and bicycle facilities; and evaluating compliance with the Americans with Disabilities Act, particularly around schools, concentrations of disadvantaged populations, social services, medical and transit facilities.

CAMPO will work cooperatively with TxDOT, CARTS and Capital Metropolitan Transportation Authority (CMTA) to define performance measures that emphasize these seven federal goals:

1. Safety
2. Infrastructure Condition
3. Congestion Reduction
4. System Reliability
5. Freight Movement and Economic Vitality
6. Environmental Sustainability
7. Reduced Project Delivery Delays

II. TASK 1.0 – ADMINISTRATION AND MANAGEMENT

- **OBJECTIVE**

  To accomplish, on a continuing basis, the plans and programs necessary to administer federal transportation planning requirements and maintain the transportation planning process in and for the Capital Area Metropolitan Planning Organization's planning area.

- **EXPECTED PRODUCTS**

  Certified transportation planning process;
  Updated or new documents and reports including Public Participation Plan, Limited English Proficiency Plan, and Title VI Plan;
  FY 2019 & FY 2020 Single Audit;
  Unified Planning Work Program (FYs 2020 & 2021) and amendments;
  Unified Planning Work Program (FYs 2022 & 2023);
  FY 2019 & 2020 Annual Project Listing;
  FY 2019 & 2020 Annual Performance and Expenditure Report;
  New equipment and computer hardware/software

- **PREVIOUS WORK**

  Performed general administrative functions;
  FY 2018 & 2019 Unified Planning Work Program and amendments;
  FY 2017 & 2018 Annual Project Listing;
  FY 2017 & 2018 Annual Performance and Expenditure Report;
  FY 2017 & 2018 Single Audit;
  Updated Public Participation Plan;
  Updated Limited English Proficiency Plan;
  Updated Title VI Plan
  Coordinated transportation planning and implementation activities with other agencies and organizations;
  Conducted a public involvement process compliant with federal and state regulations;
  Provided support for all meetings of the transportation planning process;
  Implemented policies to maintain the transportation planning process;
  Provided staff access to courses, conferences, workshops and seminars

- **SUBTASKS**

  Subtask 1.1 MPO Staff Work for Task 1.0

  The primary activities which will take place under MPO Staff Work include the following:

  1.1.1 Program Administration: This activity includes development and implementation of those policies and guidelines necessary to carry out and maintain the transportation planning process; maintenance of the FY 2020 & 2021

Unified Planning Work Program, development of the Annual Performance and Expenditure Report (APER) and Annual Project Listing (APL), development of the FY 2022 & 2023 Unified Planning Work Program, sponsoring and conducting meetings including providing support to policy and advisory bodies; coordinating and working with other agencies and organizations involved in planning, programming and implementation of transportation projects.

1.1.2 Public Participation: This activity supports the implementation of the MPO's Public Participation Plan to include the conduct of community outreach and public meetings/hearings as needed with emphasis on Environmental Justice populations and the development/review processes of the Transportation Improvement Program, Metropolitan Transportation Plan and other planning products; develop and use of questionnaires, online surveys, newsletters and other participation techniques; and provide bilingual materials and translations as appropriate.

1.1.3 Title VI Civil Rights/Environmental Justice (EJ): This activity supports monitoring and evaluating Title VI/EJ guidance and requirements, developing and implementing documents and procedures to ensure CAMPO's plans, programs and activities comply with Title VI/EJ guidance and requirements, collecting and analyzing data related to minority, low income, limited English proficiency and other populations vulnerable to potential disproportional adverse impacts from the planned transportation system and transportation projects, identifying possible strategies to minimize, avoid or mitigate potential disproportional adverse impacts on the EJ populations, maintaining, coordinating efforts to develop the Regional Toll Network Analysis that evaluates the impacts of the regional toll network on the EJ and non-EJ populations (see Task 2.0), implementing the CAMPO Limited English Proficiency Plan and updating that plan as needed.

1.1.4 Travel and Training: This activity supports staff development in the technical activities associated with the transportation planning process through travel to and attendance at appropriate conferences, courses, seminars, and workshops (AMPO, APA, ESRI, TransCad, TxDOT, TRB, UT at Austin, CNU, etc). CAMPO will seek prior approval from TxDOT for Out-of-State travel.

1.1.5 Equipment & Computer Hardware/Software : This activity is for the upgrade/addition of equipment and computer hardware or software to ensure program efficiency. A description of equipment purchases in excess of $5,000 will be submitted to the Texas Department of Transportation for approval prior to acquisition. The MPO understands that split costs are not allowed.

Responsible Agency:	Capital Area Metropolitan Planning Organization
Funding Requirement:	$3,152,432 PL
Product(s):	Certified transportation planning process; Updated or new documents and reports including Public

Participation Plan, Limited English Proficiency Plan, etc.; New equipment and computer hardware/software

Subtask 1.2 Legal Services – Consultant Work

1.2.1 Legal Services: This activity is for legal services that are necessary for planning purposes.

Responsible Agency: Capital Area Metropolitan Planning Organization
Funding Requirement: $60,000 PL
Product(s): Legal opinion(s) and counsel, as necessary and appropriate, with prior approval from TxDOT and FHWA

Subtask 1.3 Audit Costs – Consultant Work

1.3.1 Audit Services: This activity is for audit services that are necessary to comply with the Single Audit Act.

Responsible Agency: Capital Area Metropolitan Planning Organization
Funding Requirement: $50,000 PL
Product(s): Single Audit Report, financial statements

Subtask 1.4 General Planning Consultant – Consultant Work

1.4.1 General Planning Consultant

Consultant to assist in the overall activities related to regional transportation planning in the CAMPO planning boundary that includes the counties of Bastrop, Burnet, Caldwell, Hays, Travis, and Williamson.

Responsible Agency: CAMPO
Funding Requirement: $240,000 STP MM and $60,000 Local

- FUNDING SUMMARY

Task 1.0 - FY 2020 & FY 2021

Subtask	Responsible Agency	Transportation Planning Funds (TPF)[1]		STBG		Local		Total		Grand Total
		2020	2021	2020	2021	2020	2021	2020	2021	2020&2021
1.1	CAMPO	1,576,216	1,576,216					1,576,216	1,576,216	3,152,432
1.2	CAMPO	30,000	30,000					30,000	30,000	60,000
1.3	CAMPO	25,000	25,000					25,000	25,000	50,000
1.4	CAMPO			240,000	-	60,000	-	300,000	-	300,000
TOTAL		1,631,216	1,631,216	240,000	-	60,000	-	1,931,216	1,631,216	3,562,432

[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.

III. TASK 2.0 - DATA DEVELOPMENT AND MAINTENANCE

- **OBJECTIVE**
  Provide updated information, demographic data and analysis to support the Metropolitan Planning Organization's planning efforts.

- **EXPECTED PRODUCTS**
  Series of technical reports documenting the ongoing GIS data updates on traffic counts and mapping
  Transportation related air quality data collection and analysis, air quality planning and outreach products;
  2045 Plan related performance measures
  Demographic forecasts and travel demand model for the 2045 Plan updates;
  Interactive Web Viewer updates
  UrbanSim (Demographic Allocation Tool)
  Development 2050 Travel Demand Model

- **PREVIOUS WORK**
  Updated demographic forecasts and travel demand model for the 2045 Plan;
  2040 Plan related performance measures
  Development 2045 Travel Demand Model
  Regional Arterial Plan Modeling
  UrbanSim (Demographic Allocation Tool)
  Interactive Web Viewer – Regional Arterial Plan

- **SUBTASKS**

Subtask 2.1 MPO Staff Work for Task 2.0

2.1.1 General Administration: This subtask allows for administrative activities related to data development and maintenance including procurement, contract management and appropriate review/processing of monthly billings for work related to Task 2, as well as conducting the activities in subtasks 2.1.2, 2.1.3, 2.1.4, and 2.1.5 and developing related performance measures.

2.1.2 General GIS: Specific activities will include reviewing and providing direction on the development and dissemination of geospatial databases on residential and commercial growth and transportation data; mapping databases supporting CAMPO programs; maintenance of the demographic and modeling databases of the 2045 Plan and 2019-2022 TIP amendments; develop and maintain the interactive web viewer for sharing GIS data on growth and projects; develop maps and materials for work group and public meetings; develop technical memoranda documenting work completed.

2.1.3 Demographic Forecasting: Run UrbanSim for producing demographic

forecasts for 2050 Plan and TIP amendments. Specific activities will include production and review of demographic forecasts to be used for required 2045 Plan. Develop the datasets for running the Allocation Tool for the 2045 Plan.

2.1.4 Travel Demand Modeling: Run CAMPO's FTA-compliant and time-of-day model. Specific activities will include coordination with TxDOT on development of the new 2020 base year model, performing model runs for the amendments of the 2045 Plan, 2019-2022 TIP and the development of the 2050 Plan; refinements of in-house modeling capabilities; and regular updates of computer hardware, software, and necessary peripherals for supporting the demographic forecasting and travel demand modeling activities.

2.1.5 Environmental Analysis: This subtask includes facilitating planning and environmental linkages by participating in NEPA related studies and Planning and Environmental Linkages (PEL) studies, monitoring and evaluating the effect of CAMPO plans and programs on the environment, identifying potential mitigation activities and locations where they might occur, coordinating outreach with resource agencies and working groups, developing and updating GIS analyses using GISST, and other relevant data. CAMPO is participating in NEPA related studies to facilitate the proper integration of planning outcomes in the environmental process.

Responsible Agency:	Capital Area Metropolitan Planning Organization
Funding Requirement:	$320,176 PL
Product(s):	Technical memoranda, final reports, PEL and NEPA related reports and analyses.

Subtask 2.2 GIS, Demographic Forecast, & Travel Demand – Consultant Work

2.2.1 Demographic Forecast and Travel Demand Modeling Projects for 2045 Plan

Conduct activities related to the travel demand model in support of development of the 2045 Plan. It is noted that the demographic forecasting and travel demand modeling procedures applied in the CAMPO area are integrated. Conduct activities related to the production of the regional employment and population profiles for inclusion in the CAMPO travel demand model and the 2045 toll analysis.

Responsible Agency:	Capital Area Metropolitan Planning Organization
Product(s):	Interactive Web Viewer, UrbanSim, Development 2045 Travel Demand Model, Model files for development of the 2045 RTA, draft and final 2045 RTA document.

- FUNDING SUMMARY

Task 2.0 - FY 2020 & FY 2021

Subtask	Responsible Agency	Transportation Planning Funds (TPF)[1]		FTA Sect. 5304		Local		Total		Grand Total
		2020	2021	2020	2021	2020	2021	2020	2021	2020&2021
2.1	CAMPO	160,088	160,088					160,088	160,088	320,176
2.2	CAMPO	-	-					-	-	-
2.3	CAMPO	-	-					-	-	-
TOTAL		160,088	160,088					160,088	160,088	320,176

[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.

IV. TASK 3.0 - SHORT RANGE PLANNING

- **OBJECTIVE**
  Conduct short-range transportation and transportation-related planning activities with short-term planning and implementation focus, including the development and administration of the Transportation Improvement Program.

- **EXPECTED PRODUCTS**
  2019-2022 TIP Amendments
  Intelligent Transportation Systems (ITS)
  2021-2024 TIP
  Project Selection/Readiness Criteria
  HB20 10 Year Plan
  Performance Measure Development
  Project Tracking
  2021-2024 Project Call

- **PREVIOUS WORK**
  Transportation Improvement Program (TIP) FYs 2019 – 2022
  Project Tracking
  Ongoing development of related performance measures
  Congestion Management Process (CMP) Plan
  2019-2022 Project Call

- **SUBTASKS**

Subtask 3.1 MPO Staff Work for Task 3.0

3.1.1 General Administration: This subtask allows for MPO staff support for administrative activities related to short range planning, including the development and management of agency contracts; procurement, development and management of consultant contracts for projects in Task 3; and the review and processing of monthly billings for work related to Task 3.

3.1.2 General Activities: Specific activities will include, but are not limited to, maintenance of the FY 2019-2022 Transportation Improvement Program, development of the FY 2021-2024 Transportation Improvement Program, along with related performance measures.

3.1.3 Public Participation: This subtask includes MPO staff participation in public outreach activities including video production, developing website information, writing newsletter articles, developing other printed materials, and public meeting facilitation as needed.

3.1.4 Congestion Management Process (CMP), Intelligent Transportation

Systems (ITS) and Operations Planning: This subtask covers activities related to conducting the CMP, ITS and Operations Planning. Specific activities include, but are not limited to, developing, updating, refining and implementing the CMP, incorporating congestion analysis results into the regional planning process, and incorporating ITS, systems management and operations into the planning process

3.1.5 Transportation Improvement Program: The four-year Transportation Improvement Program (TIP) lists surface transportation projects that are funded with federal dollars and are consistent with the long-range plan developed for the area. The TIP may also include non-federally funded projects that are regionally significant. The TIP development process includes public involvement activities and opportunities for public review and comment on all aspects of the program.

Responsible Agency: Capital Area Metropolitan Planning Organization
Funding Requirement: $417,382 PL
Product(s): Contract procurement materials and billing packages, meeting packages and materials, technical memos

- FUNDING SUMMARY

Task 3.0 - FY 2020 & FY 2021

Subtask	Responsible Agency	Transportation Planning Funds (TPF)[1]		Local		Total		Grand Total
		2020	2021	2020	2021	2020	2021	2018&2019
3.1	CAMPO	208,691	208,691			208,691	208,691	417,382
3.2	CAMPO	-	-			-	-	-
3.3	CAMPO	-	-			-	-	-
TOTAL		208,691	208,691			208,691	208,691	417,382

[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.

V. TASK 4.0 - METROPOLITAN TRANSPORTATION PLAN

- **OBJECTIVE**
  To develop, maintain and update a multi-modal Regional Transportation Plan for the CAMPO planning area for a 25-year horizon that meets federal requirements and regional goals.

- **EXPECTED PRODUCTS**
  Maintenance and amendments of the 2040 Plan
  Development of the 2045 Plan
  Maintenance of the Coordinated Public Transit – Health and Human Services Transportation Plan
  Performance Measures

- **PREVIOUS WORK**
  2040 Regional Transportation Plan Amendments
  2040 Regional Transportation Plan implementation products initial work products related to the development of the 2045 Regional Transportation Plan
  Develop a regional bicycle and pedestrian plan
  Regional Active Transportation Plan
  Walkability Action Plan

- **SUBTASKS**

Subtask 4.1 MPO Staff Work for Task 4.0

4.1.1 General Administration: This subtask allows for MPO staff support for administrative activities related to long range planning including procurement, development, management of consultant contracts for projects in Tasks 4.1, 4.2, 4.3, and 4.4, review and processing of monthly billings for work related to Tasks 4.1, 4.2, 4.3, and 4.4, conduct access management, safety, sub-regional traffic management, and other related corridor studies, participation in study oversight committee meetings, amending and maintaining the CAMPO 2040 Regional Transportation Plan, developing the CAMPO 2045 Regional Transportation Plan and supporting materials and cooperatively developing related performance measures.

4.1.2 Public Participation: This subtask includes MPO staff participation in public outreach activities including video production, developing website information, newsletter articles, other printed materials, and public meeting facilitation as needed.

4.1.3 Regional Public Transportation Coordination: This subtask allows for MPO staff support for regional public transportation coordination including coordinating the Regional Transit Coordination Committee (RTCC) and associated activities, and implementing, maintaining and updating the Capital Area Coordinated Transit –

Health and Human Services Transportation Plan.

4.1.4 Bicycle and Pedestrian Planning: This subtask includes coordinating the Active Transportation Advisory Committee, conducting planning activities related to bicycle and pedestrian facilities, developing a regional active transportation plan, and updating the regional bicycle and pedestrian facility inventory.

4.1.5 Safety Planning: This subtask includes access management and corridor studies for the region, crash data hot spot analyses for regional and local governments, coordinating the regional safety coalition and its safety emphasis area team's associated activities, including, but not limited to, regional workshops, Safety Summits, data analyses, and updating and maintaining the safety analysis tool.

Responsible Agency:	Capital Area Metropolitan Planning Organization
Funding Requirement:	$967,616 PL
Product(s):	Planning documents, data sets, contract procurement materials and billing packages, and networks

Subtask 4.2 2045 Metropolitan Transportation Plan

4.2.1 2045 Metropolitan Transportation Plan Development - Consultant Work

CAMPO contracted a General Planning consultant to assist with the development of the CAMPO 2045 Regional Transportation Plan, including the public involvement and outreach, corridor and project prioritization, and draft plan documents. (see Task 1.4).

Responsible Agency:	Capital Area Metropolitan Planning Organization
Product(s):	Public participation plan, meeting materials, technical report(s), draft plan documents

Subtask 4.3 Regional Transit Coordination - Related MPO and Consultant Work

4.3.1 Regional Transit Coordination

This subtask provides support for regional public transportation coordination including the Regional Transit Coordination Committee and associated activities, implementing, maintaining and updating the Capital Area Coordinated Transit-Health and Human Services Transportation Plan.

Responsible Agency:	Capital Area Metropolitan Planning Organization
Funding Requirement:	$50,000 FTA 5304
Product(s):	Reports, memos, agendas

Subtask 4.4 Planning Studies – Other agencies in the CAMPO region (MPO Staff Work is not applicable)

4.4.1 RM 2243 Corridor Study
Feasibility study.

Responsible Agency: TxDOT
Funding Requirement: $575,282 State Funds

4.4.2 Central Texas Turnpike (CTTS) Capital Improvement
Feasibility study – Central Texas Turnpike System Capital Improvement Plan.

Responsible Agency: TxDOT
Funding Requirement: $9,858,734 State Funds

4.4.3 US 77 Feasibility Study
Fayette CL to N. of Industrial Park Rd./S. of CR 327 to Milam CL.

Responsible Agency: TxDOT
Funding Requirement: $2,251,866 State Funds

4.4.4 SH 21 Feasibility Study
Paint Creek to Burleson CL.

Responsible Agency: TxDOT
Funding Requirement: $2,914,780 State Funds

4.4.5 RM 620 Corridor Study
Colorado River to US 183 N.

Responsible Agency: TxDOT
Funding Requirement: $4,281,752 State Funds

4.4.6 FM 685 at Kelly Lane Intersection Preliminary Engineering Study
Analyze near-term and long-range intersection improvement options; including O/D study, geometric possibilities, and cost/benefit concerns.

Responsible Agency: City of Pflugerville
Funding Requirement: $140,000 Local Funds

4.4.7 FM 685/Dessau Corridor Engineering Study
SH130 to Southern City limits or beyond - Analyze innovative intersection/widening improvement options; including traffic analysis, ROW & geometric possibilities, and cost/benefit concerns.

Responsible Agency: City of Pflugerville
Funding Requirement: $140,000 Local Funds

4.4.8 Rowe Lane Overpass/Rowe Lane Corridor Study

Heatherwilde to Eastern City Limits - Overpass preliminary engineering study in conjunction with corridor/alignment study from Heatherwilde to SH130 and east of Hodde.

Responsible Agency: City of Pflugerville
Funding Requirement: $200,000 Local Funds

4.4.9 Pecan Street Preliminary Engineering Study

Impact Way to FM 973 - Overpass preliminary engineering study in conjunction with corridor/alignment study through high-growth areas of our ETJ.

Responsible Agency: City of Pflugerville
Funding Requirement: $100,000 Local Funds

4.4.10 Pecan Street Preliminary Engineering Study

Central Commerce to FM 973 - Preliminary engineering study for urbanizing a high-speed 5-lane rural section highway – pedestrian/adjacent schools/downtown.

Responsible Agency: City of Pflugerville
Funding Requirement: $100,000 Local Funds

4.4.11 Cele Road Corridor Study

Weiss Lane to FM 973 - Corridor/alignment study through high-growth areas of our ETJ.

Responsible Agency: City of Pflugerville
Funding Requirement: $100,000 Local Funds

4.4.12 Project Connect System Plan Project Development

Determine modes and alignments and define locally preferred alternatives (LPA) for several high-capacity transit corridors.

Responsible Agency: Capital Metro
Funding Requirement: $11,000,000 Local Funds

4.4.13 Public Transportation Origin and Destination Study 2020

An origin and destination study every five years to collect comprehensive, statistically valid information about public transportation usage in Central Texas to collect more than 10,000 on-board surveys regarding rider's travel patterns.

Responsible Agency: Capital Metro
Funding Requirement: $500,000 Local Funds

4.4.14 North Lamar / Airport Blvd Grade Separation Design and Environmental

Conduct the environmental process and develop preliminary and final design for a grade separation of the Capital Metro Red Line at the point where it crosses North Lamar Blvd. The purpose of the project is to develop a feasible design to mitigate the existing rail crossing of North Lamar Blvd. as MetroRail service levels increase over time, requiring additional delays to vehicular traffic including Capital Metro buses.

Responsible Agency: Capital Metro
Funding Requirement: $4,697,745 STBG Funds $1,174,436 Local Funds

4.4.15 Corridor Mobility Development Program

Assess a specific corridor's mobility and safety deficiencies, and identify a vision for the long-term modernization of the corridor based on anticipated growth and City of Austin transportation policy.

Responsible Agency: City of Austin
Funding Requirement: $1,000,000 Local Funds

4.4.16 Austin Core Transportation Plan

An update to the 2002 Downtown Access and Mobility Plan. It will serve as a decision-making tool for transportation planning, project development, operations, and demand management, with the goal of making decisions more transparent and predictable for all stakeholders. Outcomes include the identification of TDM strategies, multimodal projects, priority segments, and spatial needs to support mobility to, from, and within downtown for all users.

Responsible Agency: City of Austin
Funding Requirement: $350,000 Local Funds

- FUNDING SUMMARY

Task 4.0 - FY 2020 & FY 2021

Sub task	Responsible Agency	Transportation Planning Funds (TPF)[1]		FTA Sect. 5304		STBG		STATE		LOCAL		Total		Grand Total
		2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020&2021
4.1	CAMPO	483,808	483,808									483,808	483,808	967,616
4.2	CAMPO	-	-									-	-	-
4.3	CAMPO			25,000	25,000							25,000	25,000	50,000
4.4	OTHER AGENCIES	-				4,697,745	-	19,882,414	-	14,804,436	-	39,384,595	-	39,384,595
		-	-			-				-	-	-	-	-
	TOTAL	483,808	483,808	25,000	25,000	4,697,745	-	19,882,414	-	14,804,436	-	39,893,403	508,808	40,402,211

[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.

VI. TASK 5.0 - SPECIAL STUDIES

- **OBJECTIVE**
  To conduct special studies of transportation facilities and/or corridors and transportation-related topics and to implement specialized studies. Includes the assessment of capital investment and other strategies to preserve the existing and future transportation system and reduce the vulnerability of the existing transportation infrastructure to natural disasters.

- **EXPECTED PRODUCTS**
  Continued analysis of corridors in the region
  Regional Transit Plan
  FM 150 /Yarrington Road Corridor Study and Schematic Development
  Bergstrom Spur
  San Marcos Platinum Planning Study
  FM 1626/RM 957 Intersection
  Garlic Creek Parkway
  US 290/RM 12 & Mercer District

- **PREVIOUS WORK**
  Regional Arterial and MoKan/Northeast Subregional
  US 183 Luling Relief Route Alternative Analysis
  Regional Incident Management Plan
  Regional Transportation Demand Management (TDM) Study

- **SUBTASKS**

Subtask 5.1 MPO Staff Work for Task 5.0

5.1.1 General Activities: This subtask allows for MPO staff support for activities related to special transportation planning studies in Subtask 5.1 and 5.2. Specific activities will include participating in special studies. MOU/MOA or other similar documents will be developed to address specific written provision for cooperatively developing and sharing information related to transportation performance data; selection of performance targets; reporting performance targets; reporting and tracking progress.

Responsible Agency:	CAMPO
Funding Requirement:	$158,990 PL
Product(s):	Contract procurement materials and billing packages, meeting packages and materials, technical memos

Subtask 5.2 Special Studies (undertaken by CAMPO and/or Consultant(s)

5.2.1 Regional Transit Study

Develop a long-range planning strategy for a network of potential regional high capacity transit services and supporting infrastructure for the CAMPO six-county region.

Responsible Agency: CAMPO
Funding Requirement: $500,000 STBG $150,000 Local Funds

5.2.2 FM 1626/RM 957 Intersection

Lane use and transportation nodal analysis.

Responsible Agency: CAMPO and City of Buda
Funding Requirement: $160,000 STBG and $40,000 Local Funds

5.2.3 Garlic Creek Parkway

Corridor and connectivity analysis.

Responsible Agency: CAMPO and City of Buda
Funding Requirement: $280,000 STBG and $70,000 Local Funds

5.2.4 Bergstrom Spur

Feasibility analysis of an abandoned rail corridor.

Responsible Agency: CAMPO and City of Austin
Funding Requirement: $280,000 STBG $70,000 Local Funds

5.2.5 US 290/RM 12 & Mercer District

Land use, corridor and node analysis.

Responsible Agency: CAMPO and City of Dripping Springs
Funding Requirement: $360,000 STBG $90,000 Local Funds

5.2.6 San Marcos Platinum Planning Study

Land use, corridor and node analysis.

Responsible Agency: CAMPO and City of San Marcos
Funding Requirement: $800,000 STBG $200,000 Local Funds

5.2.7 FM 150/Yarrington Road Corridor Study and Schematic Development

SH 21 to FM 142/SH 130, conduct feasibility study for new location roadway

Responsible Agency: CAMPO and Caldwell County
Funding Requirement: $1,725,000 STBG and 431,250 Local Funds

Subtask 5.3 Corridor and Feasibility Studies (undertaken by agencies other than CAMPO in the CAMPO region)

5.3.1 MoKan Transportation Corridor Feasibility Study – Segment 2

Study is to assist in the mission of corridor preservation and to identify future operations for this segment of the regionally significant transportation corridor.

Responsible Agency: City of Round Rock
Funding Requirement: $2,000,000 STBG 500,000 TDCs

5.3.2 DFW to Monterrey High Speed Rail Study

The effort to build high-speed trains connecting Dallas, Arlington, and Forth Worth – and eventually Waco, Austin, Laredo and possibly Monterrey, Mexico.

Responsible Agency: NCTCOG
Funding Requirement: $300,000 STBG 200,000 Local

- FUNDING SUMMARY

Task 5.0 - FY 2020 & 2021

Subtask	Responsible Agency	Transportation Planning Funds (TPF)[1]		STBG		Local		Total		Grand Total
		2020	2021	2020	2021	2020	2021	2020	2021	2020&2021
5.1	CAMPO	79,495	79,495	-		-		79,495	79,495	158,990
5.2	CAMPO	-	-	4,105,000		1,051,250		5,156,250	-	5,156,250
5.3	OTHER Agencies	-	-	2,300,000		200,000		2,500,000	-	2,500,000
TOTAL		79,495	79,495	6,405,000	-	1,251,250	-	7,735,745	79,495	7,815,240

[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.

VII. **BUDGET SUMMARY** - Include the following table which provides a summary of all funding requirements for this UPWP by task and source. Include sources of funding (*including carryovers*).

BUDGET SUMMARY - FY 2020 & 2021

UPWP Task	Description	TPF[1] Funds	FTA Sect. 5304	STBG	Local Funds	STATE	Total Funds
1.0	Administration-Management	3,262,432		240,000	60,000		3,562,432
2.0	Data Development and Maintenance	320,176	-	-	-		320,176
3.0	Short Range Planning	417,382	-	-	-		417,382
4.0	Metropolitan Transportation Plan	967,616	50,000	4,697,745	14,804,436	19,882,414	40,402,211
4.5	MTP (other agencies)			-	-		-
5.0	Special Studies	158,990	-	6,405,000	1,251,250		7,815,240
	TOTAL	5,126,596	50,000	11,342,745	16,115,686	19,882,414	52,517,441

[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.

Combined Transportation Planning Funds [2]	$5,126,596
Estimated Unexpended Carryover	$ 9,266
TOTAL TPF	$5,135,862

[2] Estimate based on prior years' authorizations

APPENDIX A

POLICY COMMITTEE MEMBERSHIP

2019 TRANSPORTATION POLICY BOARD

Bastrop County
Clara Beckett
Commissioner, Precinct 2

Burnet County
The Honorable James Oakley
County Judge

Caldwell County
Edward Theriot
Commissioner, Precinct 3

Capital Metro
Terry Mitchell
Capital Metro Representative

City of Austin
The Honorable Steve Adler
Mayor
Transportation Policy Board, Chair

City of Austin
Alison Alter
Council Member, District 10

City of Austin
Jimmy Flannigan
Council Member, District 6

City of Austin
Ann Kitchen
Council Member, District 5

City of Cedar Park
The Honorable Corbin Van Arsdale
Mayor

City of Georgetown
The Honorable Dale Ross
Mayor

City of Pflugerville
The Honorable Victor Gonzales
Mayor

City of Round Rock
The Honorable Craig Morgan
Mayor

City of San Marcos
The Honorable Jane Hughson
Mayor

Hays County
Mark Jones
Commissioner, Precinct 2

Travis County
Gerald Daugherty
Commissioner, Precinct 3

Travis County
The Honorable Sarah Eckhardt
County Judge

Travis County
Brigid Shea
Commissioner, Precinct 2

Travis County
Jeffrey Travillion
Commissioner, Precinct 2

Williamson County
Cynthia Long
Commissioner, Precinct 2
Transportation Policy Board, Vice Chair

TxDOT-Austin District
Terry McCoy
District Engineer

Revised, 02/11/19

APPENDIX B

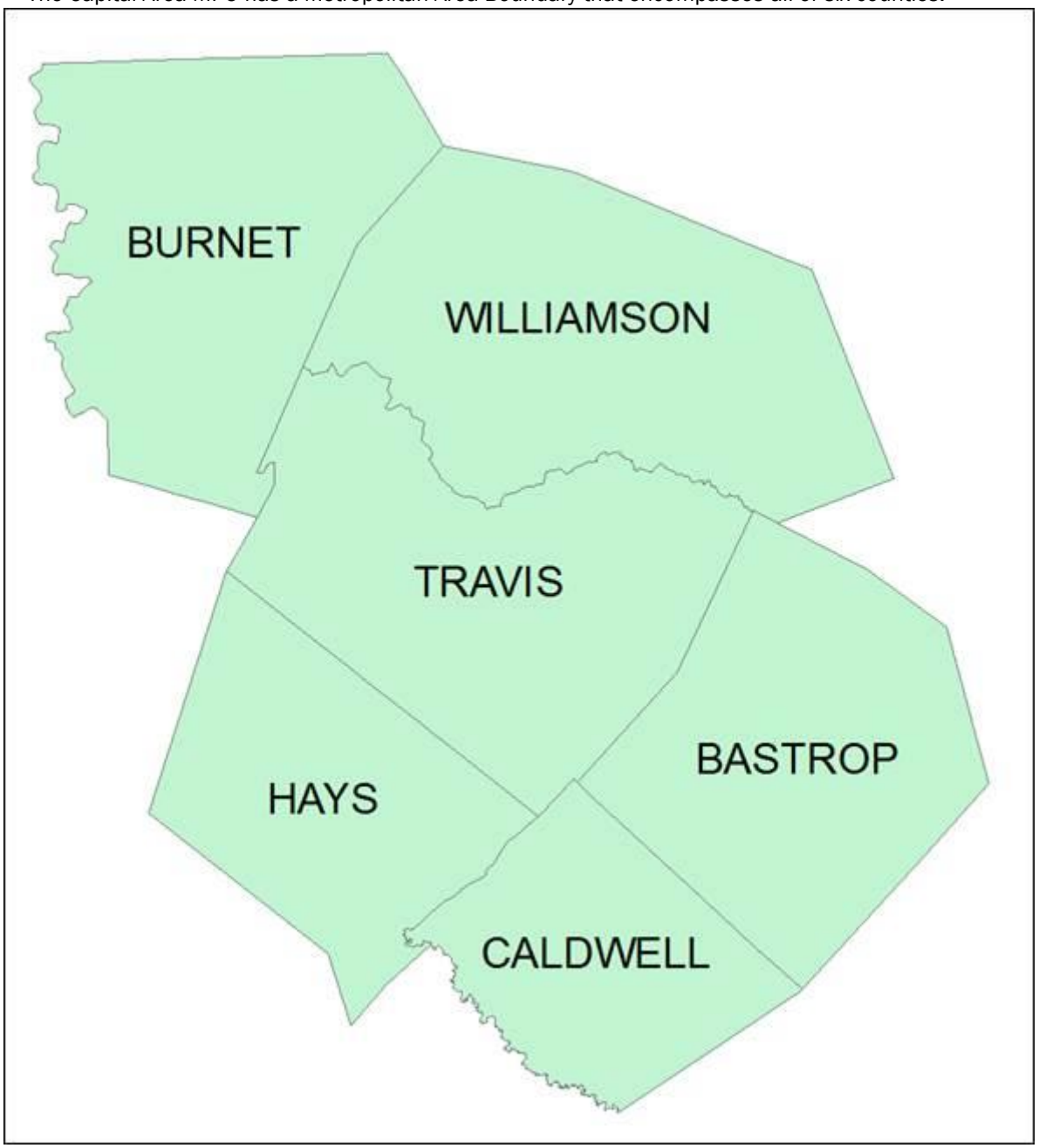
METROPOLITAN AREA BOUNDARY MAP

(GOVERNOR OR GOVERNOR'S DESIGNEE APPROVED)

APPENDIX B

METROPOLITAN PLANNING ORGANIZATION
STUDY AREA BOUNDARY MAP

The Capital Area MPO has a Metropolitan Area Boundary that encompasses all of six counties.



APPENDIX C

DEBARMENT CERTIFICATION
(Negotiated Contracts)

(1) The _____MPO as CONTRACTOR certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public* transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity* with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions* terminated for cause or default.

(2) Where the CONTRACTOR is unable to certify to any of the statements in this certification, such CONTRACTOR shall attach an explanation to this certification.

**federal, state or local*

_____

Signature – Chairman, MPO Policy Committee

_____

Title

_____

Date

APPENDIX D

LOBBYING CERTIFICATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies to the best of his or her knowledge and belief, that:

(1) No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclosure accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

_____

Signature – Chairman, MPO Policy Committee

_____

Title

_____

Agency

_____

Date

APPENDIX E

CERTIFICATION OF COMPLIANCE

I, _____,
(Name and Position, Typed or Printed)

a duly authorized officer/representative of _____

_____,
(MPO)

do hereby certify that the contract and procurement procedures that are in effect and used by the forenamed MPO are in compliance with 2 CFR 200, "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards," as it may be revised or superseded.

_____ _____
Date Signature - Chairman, MPO Policy Committee

Attest:

_____
Name

_____
Title

APPENDIX F

CERTIFICATION OF INTERNAL ETHICS AND COMPLIANCE PROGRAM

I, _____,
(Name and Position, Typed or Printed)

a duly authorized officer/representative of _____

_____,
(MPO)

do hereby certify that the forenamed MPO has adopted and does enforce an internal ethics and compliance program that is designed to detect and prevent violations of law, including regulations and ethical standards applicable to this entity or its officers or employees and that the internal ethics and compliance program satisfies the requirements of by 43 TAC § 31.39 "Required Internal Ethics and Compliance Program" and 43 TAC § 10.51 "Internal Ethics and Compliance Program" as may be revised or superseded.

_____ _____
Date Signature - Chairman, MPO Policy Committee

Attest:

_____
Name

_____
Title

Date:	May 20, 2019
Continued From:	April 22, 2019
Action Requested:	Acceptance

To:	Technical Advisory Committee
From:	Mr. Nirav Ved, Special Assistant to the Executive Director
Agenda Item:	4
Subject:	Recommendation for Acceptance of Luling Transportation Study

RECOMMENDATION

Staff requests Technical Advisory Committee recommendation to the Transportation Policy Board for acceptance of the Luling Transportation Study.

PURPOSE AND EXECUTIVE SUMMARY

This item provides a presentation to the Technical Advisory Committee on the Luling Transportation Study. Created to address increased traffic congestion in the downtown area, the study addresses current and future transportation needs within Luling, including the potential viability of a relief route.

The study recommends near term improvements mainly focused on intersection improvements and increased pedestrian connectivity. Proposed longer term improvements include the development of a new connector which includes a rail overpass and creates more efficient travel movements through, instead of around, Luling.

FINANCIAL IMPACT

Not applicable.

BACKGROUND AND DISCUSSION

Downtown Luling resides at the intersection of three major roadways, US 183, SH 80 and US 90 and serves as a crossroads for access to and from Austin, San Marcos, San Antonio and Houston. As activity in the Eagle Ford Shale has expanded, so has the presence of heavy trucks that must navigate tight turns and a Union Pacific rail line that bisects Luling. When a train is passing through during peak travel times, the resulting backup of heavy trucks and passenger vehicles can extend several miles in all directions.

The goals of the study were to identify needed safety improvements, enhance mobility in downtown for local and through traffic, evaluate the feasibility of a relief route, and promote the unique character of downtown.

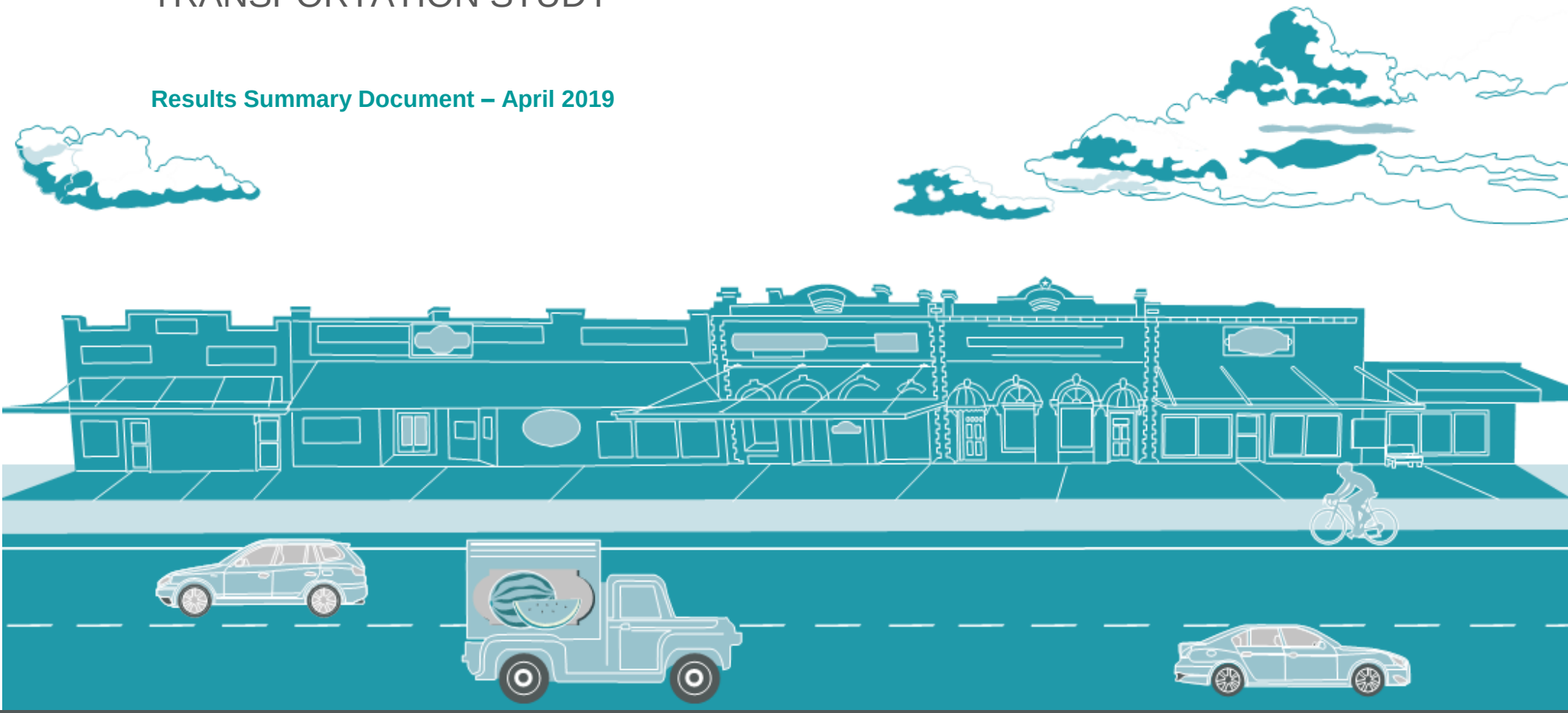
SUPPORTING DOCUMENTS

Attachment A – *Results Summary*
Attachment B – *Survey Summary*

LULING

TRANSPORTATION STUDY

Results Summary Document – April 2019



CAMPO

CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION

CENTRAL TEXAS

Study Goals and Objectives

The purpose of the Luling Transportation Study is to evaluate conditions and transportation needs in Luling, to identify needed improvements, and to set an implementation plan for those improvements. Four project goals and associated objectives were established through coordination with the project steering committee.

Goal 1: Identify needed safety improvements

Objectives: Evaluate and consider

- Crash traffic data
- Bicycle and pedestrian travel
- Union Pacific Railroad and crossings
- Local EMS travel and evacuation routes

Goal 2: Enhance mobility in downtown for local and through traffic

Objectives: Evaluate and consider

- Local travel, freight travel, and recreational through travel
- Near, mid, and long-term improvements
- Ease of travelling public and emergency response to cross railroad tracks

Goal 3: Evaluate feasibility of an alternate route for through traffic (relief route/bypass)

Objectives: Evaluate and consider

- Future impacts with and without an alternate route
- Various future growth scenarios for Luling

Goal 4: Identify and incorporate tools to promote the unique character of downtown and economic development opportunities

Objectives: Evaluate and consider

- Effects on businesses
- Types and ranges of visitors to downtown Luling

Transportation Issues/Needs

Several issues were identified through site observations and conversation with the steering committee, local business owners, emergency responders, and members of the general public, as shown in **Table 1**.

Table 1 - Transportation Issues

#	Issue	Analysis	Needs and Potential Solutions
1	Queuing at southbound and westbound approaches to US 183 / US 90 / SH 80 intersection during peak periods.	• Insufficient capacity of two-lane approaches compared to traffic volume. • Signal timing scheme provides equal green time to through, right, and left turn movements though peak demand is from southbound left and westbound right movements.	• Add capacity at US 183 / US 90 / SH 80 intersection. • Improve signal timing and lane utilization scheme. • Provide relief route around northeast quadrant.
2	Diversion of traffic onto local streets during periods of peak congestion. Some local streets were not built to accommodate high volumes or heavy vehicles.	• Eastbound traffic on SH 80 diverts to parallel streets ahead of US 183 intersection if increased queuing is perceived. • Westbound traffic on US 183 / US 90 diverts to parallel streets (Cedar Avenue, Oak Avenue) ahead of US 183 / US 90 / SH 80 intersection if increased queuing is perceived. • Degradation of pavement quality due to unanticipated heavy vehicle use.	• Add capacity at US 183 / SH 80 / E Austin Street and US 183 / US 90 / SH 80 intersections. • Traffic calming countermeasures on local streets. • Improve wayfinding and route signage. • Provide relief route around northwest and northeast quadrants. • Improve Hackberry Avenue so that some heavy truck and vehicle traffic reroutes from US 183 between US 90 and SH 80 • Provide direct grade-separated connection between SH 80 and US 90 (west of Hackberry Avenue)

#	Issue	Analysis	Needs and Potential Solutions
3	Trains crossings delay traffic approaching and departing north leg of 183 / US 90 / SH 80 intersection by several minutes	• Several closures of at-grade crossing near 183 / US 90 / SH 80 intersection each hour and upwards of 50 closures every day, lasting around two to three minutes each.	• Grade separation of alternate route. • Provide relief route around northwest and northeast quadrants; provide dynamic display signs to influence route choice for drivers.
4	Occasionally, trains stall within downtown, blocking multiple crossing locations and limiting vehicle and emergency service	• Feedback from Steering Committee and stakeholder outreach • During these events, options for crossing the railroad are often limited to the Davis Street crossing (west) and Elm Avenue (east)	• Grade separation of existing or alternate route. • New at-grade crossing and auxiliary route outside of downtown; UPRR typically request closures of at least two at-grade crossing to approve a new at-grade crossing.
5	Unsafe conditions for pedestrians on US 183 between US 90 and SH 80. Frequent vehicle collisions on this stretch of road can exacerbate traffic congestion.	• Feedback from Steering Committee and stakeholder outreach • No marked crosswalk currently exists at Davis Street / US 183 and no continuous sidewalks link to the nearest protected crossings • Crash data from 2012 – 2017 shows high concentration of rear-end, left-turn, and right-angle crashes. Two crashes involving a pedestrian at US 183 / Davis occurred during this time span	• Improve Hackberry Avenue so that some heavy truck and vehicle traffic reroutes from US 183 between US 90 and SH 80 • Provide relief route around northwest and/or northeast quadrants. • Provide direct grade-separated connection between SH 80 and US 90 (west of Hackberry Avenue) • Pedestrian crossing treatment at US 183 / Davis Street. Extend sidewalks along US 183.
6	Heavy freight traffic headed east-west via SH 80 and US 183, encounters bottleneck at US 183 / SH 80 / Austin Street and US 183 / US 90 / SH 80 intersections	• StreetLight data indicates that this is movement with the heaviest daily and peak hour freight demand	• Improve Hackberry Avenue so that some heavy truck and vehicle traffic reroutes from US 183 between US 90 and SH 80 • Provide direct grade-separated connection between SH 80 and US 90 (west of Hackberry Avenue) • Reconfigure lane assignment and signal timing at US 183 / US 90 / SH 80 intersection

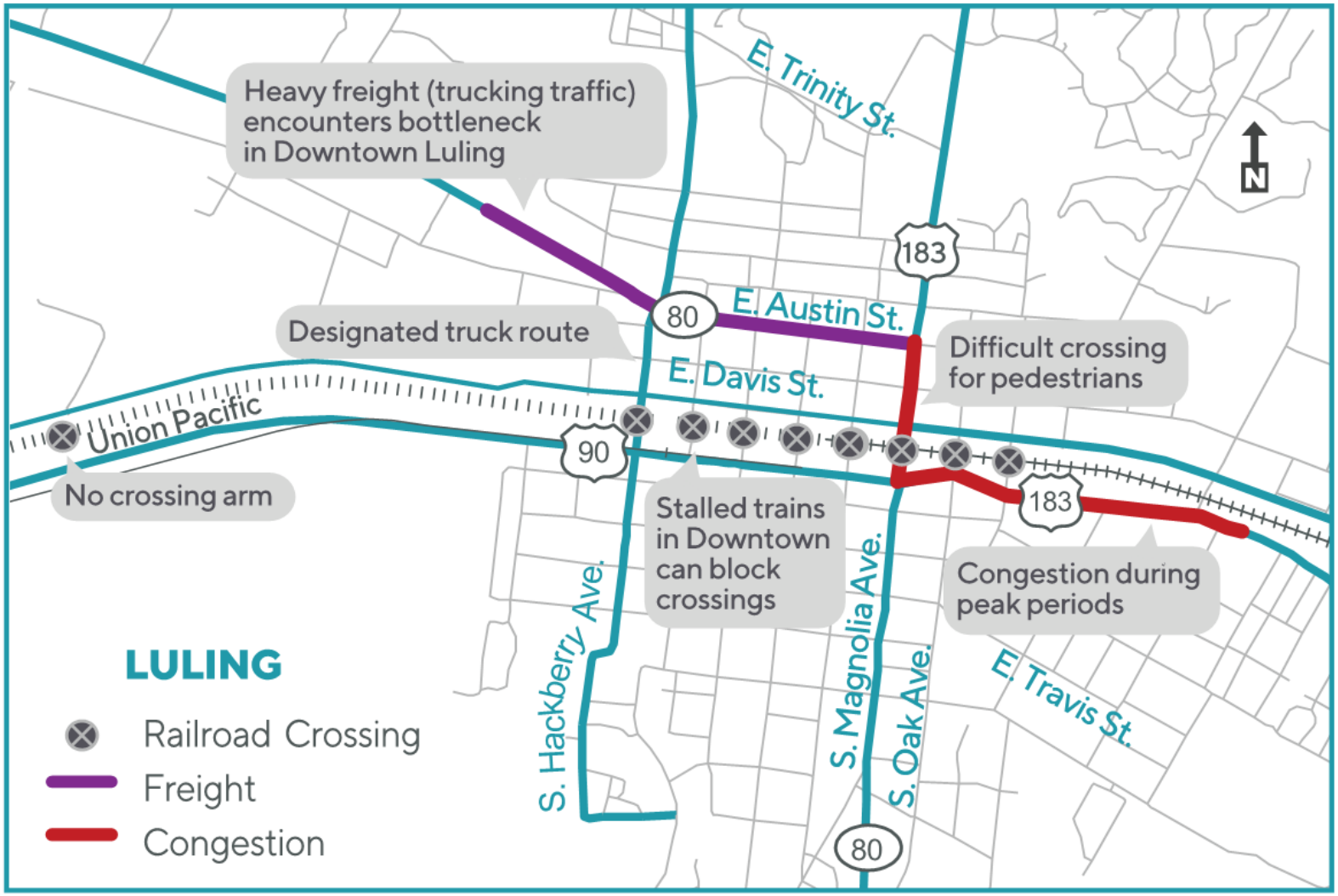


Figure 1 – Luling Issues Map

Traffic Data and Analysis

The following tables and figures display traffic counts and travel pattern information from several data sources. These counts were collected for the Luling study area to better understand traffic volume levels, truck activity, peaking characteristics, and directional distribution. Average annual daily traffic (AADT) counts from the TxDOT Traffic County Database System (TCDS) were compiled and summarized for approaching/departing study area roadways. Peak Period turning movement counts (TMCs) were collected for the five study area intersections in September 2018. Additionally, aggregated cell phone and GPS travel pattern data from StreetLight was extracted and analyzed to better understand peak Friday travel conditions and the most common routes of travel through the City.

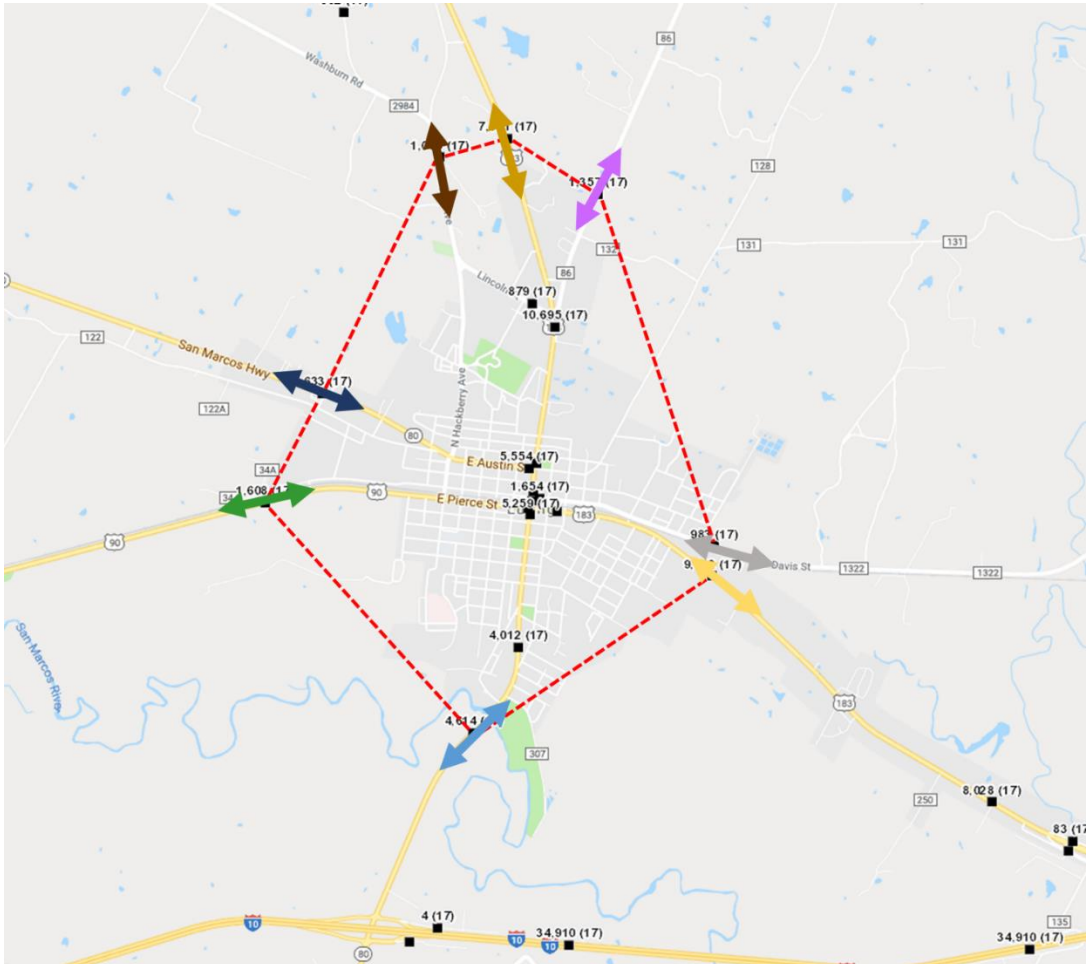


Figure 2 - 2017 Luling Study Area AADT (use with Figure 3)

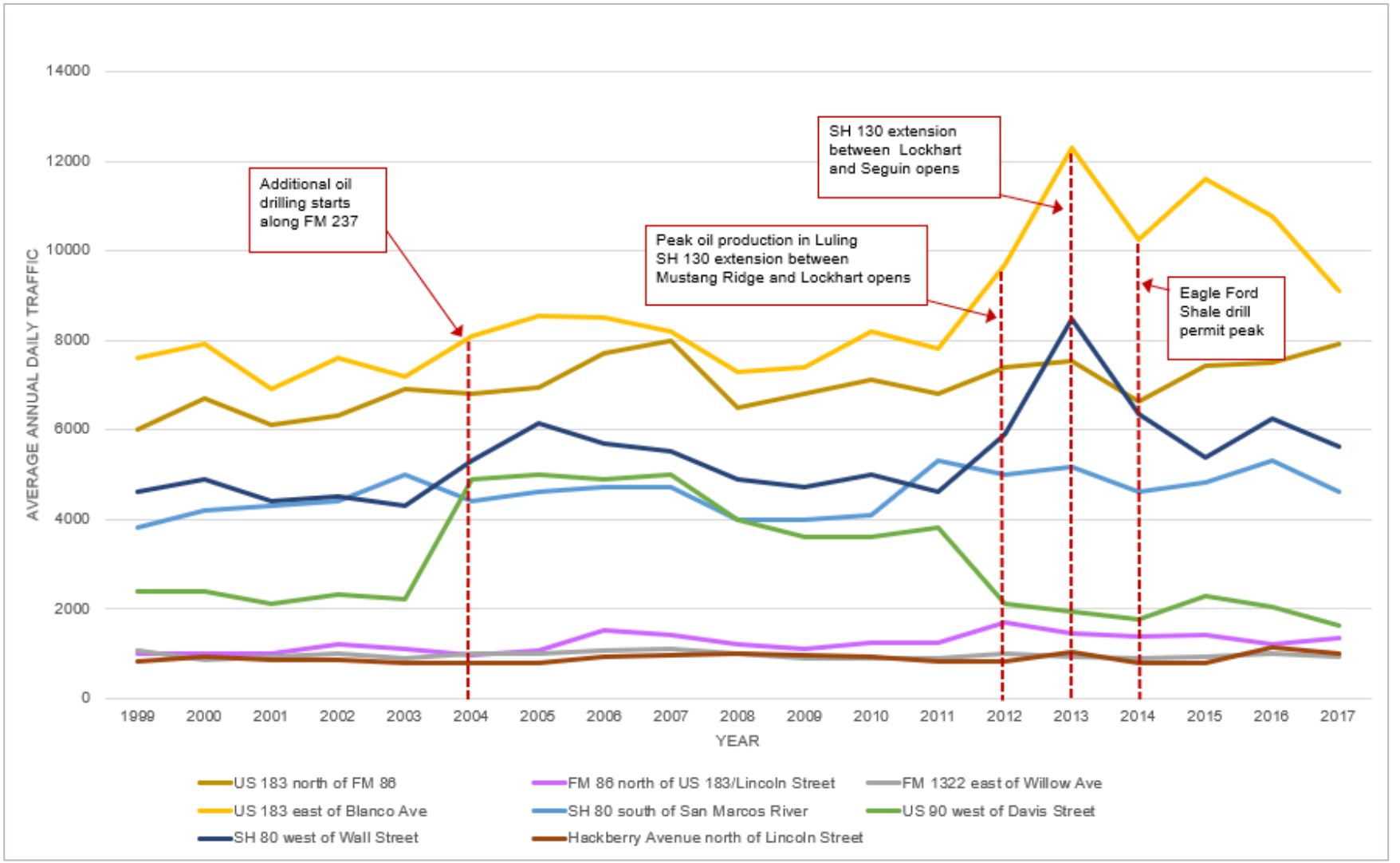


Figure 3 - Historic Counts Entering/Exiting Luling (use with Figure 2)

Table 2 - Thursday/Friday PM Peak Hour Volumes

Period Start	Thursday, September 27th						Friday, September 28th					
	SH 80 at Hackberry Avenue	US 183 & SH 80 & US 90	US 183 & SH 80	US 183 & SH 86	US 90 at Hackberry Avenue	Total (15-minutes)	SH 80 at Hackberry Avenue	US 183 & SH 80 & US 90	US 183 & SH 80	US 183 & SH 86	US 90 at Hackberry Avenue	Total (15-minutes)
16:00	241	381	346	236	179	1383	277	472	425	291	197	1662
16:15	217	351	347	254	108	1277	247	462	424	299	111	1543
16:30	189	383	348	259	98	1277	261	456	444	314	104	1579
16:45	205	368	348	253	102	1276	199	442	385	289	117	1432
17:00	178	382	333	243	108	1244	253	446	415	310	111	1535
17:15	190	378	349	266	111	1294	249	420	426	301	98	1494
17:30	191	379	345	241	104	1260	245	459	422	266	79	1471
17:45	201	344	310	200	108	1163	240	421	428	309	120	1518

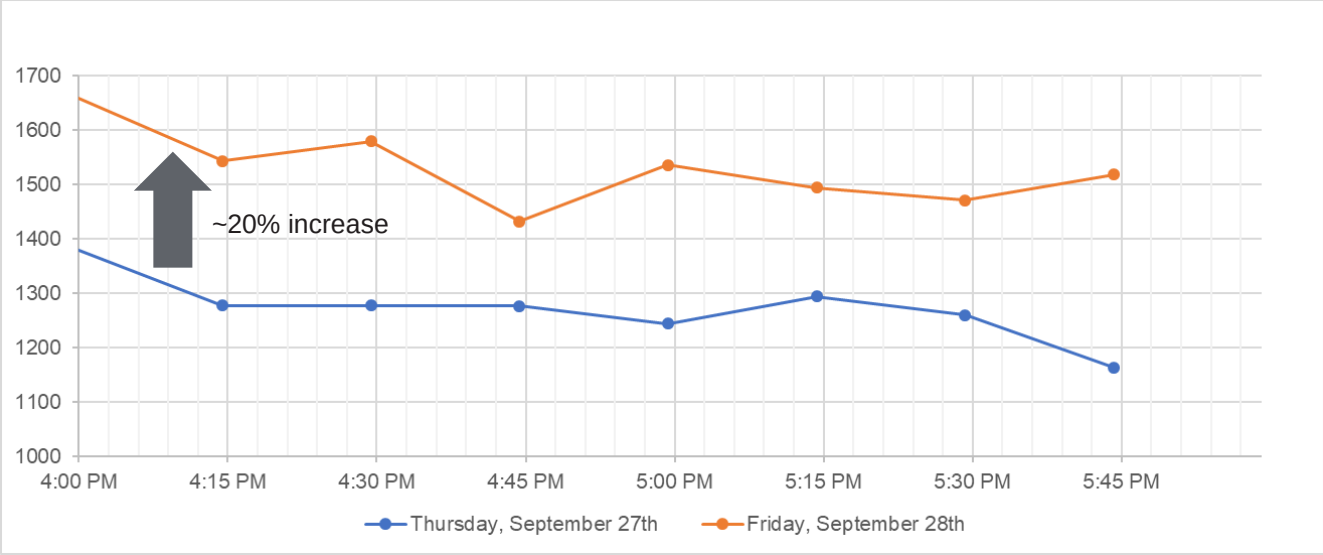


Figure 4 - Study Intersection 15-Minute Count Comparison

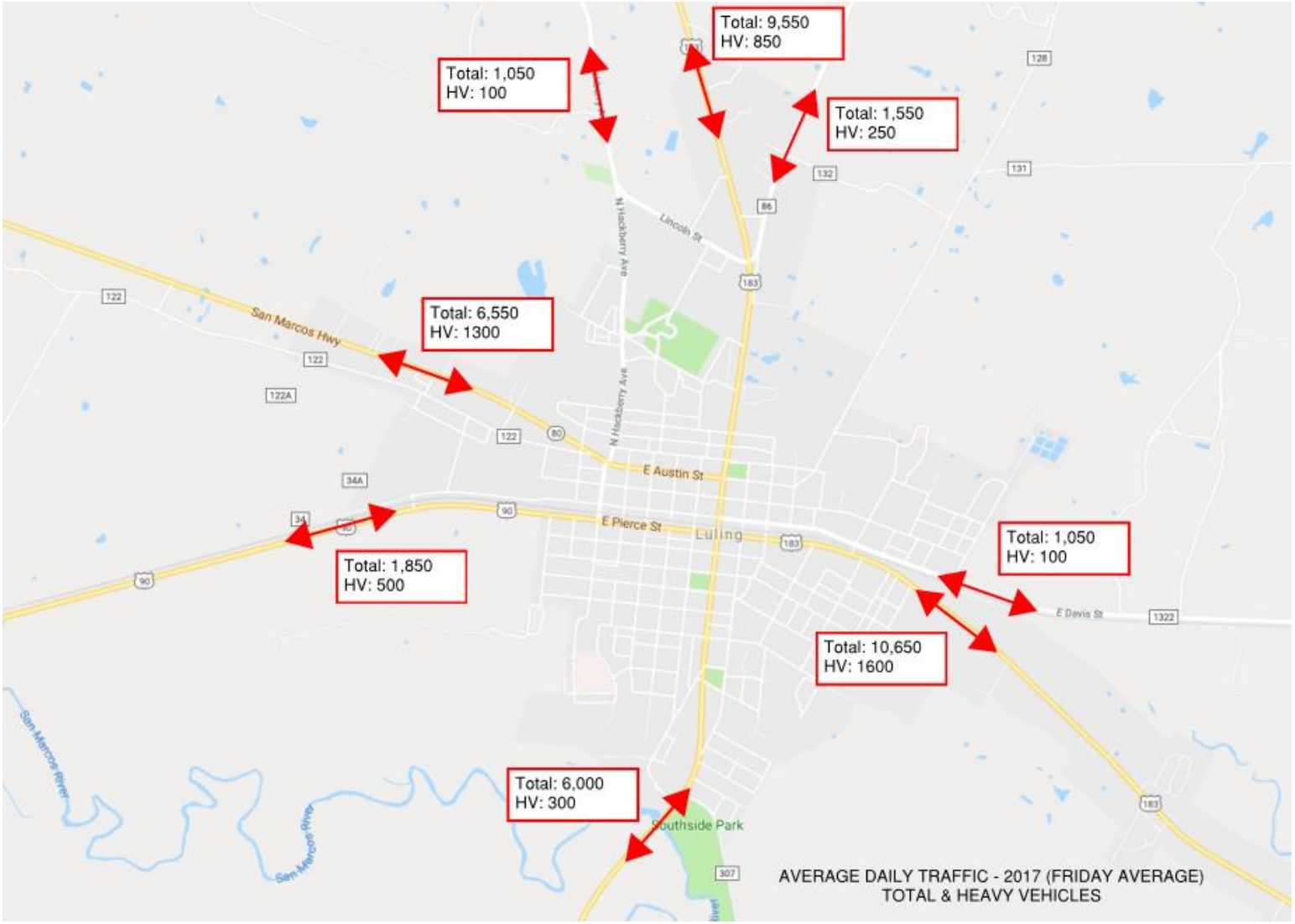


Figure 5 - Average Daily Traffic - 2017 (Friday Average) Total & Heavy Vehicles

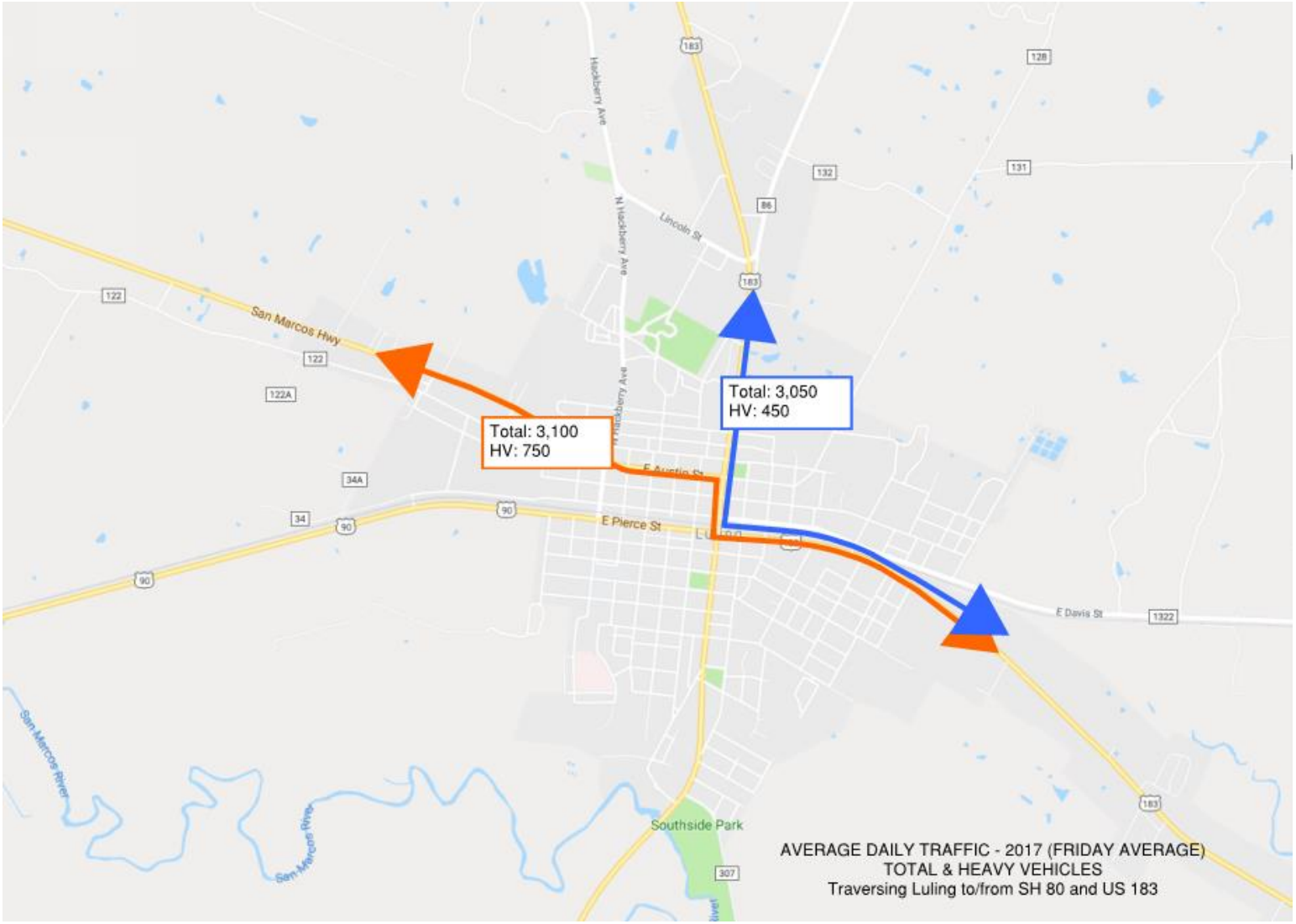


Figure 6 - Average Daily Traffic - 2017 (Friday Average) Total & Heavy Vehicles Traversing Luling to/from SH 80 and US 183

Environmental Constraints Mapping

Environmental constraints mapping is the process of identifying features related to land use, ecology, and geography that need to be considered during conceptual design and feasibility of a transportation project. Watersheds and floodplains were obtained from the Federal Emergency Management Agency (FEMA), and other sites were obtained from the Environmental Protection Agency's NEPAssist Tool. Parcel data was obtained from the Caldwell County Appraisal District. The list below provides definitions for special features contained on the map:

- Historic Sites – sites contained on the National Register of Historic Places.
- National Pollutant Discharge Elimination System – sites with federal permit to discharge pollutants into waters of the United States.
- Hazardous Waste Resource Conservation and Recovery Act Information – sites registered as having generators, transporters, treaters, storers, and disposers of hazardous waste.
- Toxic Releases Inventory – sites with toxic chemical releases and waste management activities reported annually by certain industries as well as federal facilities.
- Threatened and Endangered Species Occurrence – potential habitat of specifies classified as threatened or endangered by the Environmental Protection Agency.
- 100 year floodplain – land with a 1% annual chance of flood hazard.
- 500 year floodplain – land with a 0.2% annual chance of flood hazard.
- Parcels – division of property boundaries.

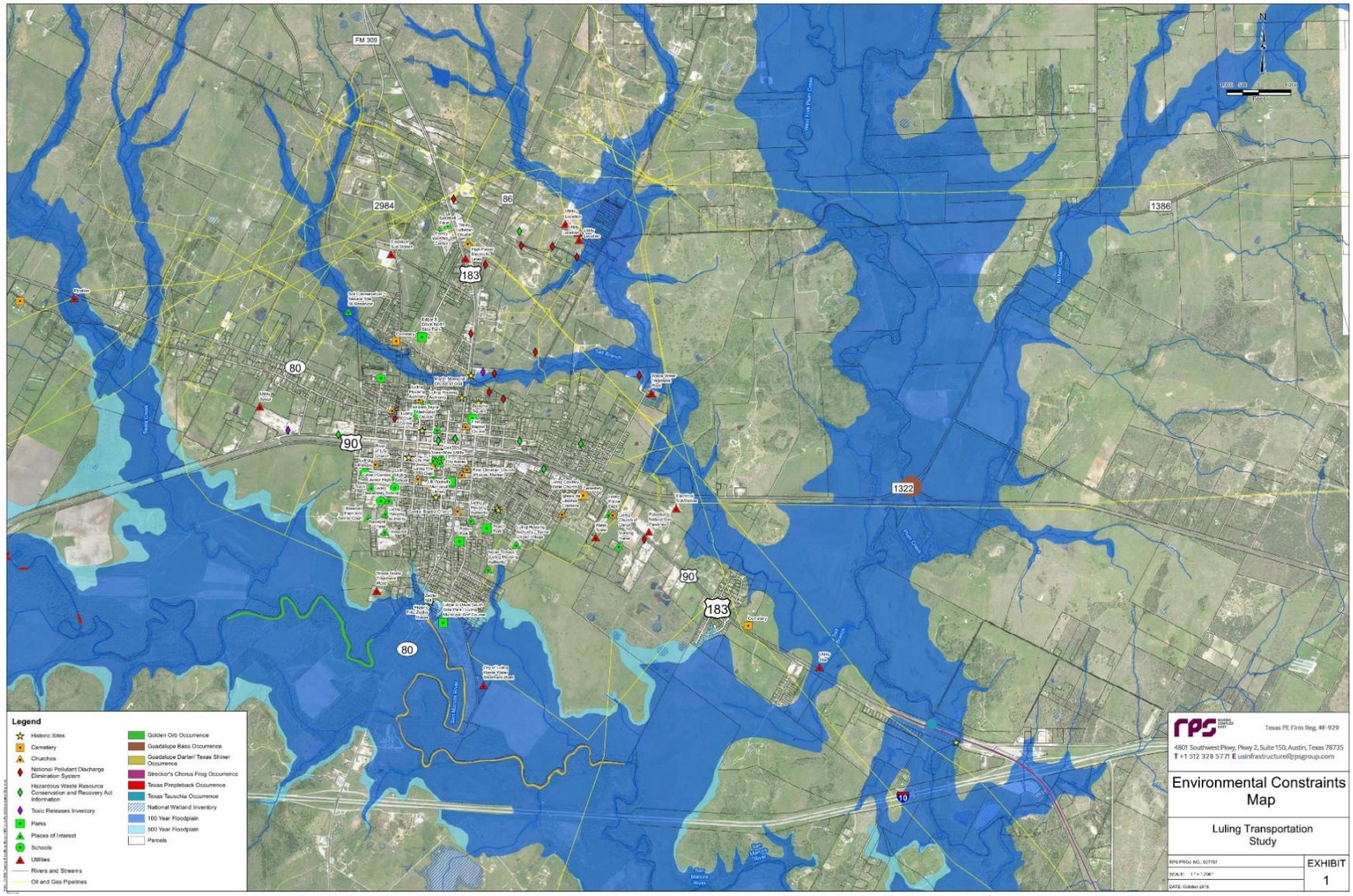


Figure 7 - Environmental Constraints Map

Performance Measures

A set of performance measures to assess potential options was developed in coordination with the project steering committee. The following table lists the four goals of the Luling Transportation Study, their associated performance measures, and the methods of calculation and data source for each measure.

Table 3 - Recommended Performance Measures

Goal	Performance Measure	Unit/Ranking	Method of Calculation	Data Source
Goal 1: Identify needed safety improvements	Predicted annual crash rates by severity	crashes/year	Highway Safety Manual (HSM) Predictive Method	○ TxDOT Crash Records Information System ○ HSM crash modification factors clearinghouse ○ TxDOT Highway Safety Improvement Manual
	Presence of new or improved street crossing or walking path for pedestrians	○ Number of protected crossings added in central Luling ○ Miles of sidewalk/walking paths added	Geographic Information Systems	○ City, County, and TxDOT shapefiles ○ Available aerial imagery
	Number of grade-separated (bridge) railroad crossings provided by improvements	Number of grade-separated crossings added	Geographic Information Systems	○ City, County, and TxDOT shapefiles ○ Available aerial imagery
	Improvement to travel time and reliability for evacuation and emergency response travel (5-minute travel shed area)	Acres of coverage	Geographic Information Systems	○ StreetLight GPS and cell phone data ○ Google maps travel time estimates ○ Turning movement counts collected in September 2018

Goal	Performance Measure	Unit/Ranking	Method of Calculation	Data Source
Goal 2: Enhance mobility in downtown for local and through traffic	Estimated daily entering traffic at US 183 / SH 80 / US 90 intersection	○ Total entering daily traffic ○ Total entering daily traffic	Apply growth rates from CAMPO Travel Demand Model to AADT collected by TxDOT	○ TxDOT Traffic Count Database System ○ CAMPO Travel Demand Model
	Estimated average travel time for typical Friday PM peak hour conditions	minutes	Use StreetLight data to set existing baseline for travel time. Use Synchro outputs to determine increase/decrease.	○ StreetLight GPS and cell phone data ○ Turning movement counts collected in September 2018
	Intersection level of service (LOS) for typical weekday and typical Friday PM peak hour conditions	○ LOS (A – F) ○ Average delay/vehicle	○ Synchro ○ Highway Capacity Manual	○ Turning movement counts collected in September 2018
	Average railroad crossing delay for typical weekday and typical Friday PM peak hour conditions	○ Daily Vehicle hours of delay at US 183 and Hackberry crossings ○ Friday PM peak vehicle hours of delay at US 183 and Hackberry crossings	Use StreetLight data to set existing baseline for railroad delay. Use Synchro outputs to determine increase/decrease.	○ StreetLight GPS and cell phone data ○ Turning movement counts collected in September 2018

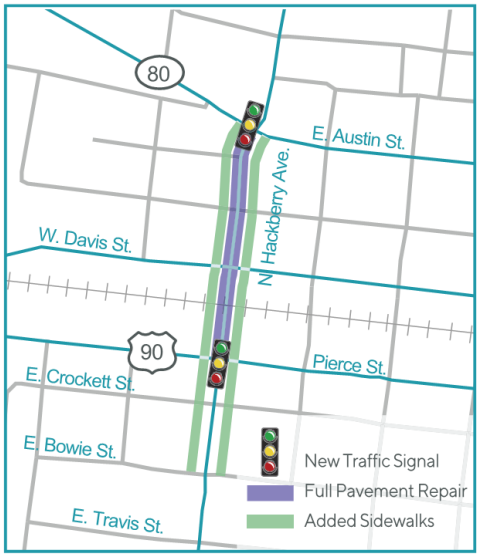
Goal	Performance Measure	Unit/Ranking	Method of Calculation	Data Source
Goal 3: Evaluate feasibility of an alternate route for through traffic	Estimated cost of each alternative including design, environmental compliance, right-of-way, and construction	Million $	Generalized unit cost and quantities	Recent unit costs for Caldwell County, City of Luling, or TxDOT Austin District
	Environmental impacts in terms of network fuel consumption and greenhouse gas emissions (PM peak hour)	○ Gallons fuel consumed ○ Kilograms carbon monoxide emitted	○ Synchro ○ Highway Capacity Manual	○ Turning movement counts collected in September 2018 ○ EPA Greenhouse Gas Equivalencies Calculator
	Overall environmental suitability of improvements (floodplains, land use, cultural resources, etc.)	Level of suitability 1 = low, many conflicts 2 = medium, some conflicts 3 = high, few conflicts	Qualitative, with Geographic Information Systems mapping	Shapefiles from City, County, TxDOT, FEMA, and Texas Parks and Wildlife Department (TPWD) shapefiles

Goal	Performance Measure	Unit/Ranking	Method of Calculation	Data Source

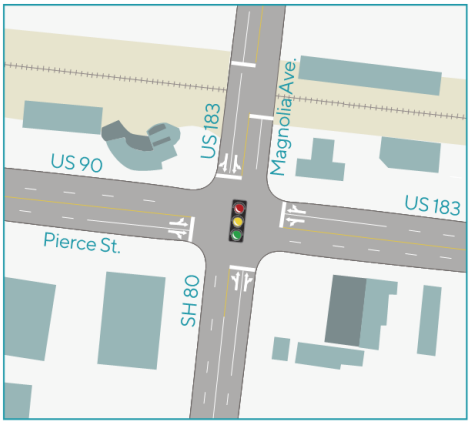
Goal 4: Promote the unique character of downtown and economic development opportunities	Increase or decrease in number of automobiles and trucks passing downtown through US 183 / SH 80 / US 90 intersection; distinguish trips that stop in downtown from pass-through trips	○ Total AADT
		  ○ Local to Luling
		  ○ Pass-through Luling
		○ Daily heavy truck traffic
		  ○ Local to Luling
		  ○ Pass-through Luling
			Apply growth rates from CAMPO Travel Demand Model to AADT collected by TxDOT. Estimate likely traffic diversion with consideration to pass-through activity levels in StreetLight data.	○ TxDOT Traffic Count Database System
				○ CAMPO Travel Demand Model
				○ StreetLight GPS and cell phone data

	Improvement to main street connectivity along US 183 / Davis Street and US 183 / SH 80 / US 90 intersection	○ Number of protected crossings added in central Luling ○ Miles of sidewalk/walking paths added	Qualitative	Qualitative

Short-Term Improvement Options – Elements and Rough Order of Magnitude



Existing at Magnolia Ave./Pierce St.



Proposed at Magnolia Ave./Pierce St.

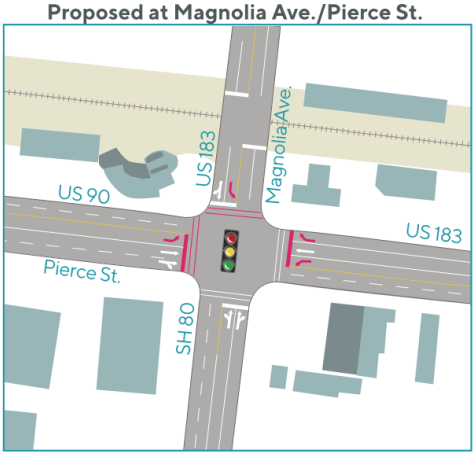


Table 4 – Short-Term Improvements
Rough Order of Magnitude

#	Item	Cost Range (thousand $)
	Hackberry Improvements	
1	Two new signals at SH 80 and US 90 with controller, mast arms, striping, and curb ramps. TxDOT standards.	500
2	Repave 50 ksf of street (1000’ long x 50’ wide)- mill & overlay	125 - 250
3	Striping for centerline and intersection approaches	50
4	Construct 15 ksf of sidewalks (3000’ long x 5’ wide) within existing ROW	150
5	Advance warning and truck route signage on SH 80 EB and US 90 / US 183 WB	25
	Subtotal	$850 - 975
	Magnolia / Pierce (US 183 / SH 80 / US 90) Improvements	
6	Restripe dedicated turn pockets and crosswalks	30
7	Signal head modifications (EB and WB approaches, only) and added crosswalk countdown timers	20 - 70
8	250 sf ROW on NW corner to improve WBR turn radii for large trucks (land values estimated from Caldwell CAD)	5 - 10
9	Reconstruct 4 curb ramps with widened WBR turn radii	40 – 60
10	Construct 2.5 ksf of sidewalks (500’ long x 5’ wide) within existing ROW	25
11	Relocate signal mast arm and gas station sign (NE corner)	5
	Subtotal	$125 – 200
	Additional Studies	
12	Neighborhood traffic calming study	50
13	Safe routes to school plan	50
14	Four-way stop-sign evaluation at Walnut Avenue / Pierce Street intersection	5 – 15
	Subtotal	$105 – 115
	TOTAL	$1,180 – 1,290

Long-Term Improvement Options – Elements and Rough Order of Magnitude

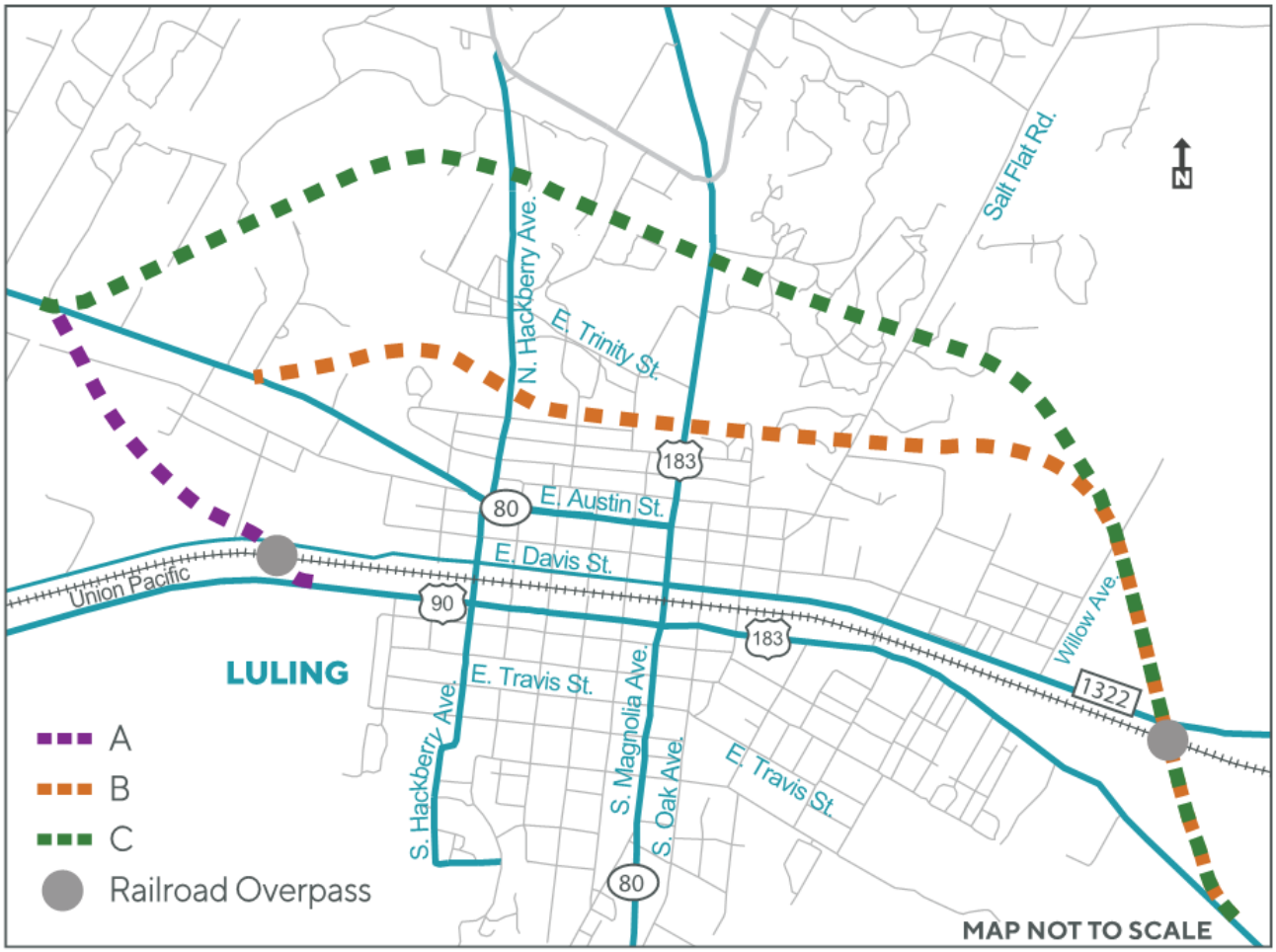


Table 5 – Option A – Rough Order of Magnitude

#	Item	Cost Range (thousand $)
1	New two-lane roadway with approximately 100' cross-section (12' lanes, 10' shoulders, 28' clear zone/drainage each direction) – variable alignments 0.8 – 1.2 miles	3,500 – 5,200
2	ROW, 12 – 15 acres (land values estimated from Caldwell CAD)	850 – 1,050
3	Side-street stop-controlled intersection at new alignment intersection with SH 80, with channelized EBR turn	200
4	500' span bridge over Davis Street, UPRR, and US 90 (eastbound connector)	2,000 – 3,000
5	500' add lane on US 90 westbound for WB to NB connection; 500' drop lane on US 90 eastbound for SB to EB connection	200 - 400
6	Advance warning and truck route signage on SH 80 EB and US 90 / US 183 WB	50
	TOTAL	$6,800 – 9,900

Table 6 – Option B – Rough Order of Magnitude		
#	Item	Cost Range (thousand $)
1	New two-lane roadway with approximately 100' cross-section (12' lanes, 10' shoulders, 28' clear zone/drainage each direction) – variable alignments 3.5 – 4.0 miles	15,000 – 17,500
2	ROW, 35 – 40 acres (land values estimated from Caldwell CAD)	2,500 – 2,800
3	Side-street stop-controlled intersection at new alignment intersection with SH 80, with channelized EBR turn. Includes advance warning and truck route signage.	200
4	Side-street stop-controlled intersection at new alignment intersection with Hackberry. Includes advance warning and truck route signage.	200
5	New signalized intersection at new alignment intersection with US 183 north of Austin Street. TxDOT standards. Includes advance warning and truck route signage.	500 - 1000
6	500' span bridge over FM 1322 and UPRR	2,000 – 3,000
7	New signalized intersection at new alignment intersection with US 183 east of Blanco Avenue. TxDOT standards. Includes advance warning and truck route signage.	500
	TOTAL	$20,900 – 25,200

Table 7 – Option C – Rough Order of Magnitude		
#	Item	Cost Range (thousand $)
1	New two-lane roadway with approximately 100' cross-section (12' lanes, 10' shoulders, 28' clear zone/drainage each direction) – variable alignments 4.0 – 4.5 miles	17,500 – 20,000
2	ROW, 40 – 45 acres (land values estimated from Caldwell CAD)	2,800 – 3,150
3	Side-street stop-controlled intersection at new alignment intersection with SH 80, with channelized EBR turn. Includes advance warning and truck route signage.	200
4	Side-street stop-controlled intersection at new alignment intersection with Hackberry. Includes advance warning and truck route signage.	200
5	New signalized intersection at new alignment intersection with US 183 north of Austin Street. TxDOT standards. Includes advance warning and truck route signage.	500 – 1000
6	500' span bridge over FM 1322 and UPRR	2,000 – 3,000
7	New signalized intersection at new alignment intersection with US 183 east of Blanco Avenue. TxDOT standards. Includes advance warning and truck route signage.	500
8	Two bridges over Salt Branch (assume each 500' span)	4,000 – 6,000
	TOTAL	$27,700 – 34,050

Improvement Options – Performance Measurement

A performance measures matrix was created to visually convey how each option compares to the existing conditions and 2045 no build conditions, as well as to each other. The performance measures were calculated using the methods and data sources decribed in **Table 8** the data for each measure based on the condition of the study area. “High” and “low” traffic growth scenario were analyzed to account for uncertainty and to create create a range of performance.

Generating “High” and “Low” Traffic Forecasts

The project team recognizes that there is not a clear indication of how transportation conditions will change through Luling over the next 25 years. The oil boom ended several years ago, so some of the historical data indicates that traffic and truck growth will proceed at the moderate rates observed during much of the last 20 years. However, it could be argued that the oil market is cyclical, and new production technologies or increase in domestic/global demand could result in more booms like the one experienced between 2011 and 2014.

Several data sources and traffic models were reviewed to determine a potential range of growth rates (low and high):

- *Historical traffic counts from TxDOT Traffic Count Database System (TCDS)*– for locations with two or more years of available AADT data, a logarithmic (trendline) growth rate was calculated. All study location had data spanning 1999 – 2019.
- *CAMPO 2040 Regional Transportation Plan (RTP) Model* – CAMPO maintains a regional transportation plan model for long range traffic forecasting. CAMPO provided directional ADT and peak hour volume outputs for the City of Luling for years 2010 and 2040. Growth rates between these two years were calculated for each approaching/departing roadway.

Growth rates were averaged for eight approach/departure roadways. The average growth rate for the TCDS historical data is 1%, and the average growth rate for the CAMPO RTP model outputs is 2.7%. The TCDS growth rate accounts for nearly 20 years of variation in traffic volumes, including the emergence and dissipation of the oil boom between 2011 and 2014. The CAMPO RTP model may have somewhat higher growth rates than the TCDS counts due to the expectation that population and employment growth in Caldwell County will begin to pick up as the areas surrounding Austin continue to develop. To capture a range of potential traffic growth scenarios, the 1% annual growth rate from the TCDS was assumed as a “low” scenario and the 2.7% CAMPO RTP rate as a “high” scenario.

Table 8 - Performance Measures Matrix

Goal	Measure	Unit	Existing	No Build		Near-Term Improvements		Option A		Option B/C	
				Low	High	Low	High	Low	High	Low	High
1	Predicted annual crash rates by severity	crash/yr	22	30	41	27	39	26	36	27	36
	Presence of new or improved street crossing or walking path for pedestrians	Number of protected crossings added in Central Luling	0	0		**10**		0		0	
		Miles of sidewalk/walking paths added	0	0		**0.6**		**0**		**0**	
	Number of at-grade and grade separated railroad crossings provided by improvements	Number of grade-separated crossings (bridges over rail) added	0	0		0		**1**		**1**	
	Improvement to travel time and reliability for evacuation and emergency response travel (5-minute travel shed area)	Acres of coverage	1892	823		2068		2169		2194	
2	Estimated daily entering traffic at US 183/ SH 80 /US 90 intersection	Total entering daily traffic	18500	23500	32100	23500	32100	23500	32100	18550	25300
		Total entering daily trucks	1600	2100	2850	2100	2850	2100	2850	700	900
	Estimated Friday PM travel time for automobiles (seconds)	SH 80 EB from Scenic View Drive to US 183 EB at Oakview Rd	9	11	17	6	7	4	5	6	6
		US 183 SB at FM 309 to US 183 EB at Oakview Rd	9	10	14	9	9	9	9	6	6
		US 183 WB at Oakview Rd to SH 80 WB at Scenic View Drive	9	13	21	7	8	6	6	6	6
		US 183 NB at Oakview Rd to US 183 NB at FM 309	8	12	20	6	7	6	7	6	6
	Intersection level of service (LOS) for typical Friday PM peak hour conditions	US 183 / SH 80	B	B	E	B	C	B	C	B	C
		US 183 / SH 80 / US 90	F	F	F	C	D	C	D	C	C
		Hackberry / SH 80	A	B	F	B	C	A	D	A	E
		Hackberry / US 90	A	B	F	A	B	A	A	B	F
	Intersection average delay for typical Friday PM peak hour conditions (seconds)	US 183 / SH 80	13	19	78	11	26	11	23	12	22
		US 183 / SH 80 / US 90	109	257	554	25	50	25	50	20	31
		Hackberry / SH 80	4	12	995	16	26	6	31	6	43
		Hackberry / US 90	8	13	145	9	13	7	9	13	145
	Total railroad crossing delay for typical weekday and typical Friday PM peak hour conditions	Daily vehicle hours of delay at US 183 crossing	104	135	193	131	185	110	156	99	138
		Friday PM peak vehicle hours of delay at US 183 crossing	16	21	32	21	32	18	26	16	24

Goal	Measure	Unit	Existing	No Build		Near-Term Improvements		Option A		Option B/C	
				Low	High	Low	High	Low	High	Low	High
	Estimated cost of each alternative including design, environmental compliance, right-of-way, and construction	Million $	n/a	n/a	n/a	1.2	1.3	7	10	21	34
	Environmental impacts in terms of network fuel consumption and greenhouse gas emissions (Friday PM peak hour)	Gallons of fuel consumed	143	242	910	160	285	150	273	164	312
		kg CO emissions	9.97	16.92	63.6	11.19	19.92	10.47	19.06	11.47	21.82
3	Overall environmental suitability of improvements (floodplains, land use, cultural resources, etc.)	1= low, many conflicts, 2=medium some conflicts, 3 = high, few conflicts	-	-	-	High	High	Med	Med	Low	Low
4	Increase or decrease in number of automobiles and trucks passing downtown through US 183 / SH 80 / US 90 intersection; distinguish trips that stop in downtown from pass-through trips	Total AADT	18500	23500	32100	23500	32100	23500	32100	18550	25300
		AADT Local to Luling	10900	14400	16400	14400	16400	14400	16400	14400	16400
		AADT Pass-through Luling	7600	9100	15700	9100	15700	9100	15700	4150	8900
		Total AADT compared to No Build	n/a	n/a	n/a	0	0	0	0	-4950	-6800
		Total Heavy Trucks	1600	2100	2850	2100	2850	2100	2850	900	1200
		Total Heavy Truck Local to Luling	150	350	450	350	450	350	450	350	450
		Total Heavy Truck Pass-through Luling	1450	1750	2400	1750	2400	1750	2400	550	750
		Heavy Truck volume compared to No Build	n/a	n/a	n/a	0	0	0	0	-1200	-1650
	Improvement to pedestrian connectivity between US 183 / Davis Street and US 183 / US 90 intersections	Number of protected crossings added	n/a	0		**2**		0		0	
		Miles of sidewalk/walking paths added	n/a	0		**0.1**		0		0	

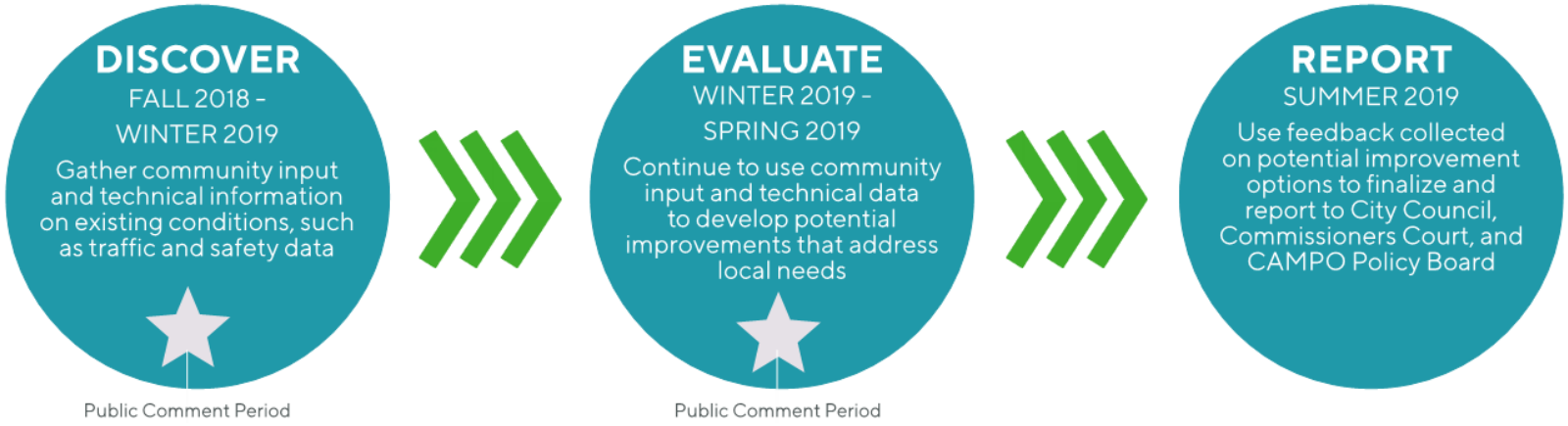
Public Survey – Results Summary

A community survey was developed in both English and Spanish and was administered between January 13, 2019 and February 24, 2019. The purpose of this survey was to determine people's perception of transportation conditions and issues within Luling and gauge opinions of the Luling Transportation Study Goals. In total, 252 responses were completed. Detailed results are contained within the Community Summary Survey Document. Overall, more than 70% of respondent agreed with the goals of the study. Other major findings and a sampling of written comments from the survey are provided below.

Community Concerns as Percentages

- 78% ← Railroad crossings
- Safety conditions → 71%
- 70% ← Volume of freight traffic
- Traffic congestion due to weekend or through travel → 69%
- 68% ← Preserving the character of downtown
- Emergency evacuation routes → 62%
- 61% ← Daily traffic congestion
- Flooding → 56%
- 54% ← Parking availability
- Walking around downtown → 38%

Schedule and Next Steps



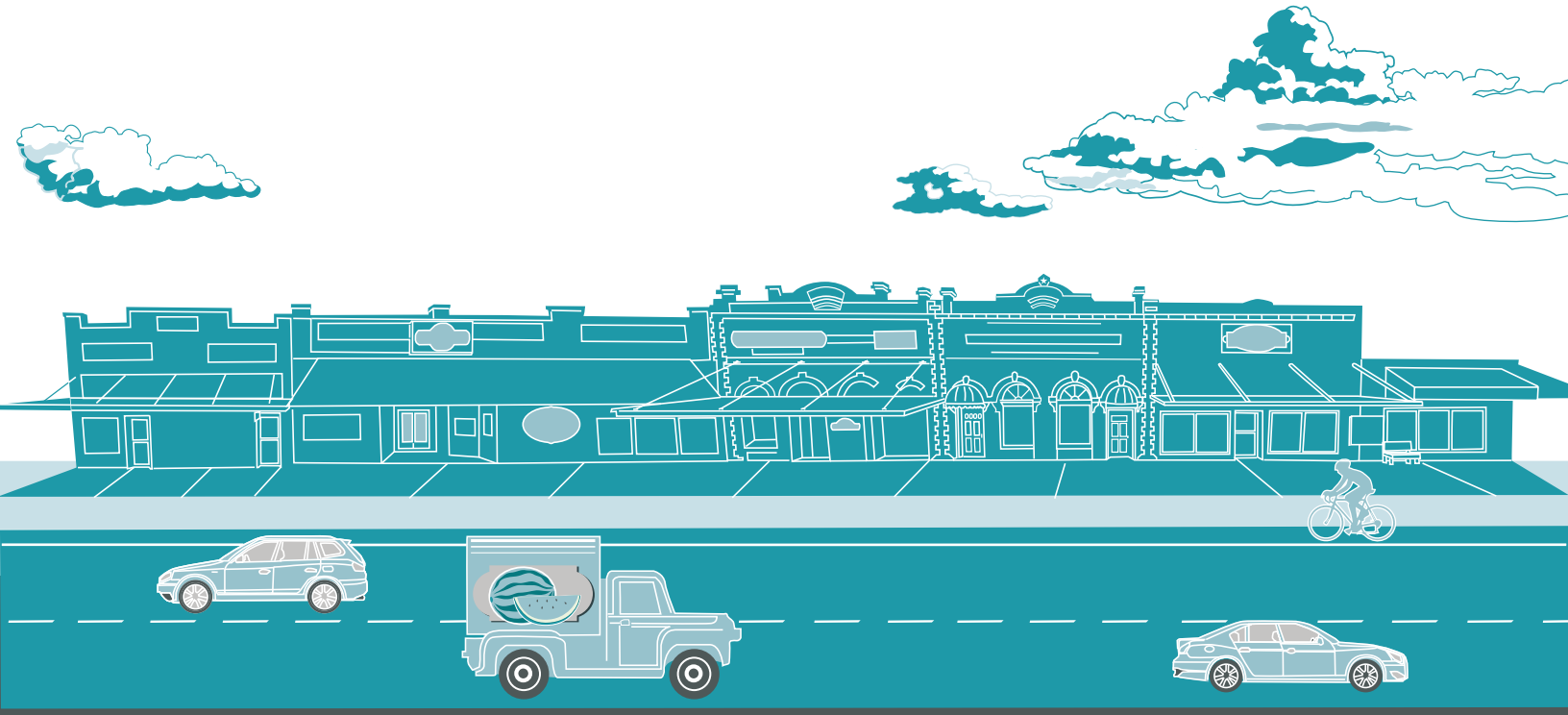
The project team is currently evaluating community input on the short- and long-term options. The public comment period is open now and will be closed on May 15, 2019. Those comments and the materials contained within this document will be used to determine the recommended short- and long-term solutions and to finalize the report in summer 2019.

Other steps remaining in the study process include:

- Present recommendations to Luling City Council, Caldwell County Commissioners Court, and the CAMPO Transportation Policy Board
- Include recommended projects in CAMPO plans
- Secure funding for near-term improvements
- Complete the environmental study, design, and engineering for near-term improvements
- Evaluate travel and consider when long-term improvements are needed

LULING
TRANSPORTATION STUDY

Community Survey Summary



CAMPO
CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION
CENTRAL TEXAS

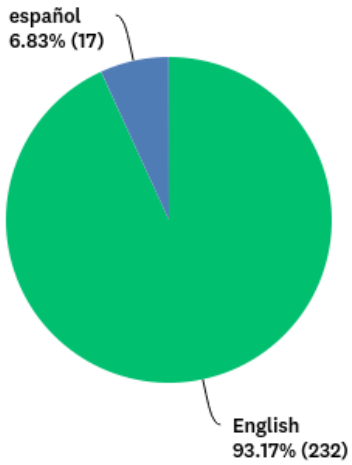
What We Heard

Community Survey

The community survey was developed in English and Spanish and was available online and in print from **January 13, 2019 to February 24, 2019**. Printed copies were available at several community events and distributed to community partners to share with postage-paid return envelopes. **243 English responses and 9 Spanish responses were completed.**

Survey Response Summary

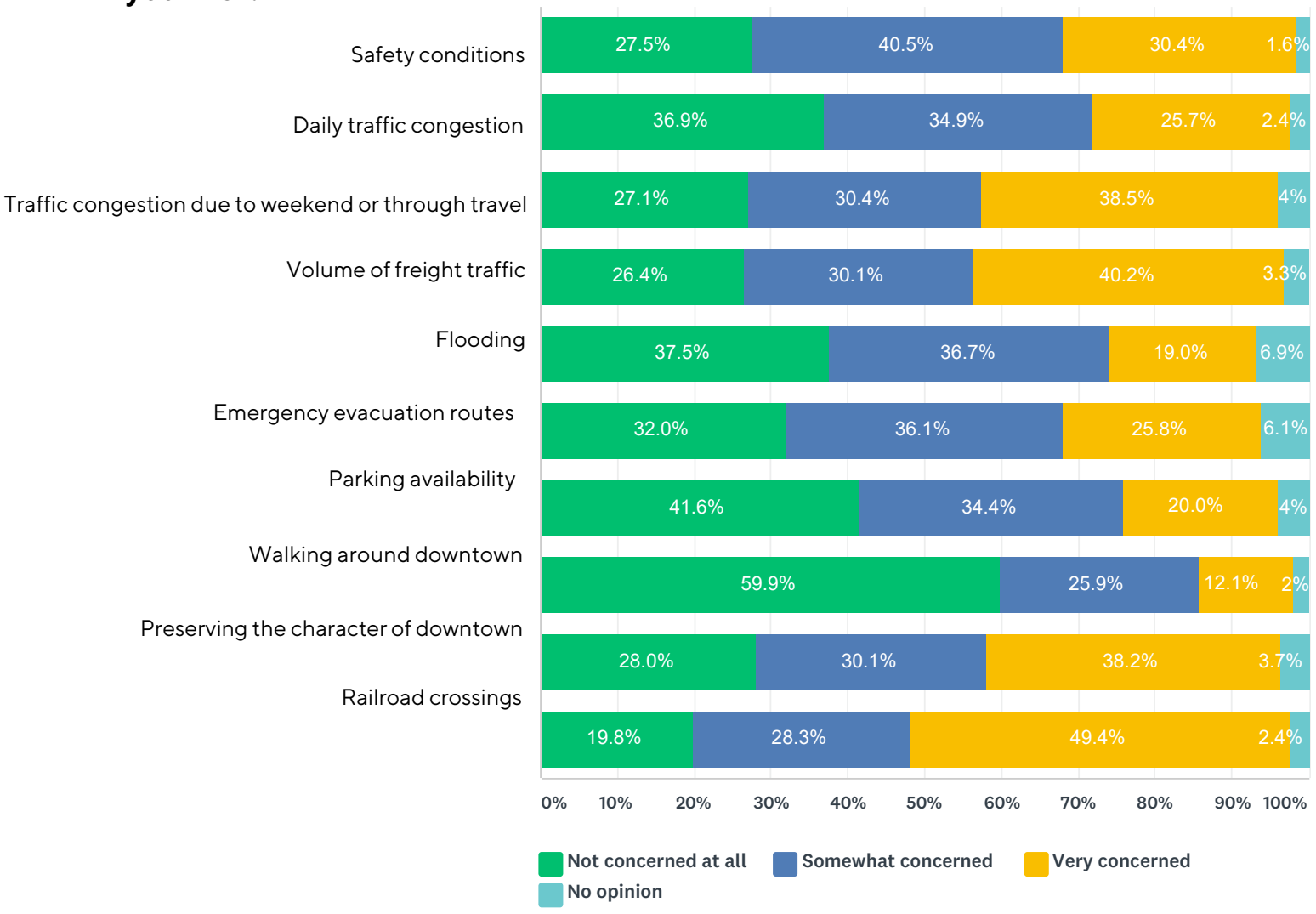
Do you prefer to respond to this survey in English or Spanish? (25 answered, 27 skipped)



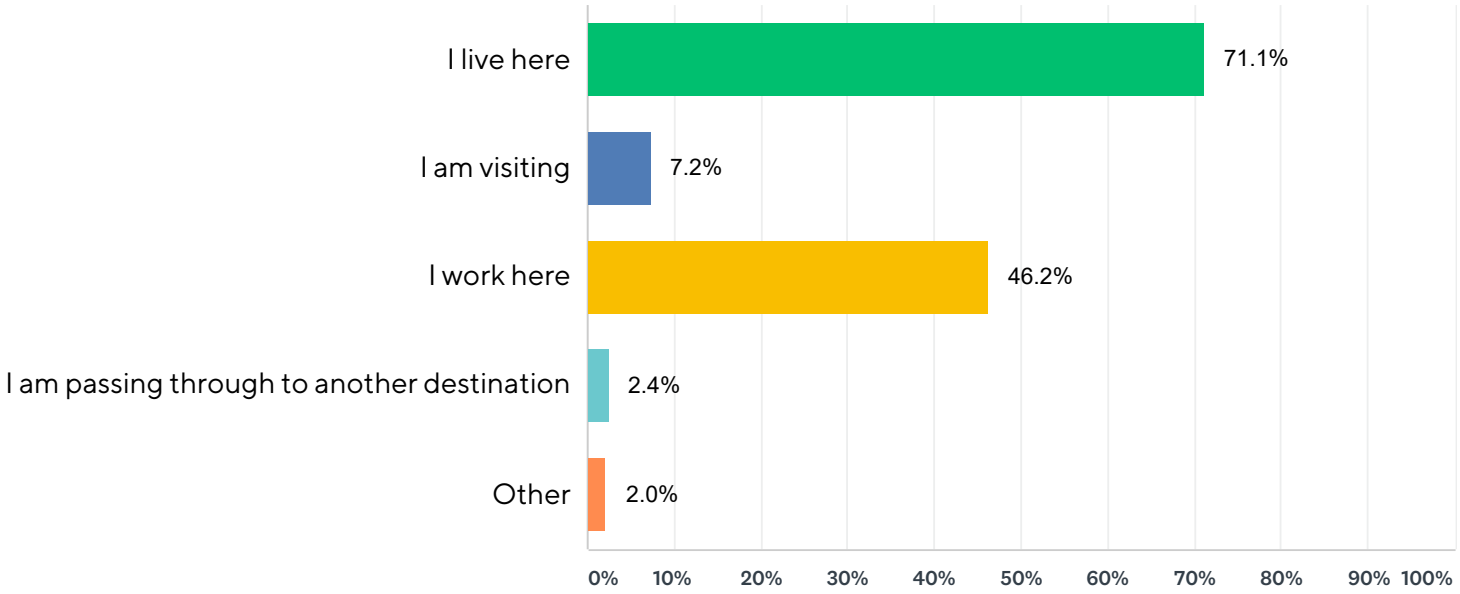
What We Heard

Survey Response Summary

Please share your input on transportation in Luling. How concerned are you with:



What brings you to Luling? (select all that apply)

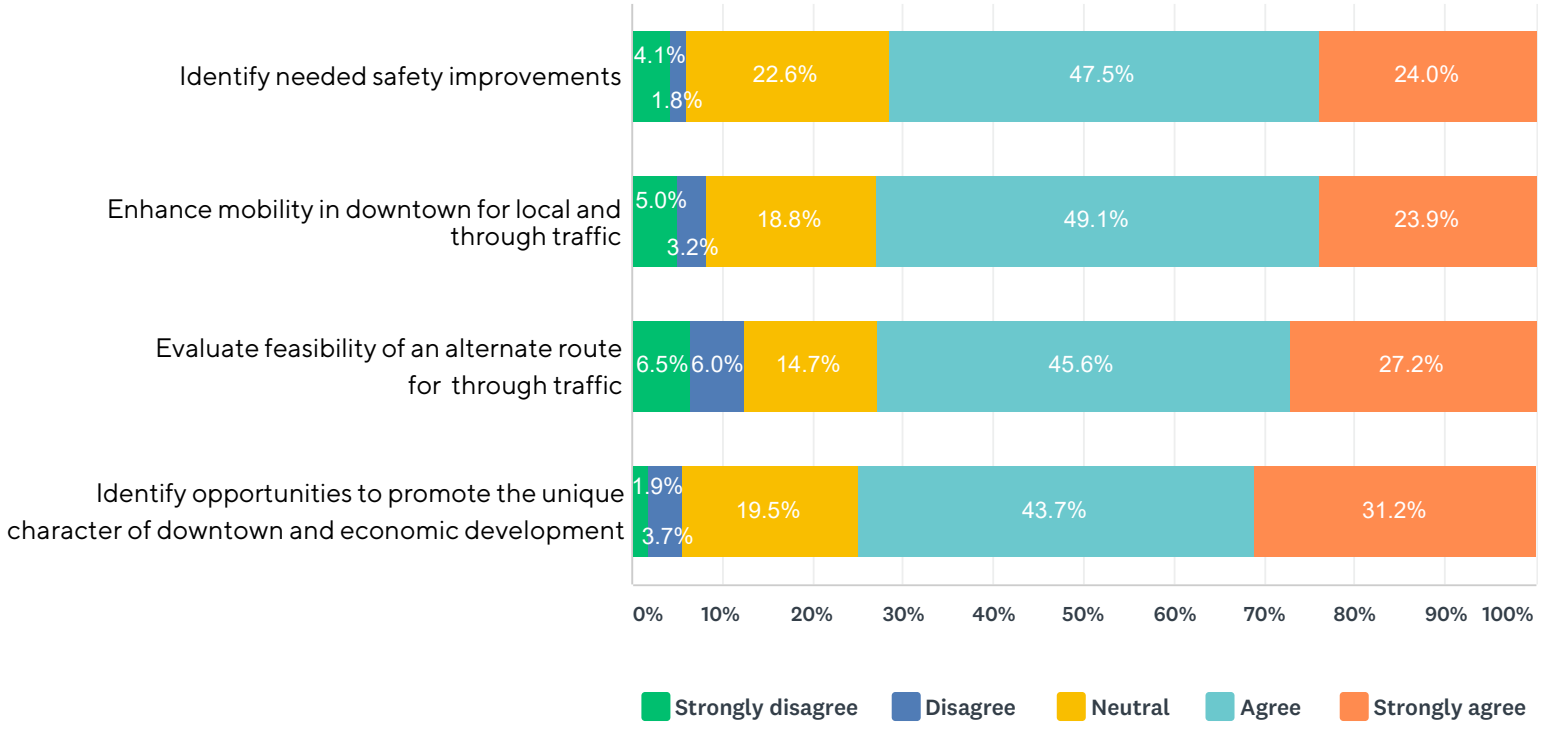


Zip Code	Responses
78648	8
78666	6
78629	6
78155	6
78644	4
78640	4
78130	4
78632	3
78616	3
78744	2
78731	2
78638	2
78622	2
78612	2
78239	2
78764	1
78759	1
78757	1
78660	1
78602	1
78244	1
78109	1
78102	1
77006	1
77539	1

Destination	Responses
Recreation, shopping, dining	5
School	4
Church	2
Austin	2
San Antonio	2
Gonzales	1
Wimberly	1

Frequency	Responses
Daily	10
4-6 times a week	22
1-3 times a week	7
3 times a month	4
1-2 times a month	6
1-2 times a year	4

Do you agree with the study goals?



Do you have any additional comments on transportation in Luling?

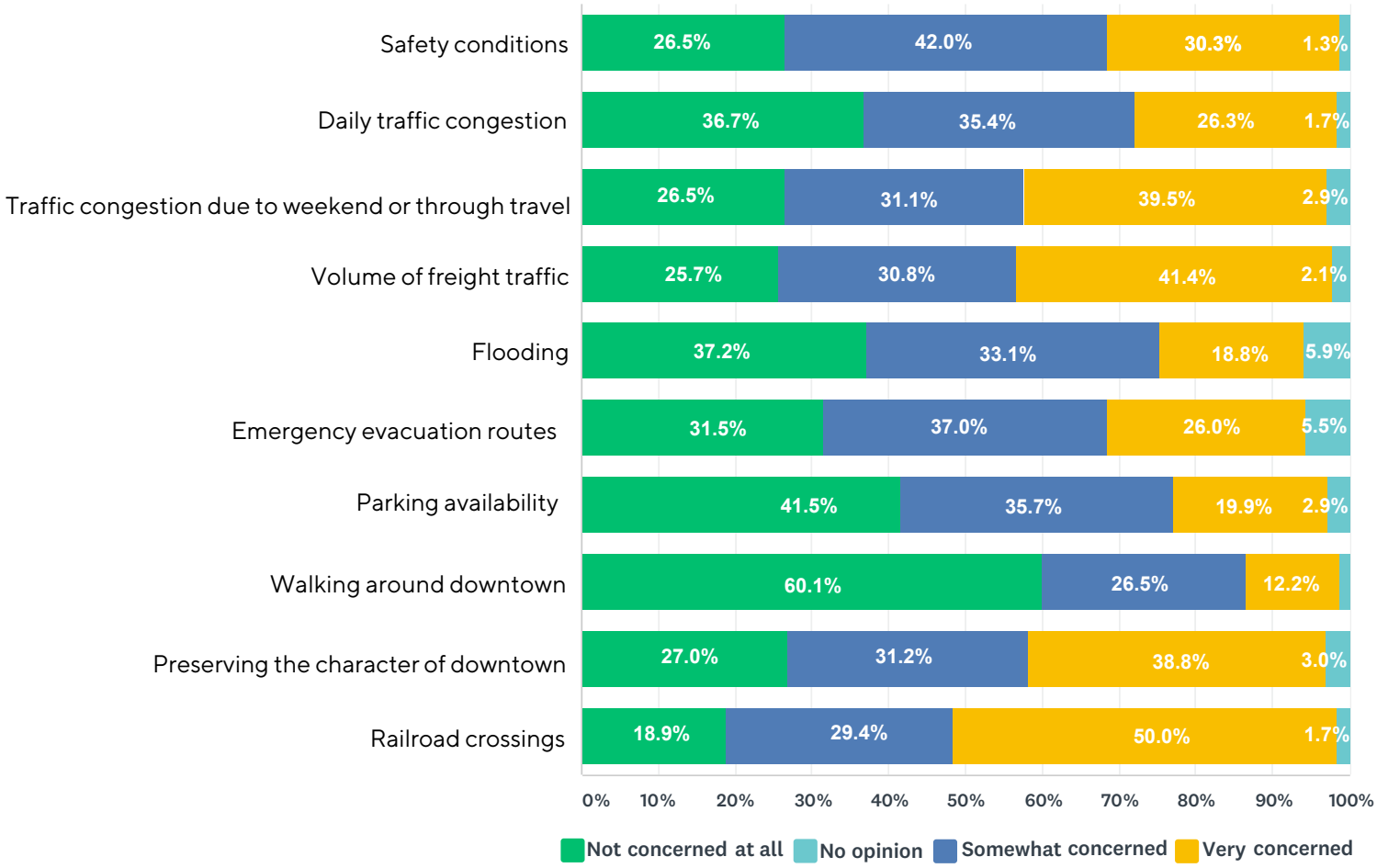
Common themes:

- Potholes and need for road maintenance
- Concern for freight traffic damaging roads
- Improved pedestrian safety and additional pedestrian crossings
- Improved access for emergency services
- Improved traffic signal timing
- Increased public transportation options
- Speeding concerns
- Opposition to building alternate route

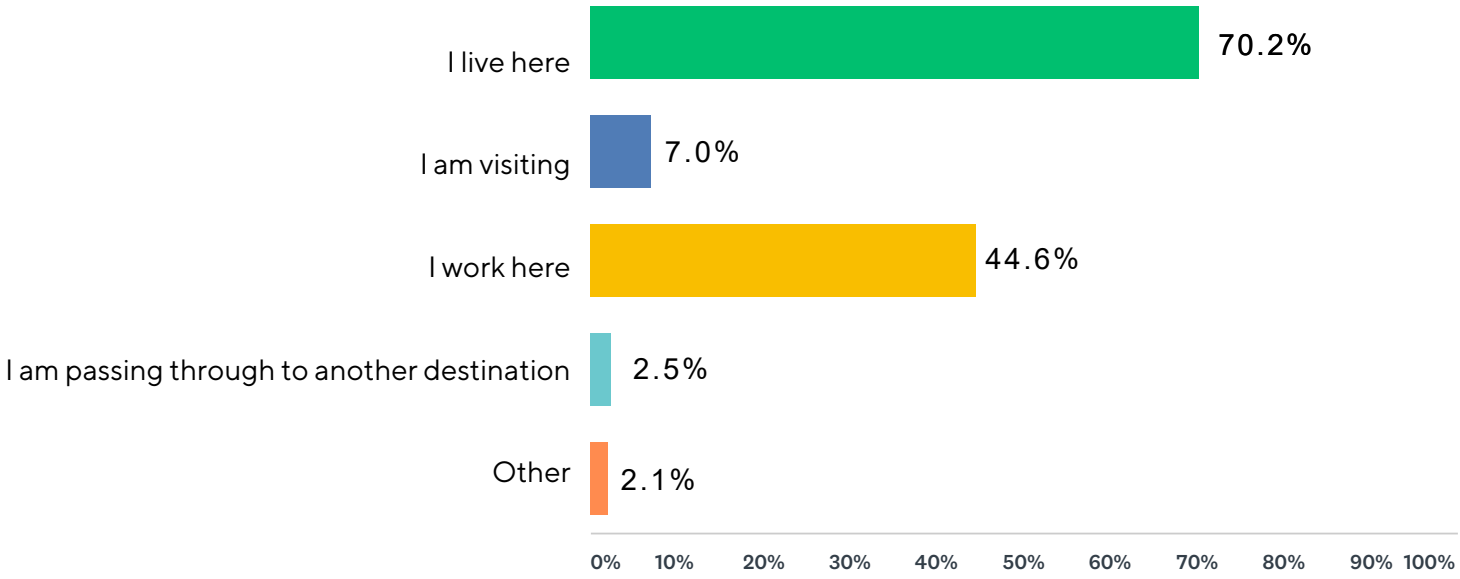
What We Heard

Survey Response Summary - English

Please share your input on transportation in Luling. How concerned are you with:



What brings you to Luling? (select all that apply)

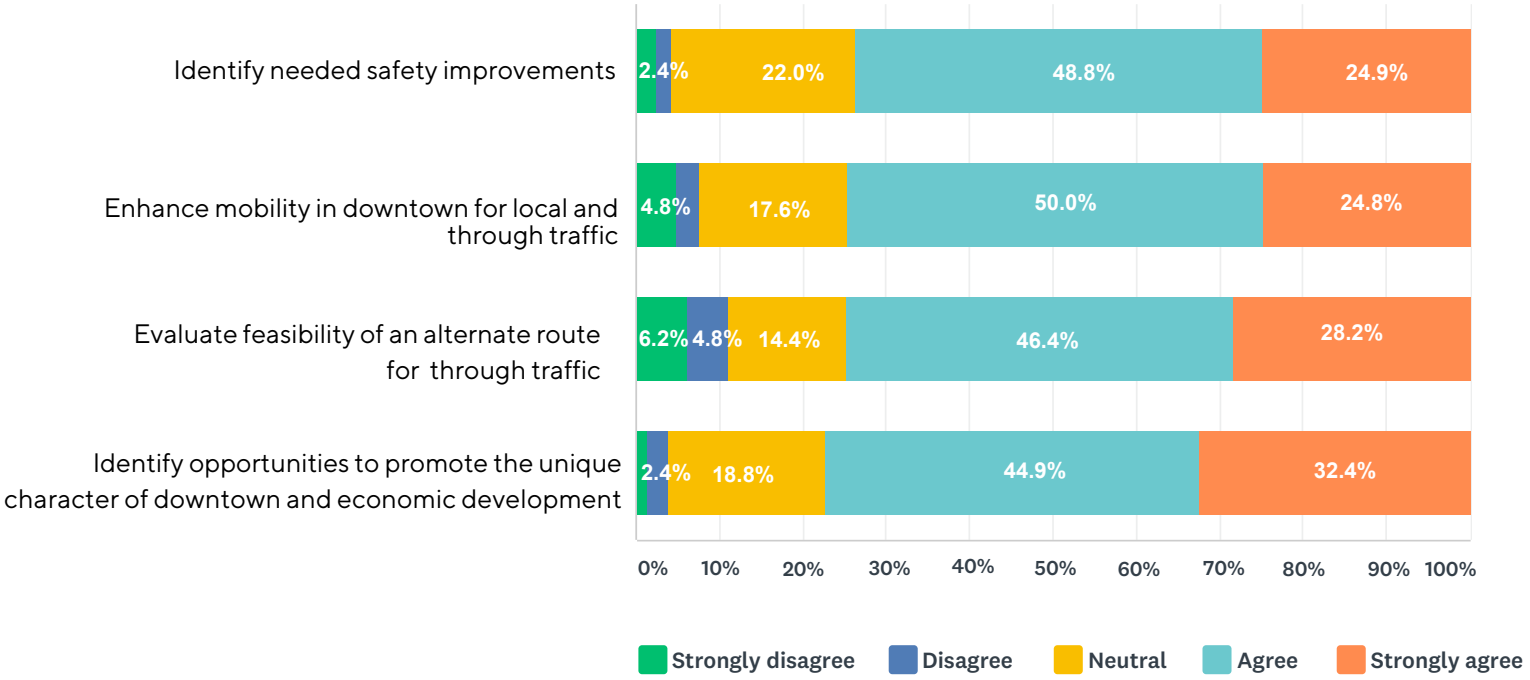


Zip Code	Responses
78648	8
78666	6
78629	6
78155	6
78644	4
78640	4
78130	4
78632	3
78616	3
78744	2
78731	2
78638	2
78622	2
78612	2
78239	2
78764	1
78759	1
78757	1
78660	1
78602	1
78244	1
78109	1
78102	1
77006	1
77539	1

Destination	Responses
Recreation, shopping, dining	5
School	4
Church	2
Austin	2
San Antonio	2
Gonzales	1
Wimberly	1

Frequency	Responses
Daily	10
4-6 times a week	22
1-3 times a week	7
3 times a month	4
1-2 times a month	6
1-2 times a year	4

Do you agree with the study goals?



Do you have any additional comments on transportation in Luling?

Common themes:

- Potholes and need for road maintenance
- Concern for freight traffic damaging roads
- Improved pedestrian safety and additional pedestrian crossings
- Improved access for emergency services
- Improved traffic signal timing
- Increased public transportation options
- Speeding concerns
- Opposition to building alternate route

Open-Ended Responses
road improvement needed
I feel that the students of Luling ISD need to be encouraged & controlled more in regards to the safety precautions of driving through the district. They speed. They do not get tickets and the administration does not do enough to hold them accountable.
Pedestrian crossings need push buttons
Traffic doesn't concern me. The many potholes do. Fix our streets. Traffic is good for business!!!
I believe that the road damage along where the railroad tracks are located should be fixed
It concerns me when our first responders can't get across tracks when there is a train
Specific areas of concern are on Hackberry Road between Hwy 80 & Hwy 90; it's in very poor condition and highly used by local and freight vehicles. Another area is pedestrians and traffic crossing at the intersection of Hwy 183 & Davis St. Big Positive- timed lights at 183/90 & 183/80 are excellent! Not pertaining to downtown Luling, but the 2 lane Hwy on 80 b/w Luling and San Marcos caused ridiculous and unnecessary backups. (needs to go back to 4 lanes!)
There needs to be a pedestrian crosswalk sign, markings, etc. On the intersection of Davis and Magnolia.
More school zones for kids going/leaving school- morning walker and afternoon walkers
It would be nice to have police officer watching the speed on bowie and walnut or put school zone signs. A lot of drivers speed thru and there are kids crossing or high school students driving crazy.
To have more security in school or police officers driving around so there won't be much speeding or kids fighting. Putting more school zone lights. Better streets and parking spaces.
Alternate truck route in school zone and Hackberry St. Reinforce school zone areas Maintenance on truck route roads
Bus routes should have certain intersections for them. Hackberry roads need major fixing. Possibly widening the roads, bike lane is needed. We need more crosswalk guards or patrolling from local enforcement. Speed bumps in school zones. Bring back the safety gates they used to have in school areas.
Need more sidewalks and better roads.
I was born and raised here in Luling, Tx. I love this town! But threw commercial trucks such as 18 wheelers affect our roads a lot and my car is beat up from roads being ruined from big trucks.
The information center is a waste of our tax dollars, there is never a breathing human there. We need the streets with large pot holes and road cave in's properly fixed. The streets are causing vehicle issues and accidents
There should be at least one way for people on the opposite side of the tracks from the hospital to access the hospital in case of emergency.
More sidewalks. People have to walk in the street - more crosswalks.
While attempting to preserve the "small-town feel", Luling has hindered its residents with the minimal routes available in the town. I believe that additional routes, along w/ the businesses that accompany them (gas stations/stores) would enhance the quality of life & draw increased prospects of other people moving to Luling.
My car has been vandalized in the school parking lot :(
There needs to be a pedestrian/bicycle overpass to connect the neighborhood north of the railroad to the area of the Luling schools, hospital, community health clinic, post office, & main grocery store. My main concern is solely of students crossing the main streets & railroad to get to school or walk home from school.

I am concerned about the lack of pedestrian crosswalks, especially for students needing to cross the railroad tracks walking to & from school. Also, the crosswalks, or lack thereof, are an issue when the HS releases students for lunch.
Time the green lights longer
To many pot holes! Austin St., Hackberry, the alley beside the old laundry mat as if you are going to turn back onto Hackberry St. Rough railroad crossings.
Roads in the neighborhood could use a touch up. Rough around the railroad tracks.
It would be nice to have the potholes in the road patched up
Any way to get around RR
Luling needs a more reliable dedicated public transportation with longer hours.
more reliable public transportation - getting people to doctor, grocery, pharmacy, etc. The intersection @ Magnolia + 90 carries great volume, especially when commercial traffic is mixed in with the train! What can be done to relieve this congestion?
Free or cheap transportation for those without it. An over or underpass for emergency vehicles to cross railroad tracks (Northside)
Close RR crossing on Oak Street block.
I am very satisfied with Luling citizen 30 years. Thank you Luling
Signaled crosswalks @/to NW Corner E Pierce + Magnolia.
the pot holes down S. Hackberry St need help ASAP
Through traffic needs to be a primary focus. Local citizens have learned to navigate around the main streets, but there is no relief in downtown with traffic that is just trying to get through. Not much traffic is coming through to visit luling, but just to get around it. For those few that are trying to visit, our main street's congestion issues are overwhelming. Priority should be an alternate route for through traffic and adjustment of the intersection lights at the main intersection and flow of traffic.
Just highway traffic
Not that I can think of at this time
There is a serious lack of sidewalks in the town. This is not safe for children and it does not promote fitness and healthy which is imperative for the well being of residents.
1) There is a need for sidewalks and crosswalks for children headed to and from school. 2) There is a need for a truck route or enforcement of an existing truck route for the main intersection at hwy 183 and hwy 90 & hwy 80 - and then at red light heading to San Marcos
The train crossing create some problems
Back roads/potholes
Luling has no traffic problems, low taxes, and friendly people
I am concerned about the amount of trucks and trailers that travel hwy 80 and then turn south onto Hackberry or Magnolia to traverse through downtown Luling. The truck traffic seems to have increased in recent years. Also, these heavy trucks are damaging to the roads in our city. It would be great to have these trucks diverted to a route that bypasses our downtown area. This should relieve the congestion brought about by the trucks and pass-through traffic on weekends and holidays.
I would hate to see a loop around town as it would destroy the town we moved to 10 years ago!
We moved to Luling after many trips from Houston to Kyle and liked the small-town atmosphere. A loop around the town would harm Luling. All you have to do is look around at other small towns that have died once a loop was added.
No loops
No loop around town. It will kill us

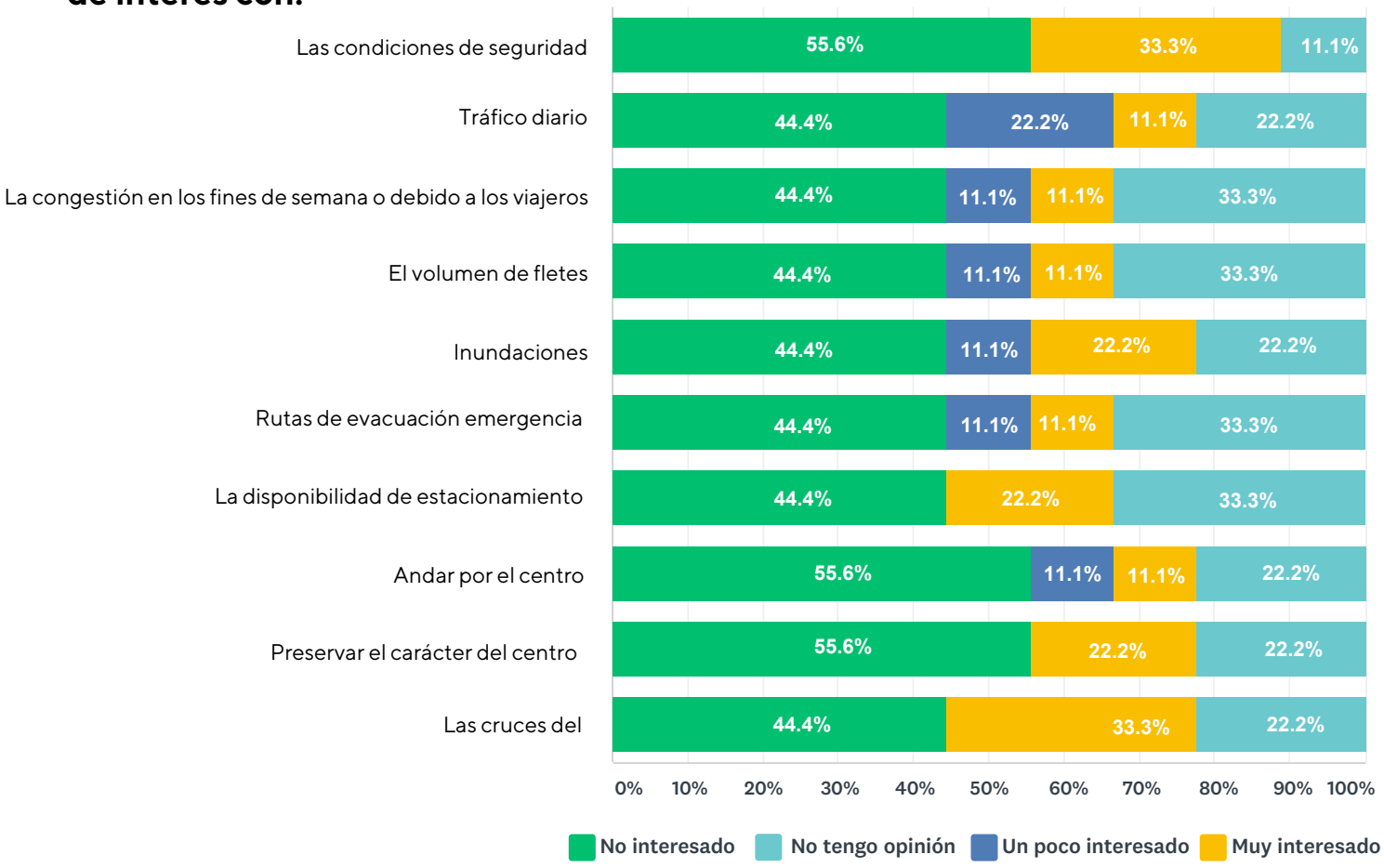
The semi traffic through town is a huge problem. But I don't know of any good answer because Luling was built with zero growth in mind.
You will kill our town with a bypass. Look at any other small town that has implemented a bypass and it results in a loss of business.
Don't build by-pass Cross walk on Davis street across hwy 183/80
More signs for I-10 Coming to Luling from East trucks should use hwy 80 to go north
1230 River Park Road is a dirt road to my home. My neighbor and I always have to get our tires changed out. Would like to get it paved.
Better streets in Luling
Different routes for oversized loads and 18 wheelers
Roads are terrible in town and around town. The amount of truck traffic is concerning. Rail road crossings are constantly having maintenance issues
Upgrading street pavement. No other suggestions
Alternate route for oversized loads to travel on
Too many semi trucks running lights write some citations
Gravel trucks coming from San Marcos, through downtown are a hazard and general nuisance.
A bypass will not be beneficial for the town of Luling. Travelers through our town often stop in the stores. Our businesses need the income, and tax revenue benefits our town.
The place is old and needs an upgrade
Keep the traffic better than Austin, tx
Please install red lights at major busy intersections instead of way stops & stop lights
We need a bridge over the railroad tracks near the main 4-way stop. People are trapped when the train breaks down or just decides to stop in town. Can't get to schools or hospitals for anyone. Not the tracks. Heavy traffic on weekends and routed for I-10. Heavy equipment constantly driving through.
- Work on some type of second rail road system bridge) - Also all the large heavy equipment coming through town
Educate the town of the consequence of making right handed turns while an 18-wheeler is also trying to turn the same direction
Address trains and truck traffic
Move the 18 Wheeler's out of town
it's not the big city traffic jam, wait a few minutes and it clears up. If it is major I 10 wreck and traffic is diverted then its a problem but just for a day.
-Get them to use the existing truck route on Huckleberry; upgrade Huckleberry -Safety concerns for intersection of 80/183
Construct at least one underpass or overpass route with rail line for emergency services to utilize during train stoppages.
An overpass over the railroad track
If a bypass highway is constructed Luling will become a ghost town
Traffic on weekend is very heavy and when accidents on 10 and routed through Luling is a nightmare. We catch San Marcos to Port Aransas on Spring Break another nightmare. Along with Austin to the coast. One other problem is the stop sign on Milian St. to hospital. Should not have to stop at that extra stop sign when your in emergency.
The trains are horrible and traffic out by the Buccees light backs up bad in the summer
We don’t need a. Bypass. We need alll the business we can get. Luling people don’t support businesses here
A loop to bypass Luling should not be an option. Stream line the truck traffic on Pierce St to the west end of town then to Hwy 80. Create a overpass over the railroad on the west end of

town. Separate the kids walking path north of the railroad from the hazardous truck route. I definitely want to be involved in any future discussions and planning to provide input. I have seen what Interstates 10 did to almost destroy the local economy, I don't want to see it happen again.
More traffic lights on Austin and 80
looking forward to a by-pass around town to help with congestion.
I would like to see crosswalks/crossing guards for the local school children. Some, if not most have to cross at least one-three major highways to get to school. We need to focus on the safety of our children in our community.
Connect Highway 80 with US 90 west of Luling
Improve walking traffic areas for safety. Main St & 183 Hwy there is no crosswalk or light. Hackberry & 90 Hwy A light for schoolchildren and crosswalk recommended. Study routes where seniors, handicap and children travel. Keep there stakeholder in-mind as you plan for change.
Train & trucking traffic creates safety concerns & traffic congestion. Can we consider a no noise ordinance for the train traffic and a reduction of the number of trains, and a possible bypass for truck traffic.
It's just very congested w/ all the 18 wheelers coming through from Hwy 80 to I-10
Consider what will happen with closing Oak Street railroad crossing. During Thump traffic is directed along Oak to 183 so people are familiar with the route.
Fix rough streets, such as Hackberry More police presence to decrease speeding vehicles!
Loss of traffic will KILL DOWNTOWN Without the traffic - our small business will die out - Due to flood zones there isn't any good place to relocate our downtown - & loss of the historic nature of our downtown would destroy attraction of tourists too! I suggest enforcing the existing truck route!
Hazmat on train 4 truck pedestrian, access from schools to 'north side' condition of R/R signals. Conditions of roads. Increased traffic due to 130. Funds being diverted to Lockhart. Overpass over railroad. I am concerned that we look at the overall needs of the area and not look at keeping city merchants busy.
Nothing, other than the fact that it gets crazy congested on Friday

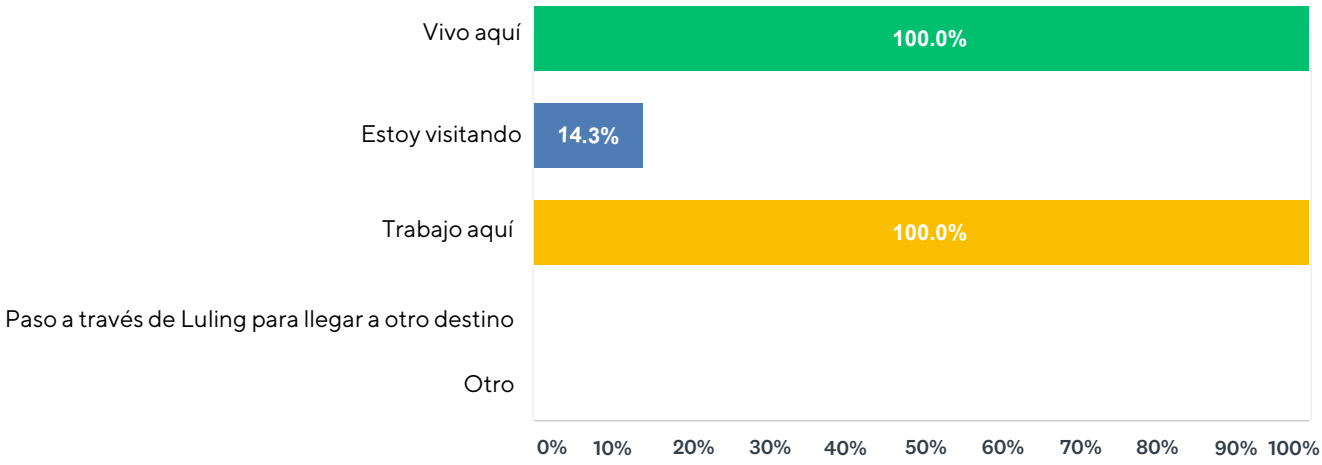
What We Heard

Survey Response Summary – Spanish

Favor de compartir sus opiniones sobre el transporte en Luling. Indique su nivel de interés con:



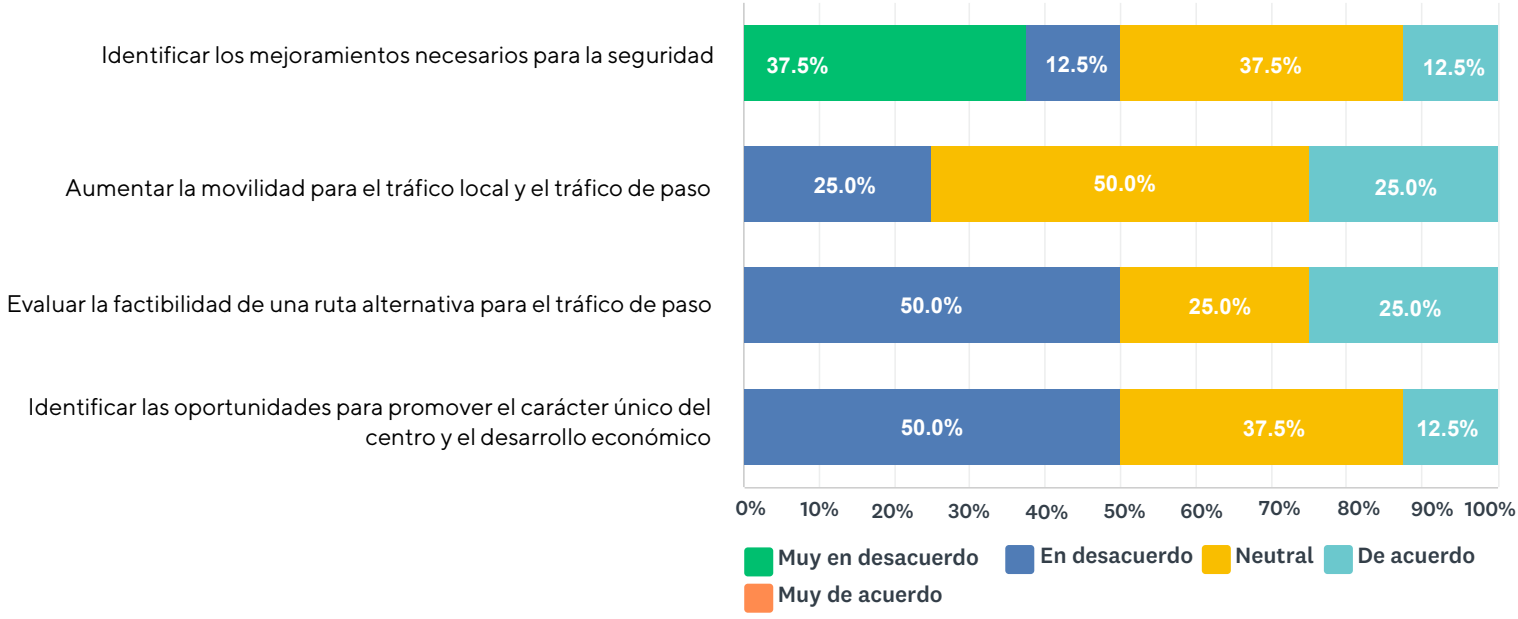
Qué le trae a Luling? (seleccione todas las que apliquen)



¿Qué le trae a Luling? (detalles adicionales)

No additional details

¿Está Usted de acuerdo con las metas del estudio?



¿Tiene algunos comentarios adicionales sobre el transporte en Luling?

No additional comments

Date:	May 20, 2019
Continued From:	N/A
Action Requested:	Information

To:	Technical Advisory Committee
From:	Mr. Kelly Porter, Regional Planning Manager
Agenda Item:	5
Subject:	Discussion on Preliminary Results of Regional Arterials Study

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

As the first regional plan of its kind for the Capital Area MPO region, the Regional Arterial Study seeks to understand the existing roles and functions of the region's major arterial corridors and to define their future roles and functions. The study is being developed in close coordination with local jurisdictions and TxDOT and is anticipated to provide common goals and implementation mechanisms for jurisdictions, transit agencies, CTRMA, TxDOT and the Capital Area MPO in their efforts to improve the performance of current and future major arterial corridors and connecting/adjacent higher functional classification facilities. The Regional Arterials Study will include a facilities inventory, a review of the most current applicable regional policies and data, 2045 illustrative and priority networks, guidance and recommendations on facility design and policy, performance measures, and an implementation plan with project and policy priorities for the next 25 years. The Bastrop, Burnet, and Caldwell Counties' portion of the study will serve as an update to those communities' thoroughfare planning documents.

FINANCIAL IMPACT

None.

BACKGROUND AND DISCUSSION

The purpose of the 2045 Regional Arterials Study is to evaluate a potential hierarchy of roads that could provide options for different travel-needs; provide the basis for a well-connected variety of roads that work together within the hierarchy that can exist flexibly to move people, not just one transportation mode; establish suggested road spacing within the potential hierarchy and provide a menu of street cross sections to meet context sensitive goals; and identify suggested policy tools that help local entities within the region to work to achieve a regional connectivity goal.

The study is being guided through a 20-member steering committee made up of local and regional partners, including many entities represented on the TAC. The committee has met four times thus far to provide guidance on the existing conditions inventory and concept planning.
The committee will meet at least two more times before the study is complete including in June when they will be asked to make a recommendation on the study to the Technical Advisory Committee.

To date there have been two rounds of local government outreach (Spring and Fall 2018) in which officials from the cities, counties, school districts, TxDOT and other local government interests were invited to provide comments on planning elements such as the roadway inventory, connectivity needs, policy issues, and other items.

Local government and public meetings included at least one in each of the six counties for both rounds of outreach. Broad regional issues that have been identified as part of the planning process are:

- Connectivity Issues – disjointed network, topographic challenges, lack of river crossings, railroads, and lack of connections across limited access facilities.
- Network Hierarchy – facilities being used for unintended trip purposes (e.g. limited-access routes being uses for local trips); a missing sub-functional class of long-distance principle arterials with optimized operations; and a lack of supporting facilities (minor arterials) to principal facilities.
- Access – inadequate access management on facilities

CAMPO staff has worked to identify areas where additional connectivity is needed and points in which safety and operational improvements may be considered as part of a regional concept plan. CAMPO staff will continue to work with TxDOT and local governments to refine the concept plan and develop network recommendations which will be part of the final plan. Five scenarios to better understand network performance have been developed:

- Scenario 0 – Baseline/Current: 2020 network with 2020 demographics
- Scenario 1 – No-Build: 2020 network with 2040 demographics
- Scenario 1.5 – Interim Improvements: Sample corridors (portions of RM 2244, RM 2222, FM 969) tested with reversible lane operations at peak periods using the Scenario 1 network.
- Scenario 2 – Tier 1 Network: Capacity, operational, and connectivity improvements applied to only key principal arterials and limited access routes.
- Scenario 3 – Non-Tolled Managed Lanes (off-model): Calculates potential "people throughput" on select Tier 1 network facilities if certain lanes along these facilities was reserved for flexible uses during certain times of day for high-occupancy vehicles, transit, motorcycles, etc.
- Scenario 4 – Vision Network: Models all planned and identified improvements to the network garnered through this process. Includes all Tier 1 facilities and ultimate build-out of other minor arterials and supporting facilities.
- Scenario 5 – Tier 1 and Tier 2 Network: Includes all Tier 1 facilities as well as facilities from Scenario 4 that had a V/C ratio higher than the regional average of .45, in addition other select corridors for identified for safety and redundancy.

Scenario results will be discussed in detail at the May 20, 2019 Technical Advisory Committee meeting.

Next steps include working with jurisdictions on the regional corridors and project list; refinement of the draft concept plan; and development of a draft final plan. The draft study expected to be taken to the public for comment and TAC for recommendation in June. The draft study will go for formal adoption by Bastrop, Burnet, and Caldwell Counties on their components in June 2019. The Transportation Policy Board will be asked to consider adoption of the Regional Arterials Plan in August 2019.

SUPPORTING DOCUMENTS

Attachment A – *Methodology and Process*

CENTRAL TEXAS

CAMPO

CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION

2045 Regional Arterials Study

Concept Plan Methodology

DRAFT March 2019

Concept Plan Methodology - 2019

CONTENTS

Purpose of the Study

The Capital Area MPO 2045 Regional Arterials Study is a planning effort that is part of the 2045 Regional Transportation Plan. The purpose of the Capital Area MPO Regional Arterials Study is to:

- Create a hierarchy of roads that provide options for different travel-needs
- Establish a well-connected variety of roads that work together within the hierarchy that can exist flexibly to move people and goods
- Establish a proper road spacing within the hierarchy and provide a menu of street cross sections
- Identify policy tools that empower local entities within the region to work to achieve regional connectivity goals

The study is overseen by a Steering Committee of representatives from local governments and implementing agencies from around the region. Steering Committee Members represented the following communities and entities:

- City of Elgin
- City of Marble Falls
- Williamson County
- Travis County
- City of Lakeway
- Urban Land Institute
- Cedar Park
- City of Austin
- City of Bee Cave
- City of Georgetown
- CARTS
- City of Pflugerville
- Central Texas Regional Mobility Authority
- City of Round Rock
- City of San Marcos
- Caldwell County
- City of Kyle
- Capital Metro
- TxDOT
- Hays County

The role of the Steering Committee is to provide direction and feedback regarding the plan's process and deliverables. This committee reports to the CAMPO Technical Advisory Committee, which reports to the CAMPO Transportation Policy Board. The findings and reports produced for this plan will be presented to all these bodies for approval.

As defined by the Steering Committee, the 2045 Regional Arterials Plan sets a vision and describes a series of goals and objectives[1] for the region's arterial roadway network.

Vision : To facilitate a framework of a broad set of transportation choices that improve mobility, are safe, convenient, reliable, resilient, and efficient, and that promote equitable prosperity, region-wide connectivity, economic development, and healthy communities.

Goals:

1. **Safety:** Improve Safety for arterial road users.
   a. Objectives:
      ii. Reduce severity and number of crashes for all modes to assist local governments and other transportation agencies reach vision zero metrics.
      iii. Reduce emergency response times.
      iv. Enhance evacuation routes.

1 Vision, Goals, and Objectives approved by the Steering Committee at the June 20, 2018 meeting.

Concept Plan Methodology - 2019

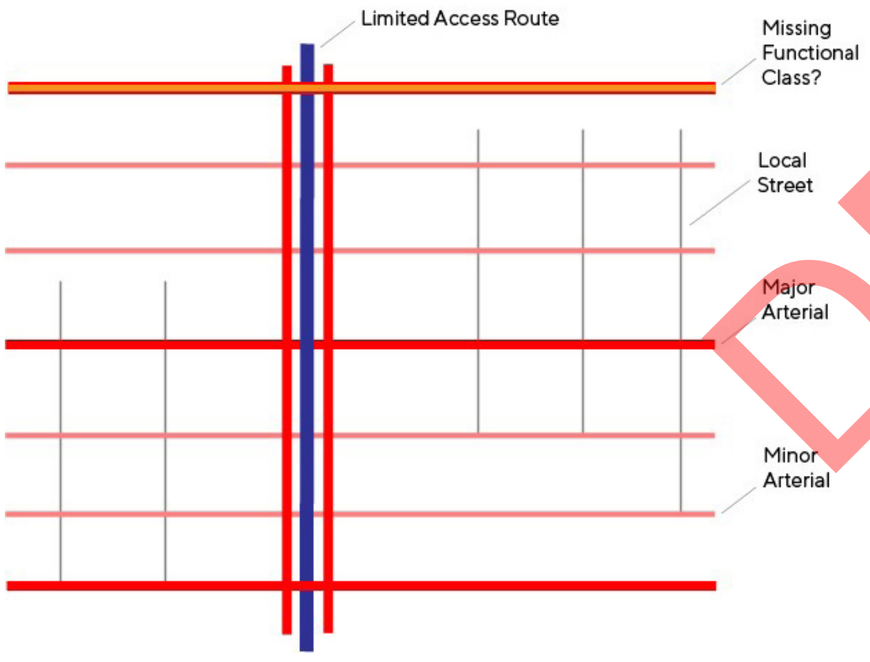
2. **Mobility:** Improve network efficiency and flexibility to reduce travel times and distance.
   a. Objectives:
      ii. Expand the network to reduce congestion and increase capacity.
      iii. Decrease network gaps to add connectivity, reduce bottlenecks, and remove barriers.
      iv. Improve network redundancy to reduce reliance on the limited access roadway network for short trips.
      v. Unlock economic development/redevelopment potential by allowing for opportunities to live, work, and play in close proximity.
      vi. Utilize improved technology to increase efficiency of travel.
3. **Growth:** Plan for growth more effectively.
   a. Objectives:
      ii. Plan for and leverage growth through a more comprehensive network to accommodate different development types.
      iii. Prepare for future land use and development opportunities.
      iv. Identify right of way, for preservation and reservation for future or redeveloping corridors.
      v. Use available policy tools creatively to achieve community objectives.
      vi. Promote a network that supports a wide range of housing choice near employment.
4. **Multimodal:** Design multimodally to provide more transportation choices to move people and goods.
   a. Objectives:
      ii. Design the roadway network for all modes.
      iii. Design arterials for all ages and abilities.
      iv. Design roadway network with flexibility for all modes.
      v. Design arterials that are freight and transit supportive.
5. **Environment:** Protect and preserve the environment.
   a. Objectives:
      ii. Develop roadway design that limits negative impact to water and air quality.
      iii. Consider design elements and aesthetic treatments that are context appropriate.
      iv. Consider environmental factors and the impacts of materials on the environment and roadway lifecycle costs.
6. **Economy, Equity, and Health:** Foster a system that promotes prosperity and vitality for our region.
   a. Objectives:
      ii. Align road functionality with evolving road character and design to community and environmental standards.
      iii. Consider freight and delivery needs.
      iv. Provide equitable access to support economic development.
      v. Improve public health outcomes through air quality, active mobility, and enhance quality of life.

The goals and objectives provide a framework for planning for a better arterial network. They serve as guideposts for the planning effort and the impetus for the recommendations of the plan. One initial undertaking was to determine how to define an "arterial" roadway. FHWA offers a definition, and along with TxDOT, classify individual roadways within our region according to a prescribed framework of uses and contexts.

Generally, arterials are roadways that are somewhere in between freeway/highways and collector or local streets in terms of total vehicles moved through the roadway. FHWA also sets out a hierarchy within the arterial classification, with much of the distinction being determined by access control and trip purpose. Limited Access facilities, also known as Freeways or Highways, typically serve trips over five miles, whereas, local streets serve trips no longer than a mile. Arterials, being somewhere in the middle of these two kinds of roadways, serve trips in between. Principal Arterials typically serve trips of three to five miles and Minor Arterials serve trips one to three miles in distance.

One initial observation that was gleaned in the early phases of the plan was that when we look at the CAMPO region's existing network, there seems to be a missing class of arterial that might allow for the same amount of movement but has generally less access to adjacent driveways and lower-functioning roadways. The figure below depicts how these varieties of arterials may function within the wider roadway network.

Roadway Hierarchy

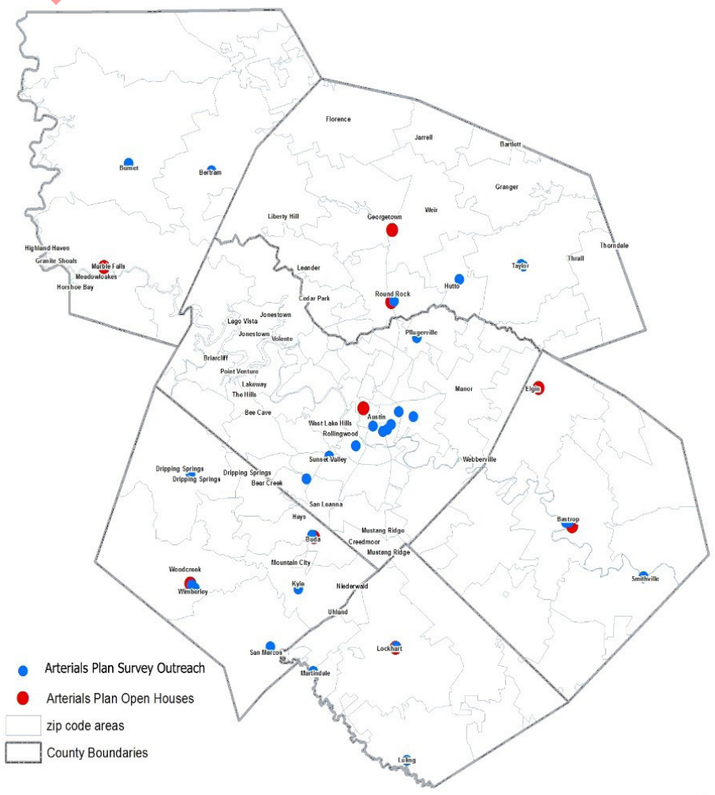


Initial Planning and Analysis Methodology

An investigation of the existing conditions was the first step in the process, which provided a greater understanding of the supply and demand for arterial roads and the major hurdles to developing a more comprehensive network. This stage of the study also included a steering committee meeting[1] to begin to develop the vision and goals, meetings with local governments[2] to better understand local needs, and public open houses.[3] The local government meetings included representatives from local government, school districts, transit, CTRMA and TxDOT. A second steering committee meeting[4] approved the vision and goals.

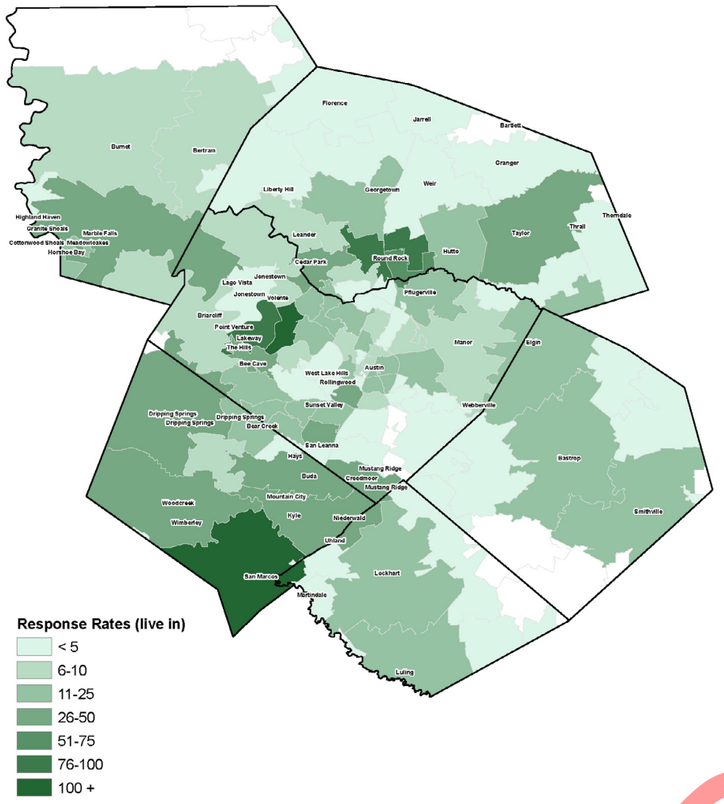
CAMPO also surveyed the region to better understand key issues relevant to the arterial network and the degree of satisfaction residents have with the current network. The maps below depict where outreach took place and the distribution of responses by zip code. To ensure a broad breadth of input for our diverse region. Staff pulled GIS data each week to determine which zip codes and groups were underrepresented in the surveying. The CAMPO "iPad Army" was deployed to target those areas to garner additional feedback.

Regional Arterials Outreach Locations



1 February 28, 2018
2 April 2-17, 2018
3 April 2-17, 2018
4 June 20, 2018

Survey Responses by Zipcode



Pattern Book Findings

A third Steering Committee[1] meeting included a presentation of the initial existing network map, findings A third Steering Committee meeting included a presentation of the initial existing network map, findings from case studies of four peer regions similar to the CAMPO region, and best practices gathered from case study corridors. Both case studies were offered in full in the Pattern Book report.

Regional planning should still focus on context, but the gradations may be broader. Thus, in the Pattern Book chapter of the study, we have identified five context zones that range from high-rise downtown districts to rural areas with a very scattered built form. This means that the functional classification of the roadway can change as it moves through the region due to this change in context. Similarly, context can also impact the design choices for a roadway since changes in built form often mirror changes in population densities and activity. A full menu of possible treatments is found in the Pattern Book and is organized by context zone.

1 September 12, 2018

CAMPO Context Zones

Urban 1	Urban 2	Suburban 1	Suburban 2	Rural
Highrise Downtown	Main Street/Small Town	Mixed Use / Activity Center	Conventional	
Z1	Z2	Z3	Z4	Z5

- Downtown Austin, TX
- The Domain, Austin, TX

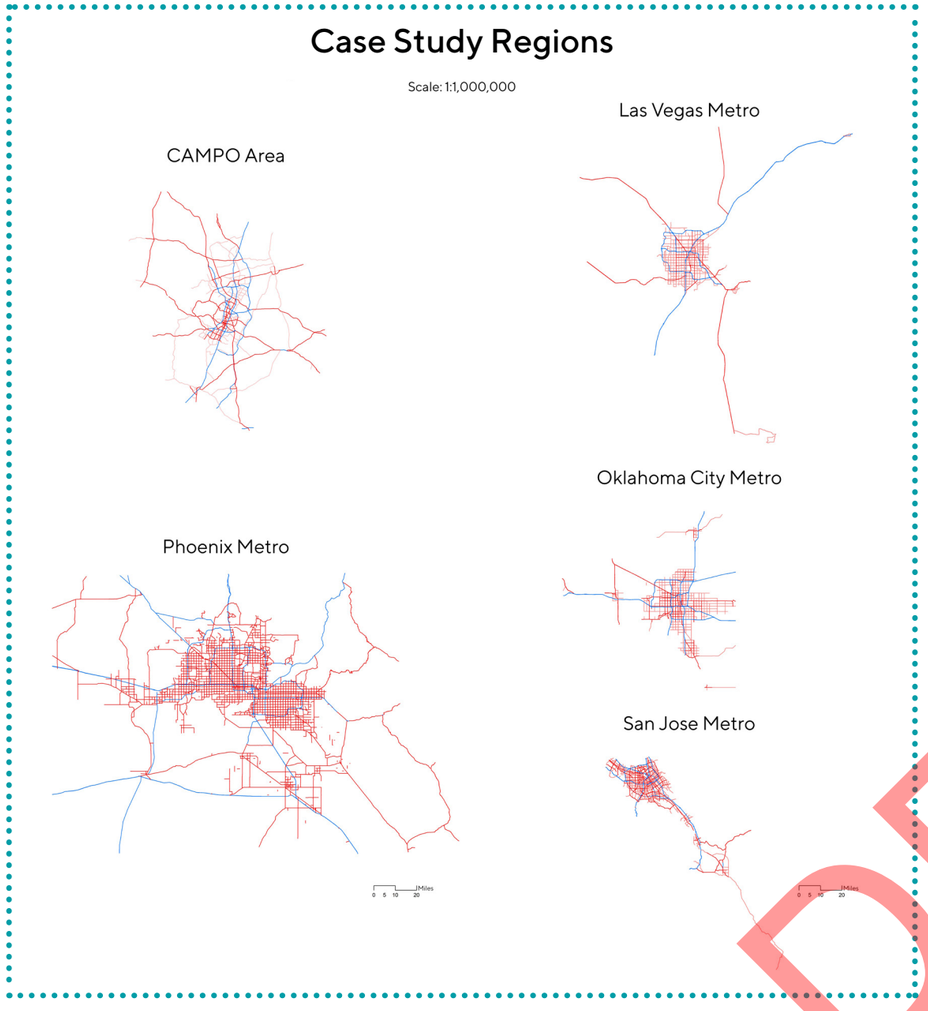
- Downtown Taylor, TX
- South Congress Avenue, Austin, TX
- Main Street, Downtown Bastrop, TX

- Parmer Lane (from N Lamar Blvd to MoPac), Austin, TX
- Burnet Road (from Koenig to 183), Austin, TX
- Williams Drive (IH-35 to Serenada Drive), Georgetown, TX

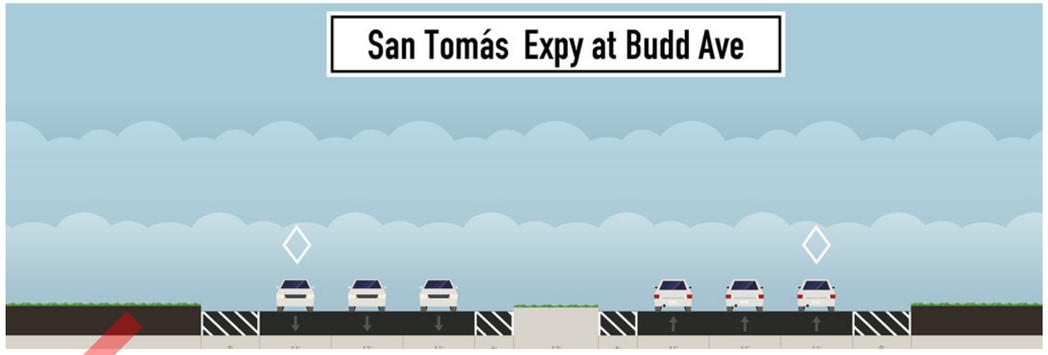
- RM 1431 (from IH-35 to A.W. Grimes Blvd (1460))
- SH 21 (from 969 to the Colorado River)

- FM 1660 (from 973 to 95)
- SH 95 (from Taylor to Coupland)

Included in the Pattern Book are regional case studies, corridor case studies, cross sections, and other best practice design treatments that have shown success at improving the overall operation of arterial roadways in other areas of the country. In each of the four regional case studies we sought to understand the proportional breakdown of roadways by functional class in addition to how each of the functional classes are spaced. This peer review also revealed that these regions had a functional class of roadway that our region was missing. In addition, staff analyzed how these peer networks crossed barriers, economic functions, mode split, and other performance metrics. Staff also examined the percentage of roadways by FHWA functional class to compare the mix to best practices.



We then sought to develop a more robust understanding of successful case study corridors and how they operate within their networks. Ten corridors were analyzed varying in context zone as shown in the graphic above. Particular attention was given to safety treatments (i.e. crash barriers & medians), operational improvements (i.e. light timing & flexible lane management), and efficient arterial cross sections, including those that integrate design types that mitigate negative environmental impacts. Moreover, we sought to incorporate design treatments that provided aesthetic amenity and improved the seamless integration of the arterials into each context. These findings helped develop a variety of options that may prove to be appropriate in our region.



From the San Jose regional case study

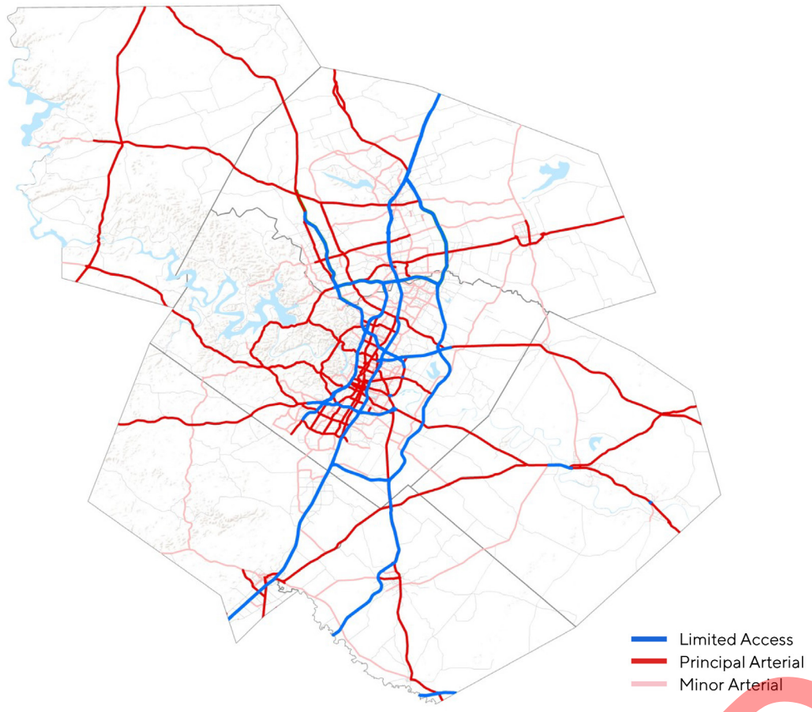
Building the Existing Network

An immediate task for the study was to create an inventory of the existing arterial network. Recognizing that most jurisdictions use their own functional classification definitions, staff worked to standardize or group up each jurisdiction's functional classes into standard categories following FHWA and TxDOT standards. This provided an "apples to apples" framing of the network at the regional scale. The existing roadway network is comprised of facilities that are currently in operation in the region. CAMPO generally followed the guidance of FHWA to determine the definitions of roadways in the region, but combined major and minor collectors, grouped together freeway/expressways and interstates as Limited Access, and developed a new subgrouping of principal arterials to be classified as Regional Connector/Expressway, with the other principal arterials being defined as Major Arterials. In cases where local plans defined existing roadways as a different functional class than TxDOT, CAMPO deferred to TxDOT's classification.

CAMPO Counties/Cities	TxDOT	CAMPO Functional Classification
Toll	Toll	Limited Access (Non-tolled/tolled)
Freeway Interstate Highway Limited Access State Controlled Access	Interstate Freeway / Expressway	
Principal Arterial Major Arterial Parkway Ranch to Market	Principal Arterial	Principal Arterial Major Arterial Regional Connector/Expressway
Minor Arterial Farm to Market	Minor Arterial	Minor Arterial
Major Collector Minor Collector	Major Collector Minor Collector	Collector
Local	Local	Local

The following map displays the arterial network, along with limited access facilities and collector roads. This gives us a sense of the existing supply of arterials, their location within the region, and how they serve the limited access network. This map was presented to the Steering Committee originally at the September meeting.

Regional Arterials Existing Conditions



Creating a Planned, Desired, and CAMPO Gaps Network

Once the existing network was assembled, the network of planned improvements and new facilities was added. CAMPO received locally-adopted plans from regional partners that set out new and improved arterials. These individual plans were combined to display the full regional network of planned and existing facilities.

CAMPO received partner plans from the following local entities:

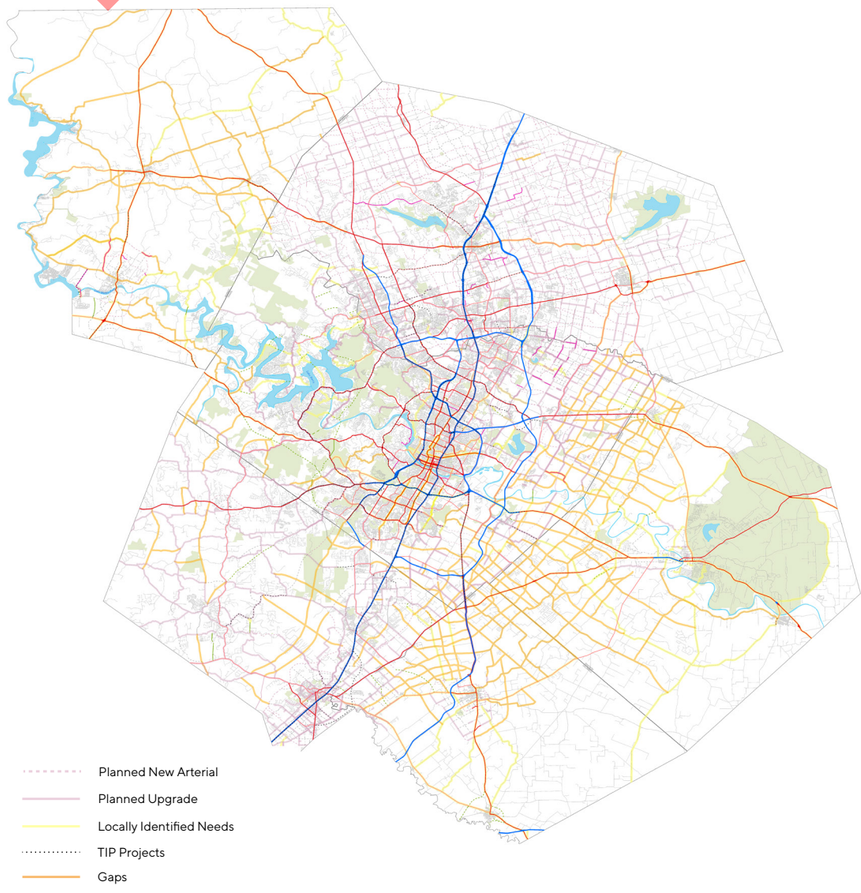
- Travis Co
- Austin
- Leander
- Georgetown
- San Marcos
- TxDOT
- CTRMA
- Bastrop
- Hays Co
- Lockhart
- Round Rock
- Williamson Co
- Marble Falls
- Cedar Park
- Kyle
- Buda
- Hutto

In addition to adopted local plans, as part of the local government meetings CAMPO staff asked local government representatives to vet their plan data displayed on the maps. Local governments were also asked to provide insight to additional needs beyond the plan shown on the map. This allowed the needs assessment to reflect needs from communities that may not have locally adopted plans and additional needs beyond adopted plans.

The first round of local government outreach also produced locally-identified needs, which were generally new connections or improvements. These new or improved facilities were further refined in the second round of local government meetings.

With locally planned and locally desired facilities mapped, CAMPO staff undertook a "gap" analysis to determine where missing connections between planned and existing facilities may be or where demographic forecasts show a lack in the supply of arterial roadways. The result of this analysis was the identification of gaps that recommend additional roadway improvements or new facilities to enhance connectivity.
A map depicting these three types of new or improved facilities, along with the existing arterial network is shown below. This map was presented to local governments in the second round of meetings.

Gap Analysis



Forming the Concept Plan

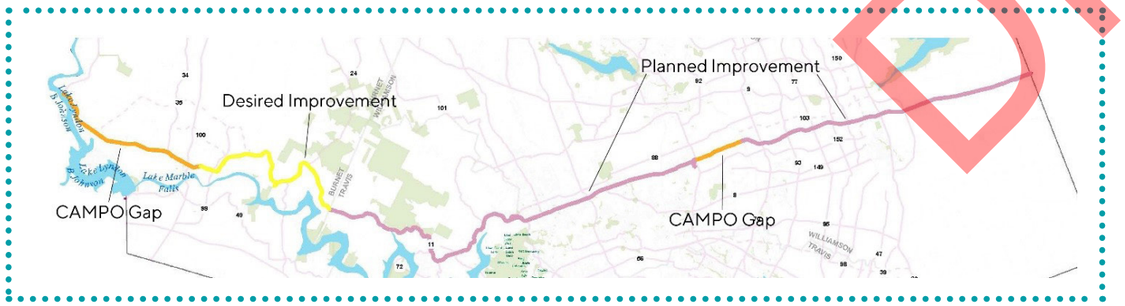
The next step in the planning process involved the building of a Concept Plan for the 2045 arterial network. The Concept Plan is comprised of a vision network, which is the culmination of the existing, planned, desired, and gaps network presented above, and detailed recommendations for four test case corridors. The Concept Plan began in earnest with the process described above to combine all locally-planned networks. This allowed us to better understand where there may be gaps between new or upgraded facilities.

To assess the proper design and capacity for the facilities in the vision network, CAMPO created longer-distance Regional Corridors from the existing, planned, desired, and gaps network facilities. This provided the planning team with all the information to develop an inventory of improvements and new facilities and begin scenario planning work to better understand the potential impact of the vision network. CAMPO has also set out to provide additional analysis for four test case corridors, SH 21, FM 734, FM 1431, and RM 12. For each, we will look at specific treatments and cross sections, as featured in the Pattern Book, to apply to the corridors and provide additional analysis on improvements or policies that can help these corridors better meet with the goals and objectives stated in the study.

Establishing Regional Corridors

With a full map in place of planned, desired, and gap facilities, CAMPO identified areas where these individual pieces (typically on the same roadway) could create longer distance, strategically connected "Regional Corridors." This was done, in part, to help illustrate the impact that individual improvements may have on the mobility demands along a given corridor, and to provide truly regional connections to a wider variety of communities.

CAMPO combined individual improvements, as shown below, to form each Regional Corridor. Most of the Regional Corridors were comprised of multiple segments with improvements or new facilities planned by a local entity or identified through this process. The Regional Corridor below follows RM 1431 going east through the region, then following University Blvd, Chandler Rd, and a planned extension of that corridor to the eastern extent of the region. These corridors cross multiple jurisdictions from Kingsland to just north of Taylor.



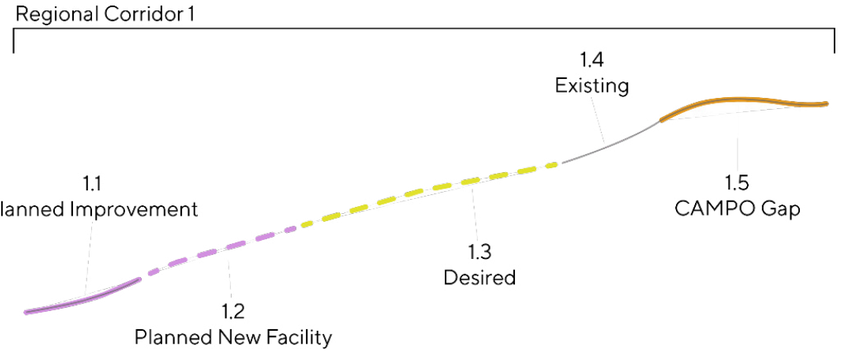
After the initial Regional Corridors were formed, a sample of them were mapped and presented to the Steering Committee in January 2019. Displayed as a single color, the map allows for a better understanding of the full potential arterial network for 2045.

Concept Plan Methodology - 2019

Constructing the Regional Corridor Inventory

The Regional Corridors were inventoried in a table to organize all the information previously collected regarding the improvements or proposed new facilities that form each one of them. The process of building the inventory followed the procedure illustrated below, with segments generally determined by a break in the source of the planned improvement or new facility.

1	**Regional Corridor - AF**	
1.1	Segment From A to B	Planned Improvement
1.2	Segment From B to C	Planned New Facility
1.3	Segment From C to D	Desired
1.4	Segment From D to E	Existing
1.5	Segment From E to F	CAMPO Gap

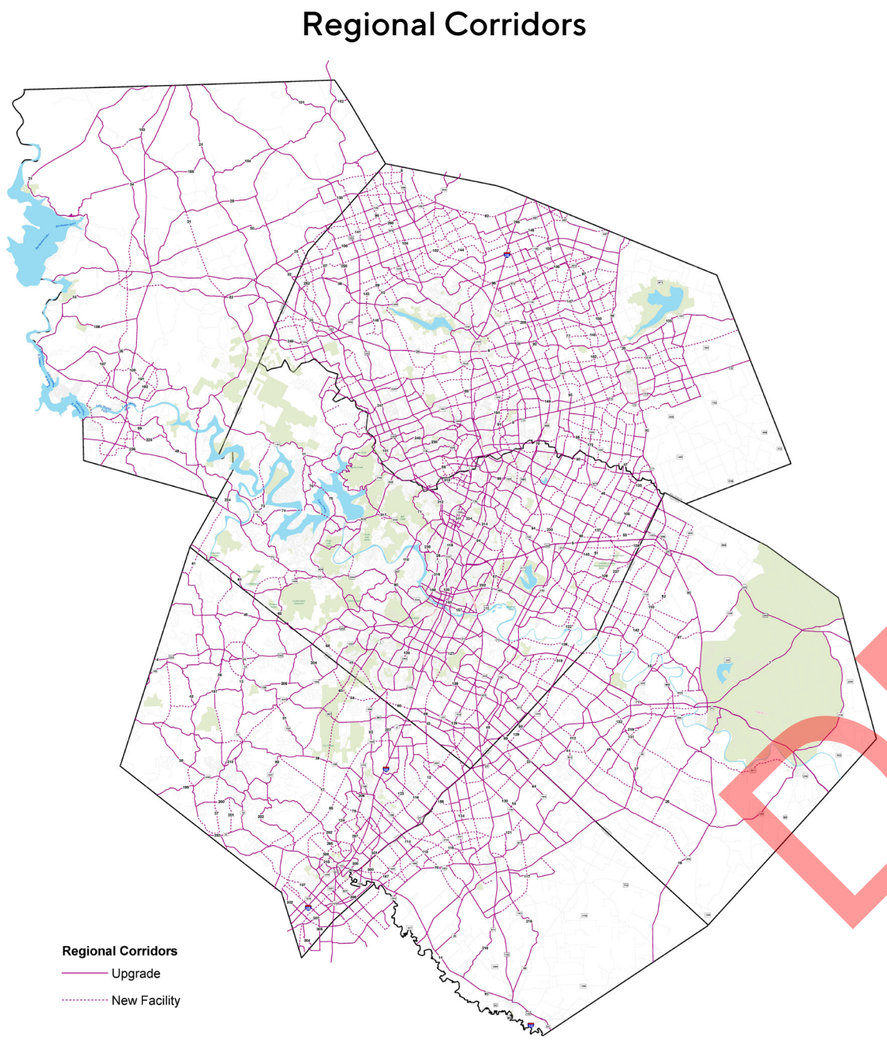


Each Regional Corridor was given a number, with each segment numbered as well. The sample below illustrates this and shows that each segment has been identified as either a new or improved facility, has been defined by source, and has limits.

The Vision Network (Unconstrained Arterial Network)

The Regional Arterial vision network is the full network of locally planned facilities, locally identified needs, and CAMPO-identified gaps for 2045. The map below shows the vision network as Regional Corridors, as described previously. This is done to provide a better sense of how the network functions. In this analysis, we started by integrating each of the local transportation plans and locally identified needs. Given that these local plans include the entirety of local transportation improvements, the spectrum of projects were vast and included many projects that do not impact regional travel. For this reason, these projects were removed from the vision network. Specifically, CAMPO removed all facilities below the major collector functional class, as any lower functional classes would most likely not meet the minor arterial functional class by 2045. These reductions provided staff with the appropriate base of facilities needed for the arterial analysis. From there,

another analysis was undertaken using the 2040 model which yielded the results of a few additional corridors that would have a proportional increase in average daily traffic (ADT) that would need to be examined for improvements and potential upgrades to the minor arterial functional class.



The vision network was not only mapped but coded in terms of the number of lanes and the design type for the roadways. CAMPO followed local plans to determine the coding, but many plans either did not extend to 2045 or did not make determinations according to lanes or design types. In the case that local entities did not decide on these elements in their plans, CAMPO based coding choices on local demand (based on the demographic forecast), projected and current Volume/Capacity (V/C) ratios, and arterial spacing guidelines gleaned from the findings of the case study analysis of the Pattern Book.

Concept Plan Methodology - 2019

Modeling of Scenarios

To better understand the impact of the improved and new facilities that make up the vision network, a series of five scenarios were developed. Four of the scenarios will be assessed through the CAMPO Transportation Demand Model, while an additional scenario will be analyzed outside of the model.

Scenario 0: Baseline

The existing network with 2020 demographics will serve as a baseline scenario to provide an understanding of the current performance of the arterial network. The study will refer to this as scenario 0.

Scenario 1: Existing and Committed

The next scenario will use the 2030 existing model network as a means of approximating the existing plus committed (built prior to 2025) network. The role of this scenario is to understand the impact to regional transportation if no additional facilities are improved or built given the significant amount of additional growth forecasted for the region. This scenario and the remaining scenarios will be run with 2040 demographic projections found the current approved Transportation Demand Model.

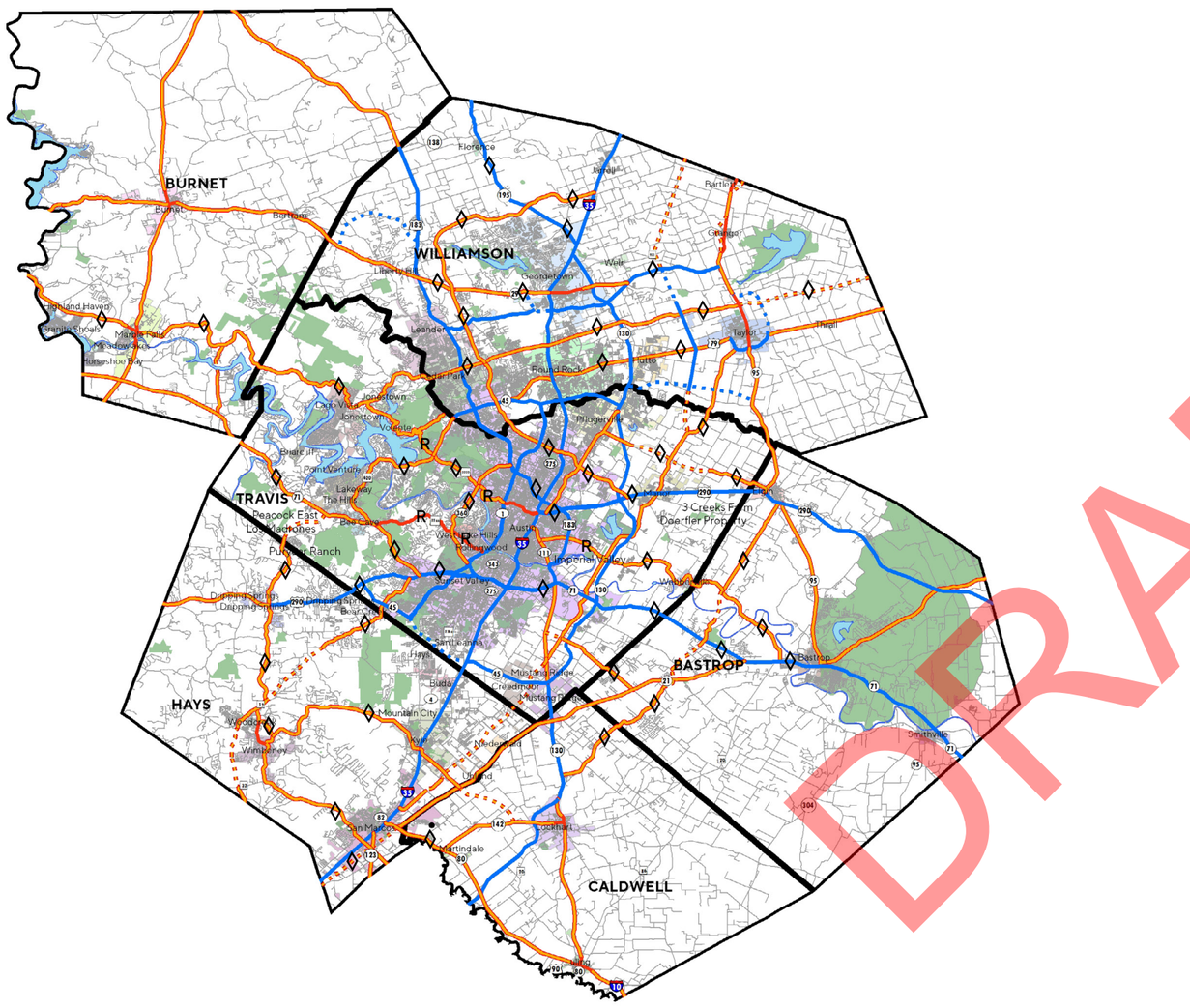
Scenario 2: Tier 1 Network

As previous analysis has made clear, it is apparent that not all arterial roadways within the network function the same or are used the same by residents and visitors to the CAMPO region. Thus, it was determined that for the purposes of analysis a network of the highest functioning roadways should be developed to better understand how these new and improved facilities might benefit the region as the only improvements.
The Tier One roadway network includes all limited access and higher functioning principal arterials in the CAMPO region.
This also includes a missing functional class, as postulated in the initial phases of the study, that have been identified as Regional Connectors. These facilities provide long-distance connections and allow for greater mobility due to tighter access controls. Along with the limited access facilities and a few strategically located major arterials, the Regional Connectors form an integrated system of multi-lane high-capacity principal arterials. More specifically they feature:

- Tight Access Management
  - Right turns in/out only
  - Left turns at signalize intersections only
- Intersections typically spaced no less than ½ mile apart (all signaled)
- Grade separated intersections with all other regional connectors and limited access roads
- Timed/Synchronized lights
- Dedicated separated ped/bike facilities
- Bus pullouts

The network is spaced appropriately for higher functional class roadways (3 to 5 miles or more). This was based on best practices developed by the case study regions examined in the Pattern Book. Additionally, this network connects multiple centers and many generally provide mobility around the core. The map below displays the Tier One network, along with additional treatments or peak period uses that may be recommended to help improve mobility. The Tier 1 corridors will be added to the current 2030 model network used in Scenario 1.

Tier I Network



R Reversible Lane Option

◊ Non-Tolled Managed Lane Option

Limited Access - Tolled / Non Tolled

Principal - Regional Connector

Principal - Major Arterial

Scenario 3: Non-tolled Managed Lanes (off model)

This scenario includes the addition of a flexible lane type, nontolled managed lanes (NMLs), for the Tier 1 corridors. NMLs are special use lanes that are managed, or their use is limited. These flexible NMLs could be used for transit, highoccupancy vehicles (HOV) and motorcycles, be limited to parking during offpeak times, be used to support reversible lanes, or be used as variable priced facilities.

NMLs are thought to be an alternative that may increase mode shift; i.e. from single occupancy vehicles (SOV) to HOV or to transit. Shifting drivers from their single occupant vehicle to bus or other HOV vehicles can increase person throughput with less vehicles. NMLs may be a viable option for Tier 1 project improvements if the proposed Tier 1 improvements still result in a poor level of service. Analyzing the impacts of NMLs can be accomplished by postprocessing model results from the scenario 2 model run. The primary assumptions for postprocessing impacts of NMLs include:

- Vehicle occupancy rates for SOV, HOV, and transit bus
- Travel demand by time of day
- Vehicle capacity of an NML
- Bus frequency
- Bus Passenger Car Equivalent (PCE)
- Mode shift from SOVs to HOV vehicles.

Scenario 4: Vision Network

This scenario includes a roadway network containing the Tier 1 projects from Scenario 2, all planned potential minor arterial and above projects from the 6-county region, and gap projects identified by CAMPO. It is a fiscally unconstrained scenario that looks to increase network connectivity by assuming the full build-out of locally-planned facilities and those identified through the Regional Arterials Study process.

Scenario 5: Priority Network

Finally, an additional scenario was developed that includes the Tier 1 network with selected supporting arterials from Scenario 4. The initial Tier 2 arterials were selected to provide parallel routes or add critical redundancy to Tier 1 corridors, thus benefiting the safety and resiliency of the overall network. To complete the priority network, arterials that had a volume to capacity ratio over 0.45 in scenario 4 were also added.

Next Steps

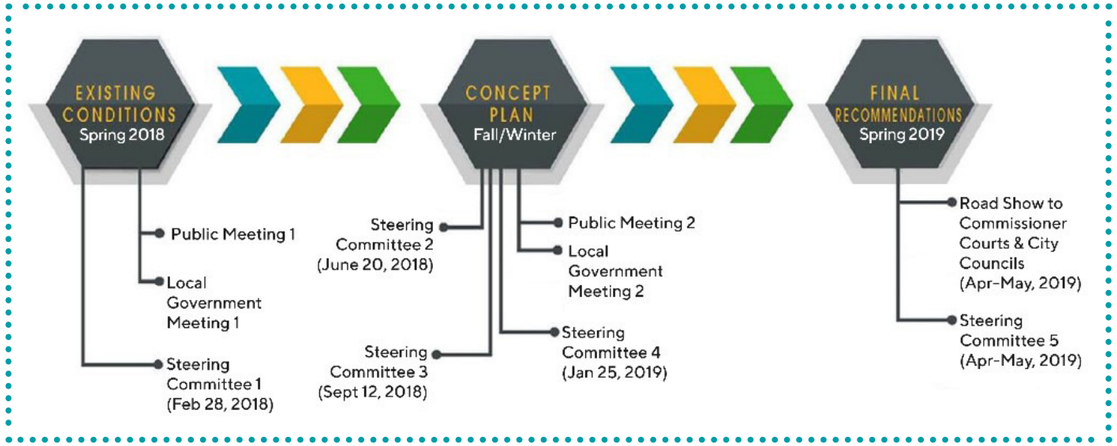
Once a full catalog of Regional Corridors has been developed, mapped, and coded, and the methodology for the scenario planning has been laid out, the next step is for Steering Committee Members and other local partners who may have all or portions of a Regional Corridor within their jurisdiction to provide comment on the coding assumptions made by CAMPO, most of which come from local plans. As ambassadors to a local area, it is imperative that thoughtful comments are received in this portion of the study so that the final vision network mirrors the needs and desires of the whole region.

In this way, the Steering Committee and others are significant partners in this process. The most important point for comment is in response to the number of lanes proposed for the segments within each member's jurisdiction and the design type.

These decisions in coding for the Regional Corridors will impact the model that CAMPO will run to understand the benefit that the whole vision network has for the region. It will also help to move the Regional Project Inventory toward a more comprehensive list of projects.

Concept Plan Methodology - 2019

As the final recommendations are being prepared for review, additional outreach to the Steering Committee, with local governments, and with the public are being readied to ensure that the plan meets the needs and concerns of the region. The full project timeline is shown in the figure below.



Finally, CAMPO will present a full draft study for review that includes the two draft chapters already delivered to the Steering Committee (Existing Conditions and Pattern Book), as well as a full Concept Plan that presents the vision network, the Regional Corridor Map and Inventory, and the findings from the transportation demand modeling analysis of the Tier One and vision networks.

CAMPO
CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION
CENTRAL TEXAS

www.campotexas.org

3300 N. Interstate 35, Suite 630
Austin, Texas 78705

O 512.215.8225
F 737.708.8140
E campo@campotexas.org

Capital Area Metropolian Planning Organization

@CampoTexas

Capital Area Metropolitan Planning Organization

@CampoTexas

Capital Area MPO

Date:	May 20, 2019
Continued From:	N/A
Action Requested:	Information

To:	Technical Advisory Committee
From:	Mr. Kelly Porter, Regional Planning Manager
Agenda Item:	6
Subject:	Discussion on Preliminary Results of MoKan/Northeast Subregional Plan

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

The MoKan/Northeast Subregional Plan is a subset of the 2045 Regional Arterials Study and focuses on an area bound by IH 35, SH 29, US 290 and SH 95. The Subregional Plan provides more details on analysis and recommendations on key corridors in the subregion as well as land use and other multi-modal elements.

FINANCIAL IMPACT

None.

BACKGROUND AND DISCUSSION

The MoKan/Northeast Subregional Plan is a subset of the 2045 Regional Arterials Study and focuses on an area bound by IH 35, SH 29, US 290 and SH 95. The Subregional Plan provides more detailed analysis and recommendations on key corridors in the subregion as well as land use and other multi-modal elements. Similar to the four test case corridors in the Arterials Study (FM 734, RM 12, SH 21, and RM 1431), the plan will include detailed analysis on US 79, FM 973, SH 95, FM 1100/Pflugerville Pkwy, FM 685/Cameron/Dessau, and the MoKan corridor (from Central Austin to Georgetown). The plan wraps in planned network recommendations sourced from discovery work from the Arterials Study and analyzes performance of the subarea network. This study is a first of its kind for MoKan as it looks at the corridor in context with supporting arterial network improvements. This plan will also include recommendations on potential multi-modal uses along MoKan and the other test corridors as well as complimentary land use and local network linkages. Five scenarios to better understand network performance have been developed. Each scenario focuses on the Subregional area and is a subset from the Regional Arterial Study. All scenarios in this plan include the MoKan corridor:

- Scenario 0 – Baseline/Current: 2020 Network with 2020 Demographics
- Scenario 1 – No-Build: 2020 Network with 2040 Demographics
- Scenario 2 – Tier 1 Network: Capacity, operational, and connectivity improvements applied to only key principal arterials and limited access routes.
- Scenario 3 – Non-Tolled Managed Lanes (off-model): Calculates potential "people throughput" on the Tier 1 network if certain lanes along these facilities was reserved for flexible uses during certain times of day for high-occupancy vehicles, transit, motorcycles, etc.

- Scenario 4 – Vision Network: Models all planned and identified improvements to the network garnered through this process. Includes all Tier 1 facilities and ultimate build-out of other minor arterials and supporting facilities.
- Scenario 5 – Tier 1 and Tier 2 Network: Includes all Tier 1 facilities as well as facilities from Scenario 4 that had a V/C ratio higher than the regional average of .45 and other corridors identified for safety and network redundancy.

Scenario results will be discussed in detail at the May 20, 2019 Technical Advisory Committee meeting.

The draft plan is expected to be taken to the public for comment and TAC for recommendation in June. The Transportation Policy Board will be asked to take action on the plan in August 2019.

SUPPORTING DOCUMENTS

Attachment A – *Summary Document (to be distributed at the May TAC meeting)*

Date:	May 20, 2019
Continued From:	N/A
Action Requested:	Information

To:	Technical Advisory Committee
From:	Mr. Ryan Collins, Short-Range Planning Manager
Agenda Item:	7
Subject:	Discussion on Cancellation of 2021-2024 Transportation Improvement Program (TIP) Call for Projects

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

On May 6, 2019, the Capital Area Metropolitan Planning Organization's Transportation Policy Board unanimously voted to allocate $500,000,000 in remaining Category 2 and 7 funding to IH-35, 183-A, and RM 620 congestion relief projects. These funds will be obligated over the upcoming ten-year period from 2020 to 2029. Because of this action, the 2021-2024 Transportation Improvement Program (TIP) Call for Projects, anticipated to open in August of 2019, has been cancelled. The next Call for Projects is anticipated to take place during the development of the 2023-2026 TIP, which is currently scheduled for approval in May of 2022.

FINANCIAL IMPACT

As a result of the $500,000,000 allocation by the Transportation Policy Board on May 6, 2019, the next Project Call will be postponed. Funds available in the next project call will be determined using federal and state revenue forecasts over the ten-year period from 2022 to 2031. Using only the current federal financial forecast, the anticipated amount of the next call is estimated to be around $100,000,000. The final amount will change based on federal and state legislation, updated revenue forecasts, and funding currently allocated that may become available due to lack of project progress or project close-outs.

BACKGROUND AND DISCUSSION

The Capital Area Metropolitan Planning Organization (CAMPO) is responsible for allocating certain federal and state funds for transportation projects in the six-county capital region. These funds are allocated through periodic Project Calls that use the project selection criteria and evaluation process adopted by the Transportation Policy Board. Funding amounts available for allocation use federal and state financial revenue forecasts.

SUPPORTING DOCUMENTS

None.

Date:	May 20, 2019
Continued From:	April 22, 2019
Action Requested:	Information

To:	Technical Advisory Committee
From:	Mr. Chad McKeown, CAMPO
Agenda Item:	8
Subject:	Presentations on Existing Transportation Demand Management (TDM) Activities from City of Austin, Capital Metro and CAPCOG

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

This item is a follow up to the TDM item on the April 2019 TAC agenda. Each funding recipient under the TDM category in the last TIP call has been asked to provide a presentation to the Technical Advisory Committee (TAC) on the efficacy of their existing TDM activities. TAC was not able to receive this information at the April 2019 meeting but CAMPO staff thought it would be good for the TAC members to have this information in advance of the TDM presentation at the June Transportation Policy Board meeting when the TPB will be asked to decide on the allocation of the remaining balance of $498,720 in the TDM category (Category 7 funds).

FINANCIAL IMPACT

None.

BACKGROUND AND DISCUSSION

Over the past decade, the CAMPO region has experienced significant growth and prosperity which has also resulted in further traffic congestion on the region's roadway system. TDM is a collection of operational and behavior changing strategies designed to reduce automobile trips, roadway congestion and parking demand by redirecting travel towards alternate modes, times and routes.

In creating this plan, CAMPO convened a steering committee consisting of regional transportation stakeholders to define a unified vision, objectives and priorities for advancing TDM policies, projects and initiatives.

SUPPORTING DOCUMENTS

None.