Resilience and Vulnerability in Transportation Planning

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What is the Capital Area MPO?

- 6 counties | 5,302 square miles
- 2 million people
- 12,420 lane miles of roads
- 44.6 millions miles traveled by vehicles daily
- 31.2 million transit boardings each year
Vulnerability Assessment

Climate Related Risks
- Flooding
- Drought
- Extreme heat
- Wildfire
- Extreme cold and ice

Key Infrastructure
- SH 71E at SH 21
- I-35 at Onion Creek Parkway
- Loop 360/RM 2222
- FM 1431 at Brushy Creek/Spanish Oak Creek
- US 183 North of Lockhart
- SH 80 at the Blanco River

Figure 9: Assets for In-Depth Evaluation
<table>
<thead>
<tr>
<th>ID</th>
<th>Asset</th>
<th>Flooding</th>
<th>Drought</th>
<th>Heat</th>
<th>Wildfire</th>
<th>Extreme Cold</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>MetroRail Red Line at Boggy Creek</td>
<td>Moderate-High</td>
<td>Inconclusive</td>
<td>Moderate</td>
<td>None</td>
<td>Low-Moderate</td>
</tr>
<tr>
<td>3</td>
<td>SH 71E at SH 21</td>
<td>High</td>
<td>Moderate-High</td>
<td>Low-Moderate</td>
<td>Moderate-High</td>
<td>Low-Moderate</td>
</tr>
<tr>
<td>4</td>
<td>I-35 at Onion Creek Parkway</td>
<td>Low</td>
<td>None</td>
<td>None</td>
<td>Moderate-High</td>
<td>Low-Moderate</td>
</tr>
<tr>
<td>5</td>
<td>US 290W/SH 71 - Y at Oak Hill</td>
<td>Moderate</td>
<td>Moderate</td>
<td>None</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>6</td>
<td>Loop 360/RM 2222</td>
<td>Moderate</td>
<td>Moderate</td>
<td>None</td>
<td>High</td>
<td>Low-Moderate</td>
</tr>
<tr>
<td>7</td>
<td>FM 1431 at Brushy Creek/Spanish Oak Creek</td>
<td>None</td>
<td>Moderate</td>
<td>Low</td>
<td>Moderate-High</td>
<td>Low</td>
</tr>
<tr>
<td>8</td>
<td>US 281 and SH 29 Intersection</td>
<td>Moderate-High</td>
<td>Low</td>
<td>Low</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>9</td>
<td>US 183 north of Lockhart</td>
<td>Low-Moderate</td>
<td>High</td>
<td>Low-Moderate</td>
<td>Moderate-High</td>
<td>Low-Moderate</td>
</tr>
<tr>
<td>10</td>
<td>SH 80 (San Marcos Highway) at the Blanco River</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>
2040 Plan Vision and Goals

Develop a comprehensive, multimodal, regional transportation system that safely and efficiently addresses mobility needs over time, is economically viable, cost-effective and environmentally sustainable, supports regional quality of life, and promotes travel options.

1. Ensure social equity
2. Support coordinated planning of land use and transportation
3. Increase safety and security of system
4. Maximize cost effectiveness
5. Maintain and enhance mobility & access
6. Improve connectivity
7. Maximize economy
8. Reduce project delays
9. Minimize negative impacts to environment, noise, and neighborhood character
10. Improve air quality and energy
11. Improve efficiency of transportation system
12. Promote system preservation
CAMPO Platinum Planning

Locally driven approach for long-term planning

PLATINUM PLANNING

ECONOMIC DEVELOPMENT - MIXED USE - EQUITY - MODAL - HOUSING - ENVIRONMENT
The land suitability and vulnerability analysis will allow for the identification of areas that may be of concern when locating transportation projects and project selection.
Soil Plasticity

Particularly relevant to infrastructure life-cycle costs
Beyond Environmental Justice: Measuring Vulnerability

Vulnerability Measures:
- low income
- seniors
- non-white
- school-aged
- disability status
- limited English proficiency
- percent zero car households
Currently In Progress

Improvements to:
evacuation routes / system redundancy / roadway design and materials
Population

DRAFT: These projections are not for distribution.

Employment
Planned + Desired Network

Includes Existing and Planned Routes with TIP Projects and Local Government Desires

Functional Classifications
- Limited Access
- Principal Arterial
- Minor Arterial
Planned + Desired Network with Gaps

Capital Area MPO identified gaps
Scenario Modeling

Z) No-Build
A) Regional Connectors
B) Regional Connectors with Non-Tolled Managed Lanes (NML)
C) Ideas Network
D) Regional and Supporting Connections Network
Scenario Z

No-Build
Existing, plus committed on 2040 demographics

Baseline
Network Lane Mileage 17,182
VMT 57.64 Million
VHT 1.27 Million
Network Mph 41

Scenario Z: No-Build
Network Lane Mileage 17,182
VMT 100.44 Million
VHT 2.93 Million
Network Mph 34
Scenario A

$9.4 Billion

Regional Connectors
Scenario B

Non-Tolled Managed Lanes
Change in person trips

- 49% increase
- 42% increase
- 35% increase
- 45% increase
Scenario C

$22.5 Billion

Collection of Ideas
Scenario D

$17.1 Billion

Regional Connectors and Supporting Connections

Safety and Redundancy
Segments Over .45 V/C
Regional Incident Management Plan

Adopted December 2018
Regional Incident Management Plan

- Real time information for drivers
- Coordinate first responders and others
- Technological improvements

Adopted December 2018
2045 Regional Active Transportation Plan

Adopted October 2017

Sidewalks

Trails

Pedestrian crossings and median islands

Curb cuts and other treatments for people with disabilities

Street lighting
Vision Connectors

- 5.96 miles Existing
- 617.66 miles New Construction Needed
- 70.94 miles Potential Upgrade

Vision Network Grand Total
1770.42 miles
- Existing: 129.11 miles
- New Construction Needed: 1245.93 miles
- Potential Upgrade: 395.38 miles
Online Project Viewer
DRAFT 2045
Regional Transit Plan

Starting in 2019
Regional connections throughout the region

This graphic is for illustrative purpose only.
Questions?

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